District I 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 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico **Energy Minerals and Natural Resources** Department Oil Conservation Division 1220 South St. Francis Dr.

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

| | Santa Fe, NM 8/505 | to the appropriate NMOCD District Office. |
|---|--|---|
| Proposed Altern | Pit, Below-Grade Tank, or native Method Permit or Closur | |
| Type of action: Below gr. Below gr. Below gr. Permit of Closure of Modificat | rade tank registration f a pit or proposed alternative method of a pit, below-grade tank, or proposed alte tion to an existing permit/or registration blan only submitted for an existing permitte | rnative method |
| Instructions: Please submit one of | application (Form C-144) per individual pit, b | elow-grade tank or alternative request |
| Please be advised that approval of this request does not re- environment. Nor does approval relieve the operator of it | elieve the operator of liability should operations re | • |
| operator: Burlington Resources Oil Gas Compan | <u>y LP</u> OGRID #: <u>14538</u> | |
| Address: P.O. Box 4289, Farmington, New Mexic | | |
| Facility or well name: SAN JUAN 27-4 UNIT 51N | | OIL CONS. DIV DIST. 3 |
| API Number: 30-039-31248 OCD Permit Number | er: | JUL 1 4 2014 |
| U/L or Qtr/Qtr B (NWNE) Section 29 Township | 27N Range 4W County: Rio Arriba | JUL 14 2011 |
| Center of Proposed Design: Latitude <u>36.548641</u> °N | Longitude <u>107.273439</u> °W NAD: | 1927 🔲 1983 🖂 |
| Surface Owner: X Federal X State Private 7 | ribal Trust or Indian Allotment | |
| | | |
| 2. ☑ Pit: Subsection F, G or J of 19.15.17.11 NMAC Temporary: ☑ Drilling ☐ Workover | С | |
| ☐ Permanent ☐ Emergency ☐ Cavitation ☐ P& | A Multi Well Fluid Management | Low Chloride Drilling Fluid ⊠ yes □ no |
| ☐ Lined ☐ Unlined Liner type: Thickness 20 m | • | _ , |
| String-Reinforced | | |
| Liner Seams: Welded Factory Other | Volume: 7700 bbl | Dimensions: L 120' x W 55' x D 12' |
| | | <u> </u> |
| 3. Below-grade tank: Subsection I of 19.15.17.11 | I NMAC | |
| Volume:bbl Type of fluid | d: | |
| Tank Construction material: | | |
| ☐ Secondary containment with leak detection ☐ | Visible sidewalls, liner, 6-inch lift and automat | tic overflow shut-off |
| $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $ | s only Other | |
| Liner type: Thicknessmil [| HDPE PVC Other | |
| 4. | | |
| Alternative Method: | | |
| Submittal of an exception request is required. Excep | otions must be submitted to the Santa Fe Enviro | onmental Bureau office for consideration of approval. |
| 5. | | |
| Fencing: Subsection D of 19.15.17.11 NMAC (Appl. | | |
| Chain link, six feet in height, two strands of barbe institution or church) | ed wire at top (Required if located within 1000) | feet of a permanent residence, school, hospital, |

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify 4' field fencing with one strand barbed wire on top.

| 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. | |
| <u>Variances and Exceptions:</u> 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 | mtable source |
| material are provided below. Siting criteria does not apply to drying pads or above-grade tanks. | piuote source |
| 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 |
| | ☐ 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 | □ NA |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance | ☐ Yes ☑ No |
| adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) - Written confirmation or verification from the municipality; Written approval obtained from the municipality | |
| 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) | Yes No |
| Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | |
| 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). | I LES I NO |
| - Topographic map; Visual inspection (certification) of the proposed site | |
| 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 |

Page 2 of 6

| 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). - Topographic map; 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 |
| 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 |
| Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc 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 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 Previously Approved Design (attach copy of design) API Number: or Permit Number: | NMAC 15.17.9 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 doc 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: | |
| | |

| 12. | |
|--|---------------------|
| 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 |
| ### ### ############################# | |
| 13. | |
| <u>Proposed Closure</u> : 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. | |
| Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well Fl | luid Management Pit |
| ☐ Alternative Proposed Closure Method: ☐ Waste Excavation and Removal ☐ Waste Removal (Closed-loop systems only) ☐ On-site Closure Method (Only for temporary pits and closed-loop systems) ☐ In-place Burial ☐ On-site Trench Burial ☐ Alternative Closure Method | |
| 14. | |
| Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be a 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 | unacneu to the |
| 15. Sixting Criteria (negariding on site alegans methods only), 10 15 17 10 NIMAC | |
| 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. P. 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. - 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 | . — |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance | ☐ Yes ☑ No |

| • | |
|--|--------------------------|
| adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - `Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes 🛛 No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☑ No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☑ No |
| Within a 100-year floodplain FEMA map | Yes No |
| On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure ple 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. 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 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 cann Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC | 11 NMAC 15.17.11 NMAC |
| Operator 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 complete the c | ief. |
| OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: 7/31/6 | 50P |
| 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 section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Date: | |
| 20. Closure Method: Waste Excavation and Removal □ On-Site Closure Method □ Alternative Closure Method □ Waste Removal (Closed-logoup If different from approved plan, please explain. | oop systems only) |
| Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please in mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD: 1927 | |

| Operator Closure Certification: | |
|---|------------|
| I hereby certify that the information and attachments submitted with this closure belief. I also certify that the closure complies with all applicable closure requires | |
| Name (Print): | Title: |
| Signature: | Date: |
| e-mail address: | Telephone: |

SAN JUAN 27-4 UNIT 51N (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.

Busse, Dollie L

From:

Busse, Dollie L

Sent:

Thursday, July 10, 2014 10:42 AM

To:

'Kelly, Mark'

Cc:

Brandon.Powell@state.nm.us; Cory.Smith@state.nm.us; 'Miller, Jon J -FS'

Subject:

San Juan 27-4 Unit 51N - Federal Surface Owner Notification

The subject well, located on Forest surface, will have a temporary pit that will be closed onsite. Please let me know if you have any questions.

Thanks!

Dollie L. Busse | Staff Regulatory Technician | ConocoPhillips | San Juan Business Unit | P.O. Box 4289 | Farmington, NM 87499 | Office: 505-324-6104 | Cell: 505-215-3069 | E-mail: dollie.l.busse@cop.com

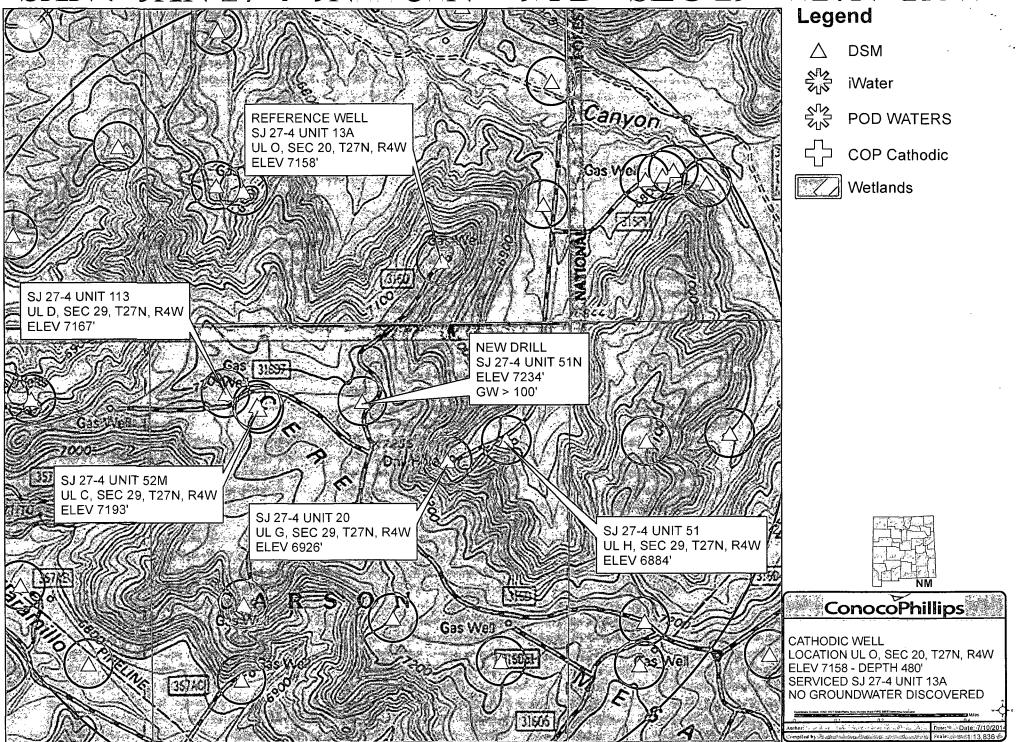
DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO

| Operator Meridian Cil Co. Location: Unit O Sec. 20 Twp 27 Rng 4 |
|---|
| Name of Well/Wells or Pipeline Serviced |
| SAN JUAN 27-4 UNIT # 13A |
| Elevation 7/58 Completion Date 10-7-92 Total Depth 480 Land Type F |
| Casing Strings, Sizes, Types & Depths 9/04 Set 100 of 8" Puc Casing. |
| NO GAS, WATER, OF Boulders Were ENCOUNTERED. DURING CASING. |
| If Casing Strings are cemented, show amounts & types used <u>Cemented</u> WITH 22 SACKS |
| If Cement or Bentonite Plugs have been placed, show depths & amounts used |
| Depths & thickness of water zones with description of water: Fresh, Clear, |
| Salty, Sulphur, Etc. No water |
| Depths gas encountered: NONE |
| Ground bed depth with type & amount of coke breeze used: 480, USed. 76 Sacks of Loresco type S W |
| Depths anodes placed: 455, 445, 435, 410, 400, 390; 380, 370, 360, 350, 340, 333, 310, 300, 260 |
| Depths vent pipes placed: 475 |
| Vent pipe perforations: Bottom 380' DEGE VE |
| Remarks: 10N31 1994 |
| OIL CON. DIV |
| D'ST. 3 |

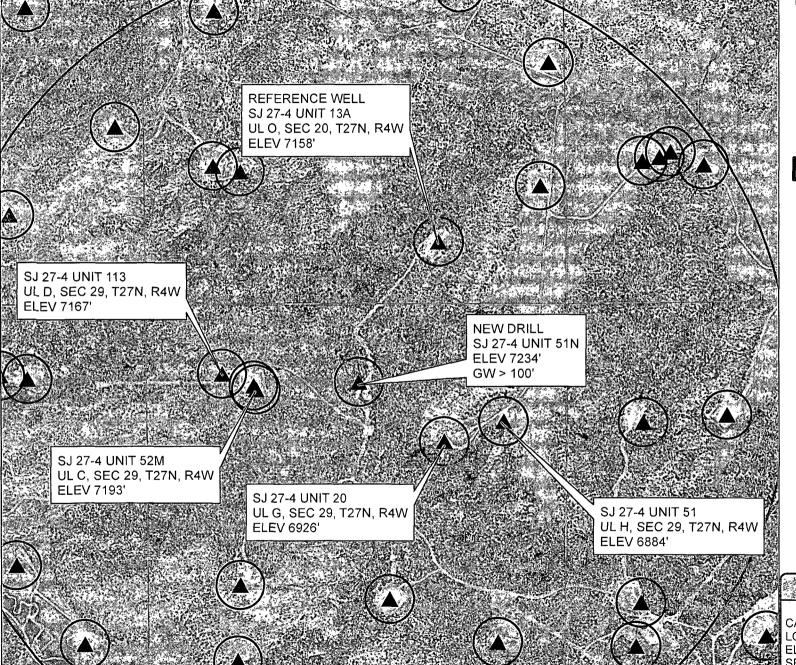
If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

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

SAN. JAN 27-4 JN ' 5 N - J J B - SEC 29 - ' '27N -R4W



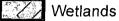
SAN. JAN 27-4 JN ' 51N - J J B - SEC 29 - ' 27N - R4W Legend DSM









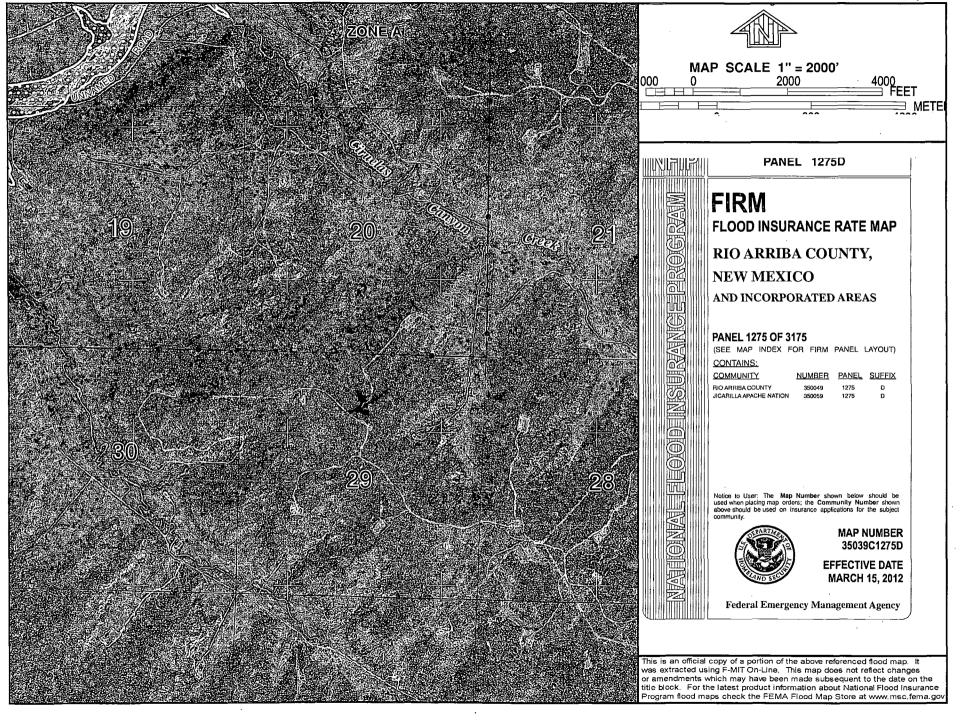




ConocoPhillips

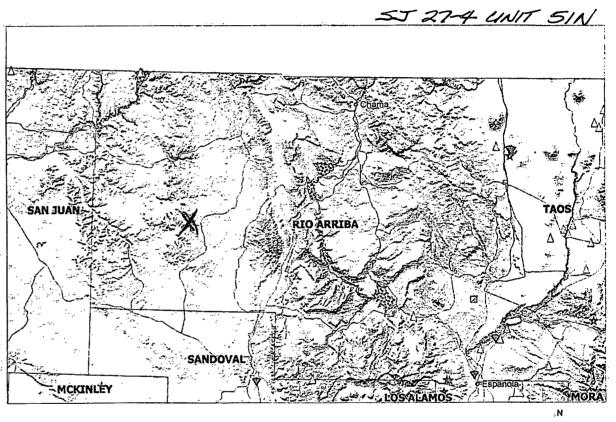
CATHODIC WELL LOCATION UL O, SEC 20, T27N, R4W ELEV 7158 - DEPTH 480' SERVICED SJ 27-4 UNIT 13A NO GROUNDWATER DISCOVERED

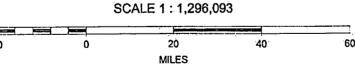
| 1 | <u> </u> | 0.2 | |
|---|------------------------------------|---|---------------------------|
| , | hors make his made water his ac- | 确然 医松松性 电影心及。 | Date: 5/2 Date: 7/10/2014 |
| • | npiled by the material Salah Salah | instruction and the state of the state of | Neale: 444-1:13,836 4 |
| | | | |



Mines, Mills and Quarries

Mines, Mills & Quarries Commodity Groups **Aggregate & Stone Mines** Δ **Coal Mines** Industrial Minerals Mines Industrial Minerals Mills **Metal Mines and Mill Concentrate** Ø **Potash Mines & Refineries** Smelters & Refinery Ops. **Uranium Mines** * **Uranium Mills Population** Cities - major **Transportation** Railways Interstate Highways **Major Roads**







Tuesday, March 16, 2010 6:40 AM

Siting Criteria and Compliance Demonstrations

Well Name: SAN JUAN 27-4 UNIT 51N

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 <u>Cathodic Well - UL O-Sec 20-T27N-R4W-Elev 7158'-Total Depth 480'</u> with no groundwater found, as indicated in the Cathodic Groundbed Data sheet attached.

2. <u>Distance to watercourse (should not be within 100 feet of a continuously flowing watercourse other significant watercourse or 200 feet from lakebed, sinkhole, or playa 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. <u>Distance to wetlands (should not be within 300 feet):</u>

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 San Juan 27-4 Unit 51N

Regional Hydrogeological context:

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

DISTRICT I
1625 N. French Dr., Robbs, H.M. 62240
Phone: (678) 393-6161 Fax: (675) 393-0720
DISTRICT II
611 S. First St., Artesia, N.M. 63210
Phone: (676) 748-4283 Fax: (676) 748-9720
DISTRICT II
1000 Rio Branos Rd., Astec, N.M. 67410
Phone: (605) 334-6178 Fax: (605) 334-6179
DISTRICT IV
1220 S. B., Francis Dr., Santa Fe, NM 67605
Phone: (606) 476-3460 Fax: (605) 478-3462

State of New Mexico Energy, Minerals & Natural Resources Department Form C-102 Revised August 1, 2011

Submit one copy to appropriate District Office

OIL CONSERVATION DIVISION 1220 NORTH St. Francis Dr. Santa Fe, NM 87505

☐ AMENDED REPORT

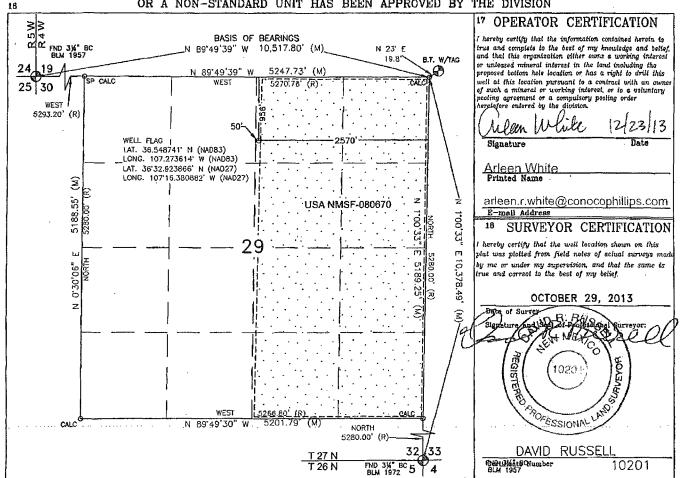
WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number | *Pacl Code | Pool Name | |
|----------------------------|-----------------------|--------------------------|------------------------|
| -30-039- | 72319 / 71599 | BLANCO MESAVERDE / BASIN | DAKOTA |
| ⁴ Property Code | ⁸ Property | Name | * Well Number |
| 7452 | SAN JUAN | 1 27-4 UNIT | 51N |
| 70GRID No. | ⁰ Operator | Name | ⁸ Elevation |
| 14538 | BURLINGTON RESOURCES | OIL & GAS COMPANY LP | 7234' |

¹⁰ Surface Location

| 320.00 ACRES | | | | | Consonuación | , ode | Older No. | : | |
|-------------------|---------|----------|-------------|---------|--------------------|------------------|---------------|----------------|------------|
| 18 Dedicated Acre | 9 | J | 13 Joint or | intili | 14 Consolidation C | lode | "Order No. | <u> </u> | |
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | NORTH/NORTH line | Feet from the | Enst/West line | County |
| | | | 11 Bott | om Hole | Location I | f Different Fro | m Surface | | |
| B | 29 | 27N | 4W | | 956' | NORTH | 2570' | EAST | RIO ARRIBA |
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | NORTH/NORTH line | Feat from the | East/West Une | County |

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

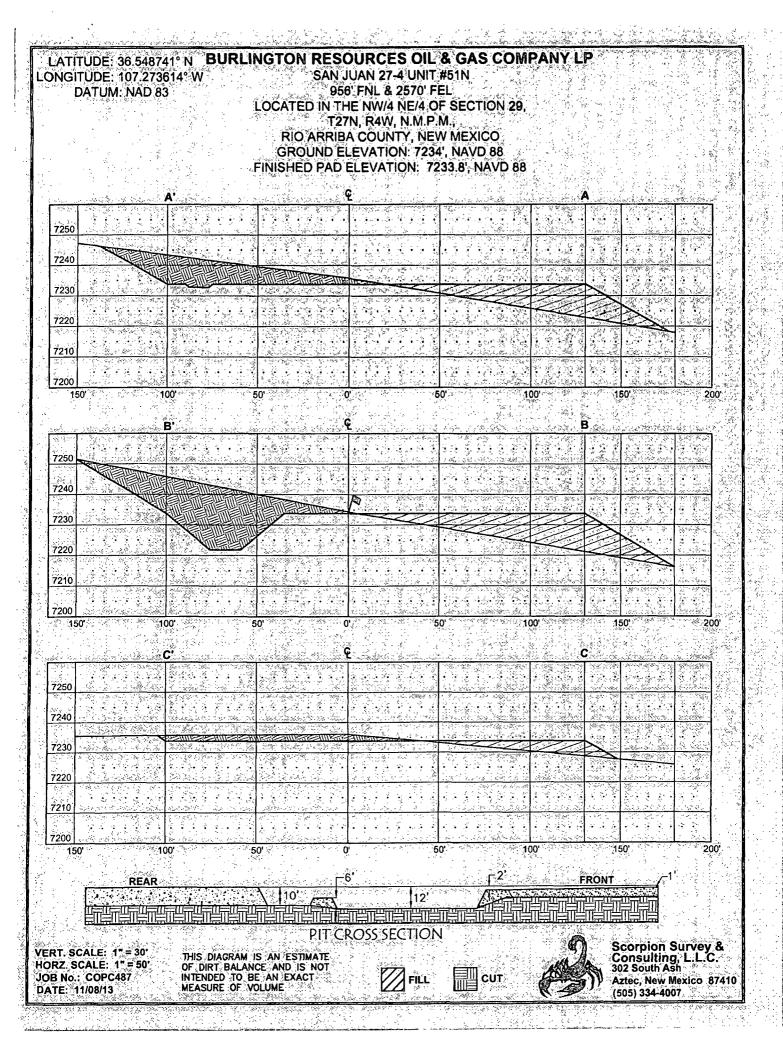


BURLINGTON RESOURCES OIL & GAS COMPANY LP SAN JUAN 27-4 UNIT #51N WELL FLAG LATITUDE: 36.548741° N 956' FNL & 2570' FEL LONGITUDE: 107 273614° W LOCATED IN THE NW/4 NE/4 OF SECTION 29 **CENTER OF PIT** T27N, R4W, N.M.P.M... LATITUDE: 36,548641° N RIO ARRIBA COUNTY NEW MEXICO LONGITUDE: 107.273439° W GROUND ELEVATION: 7234'. NAVD 88 ELEVATION: 7221.8" FINISHED PAD ELEVATION: 7233.8 NAVD 88 DATUM: NAD83 & NAVD88 SCALE = 60' 1.) BYSIS OF BEARING BETWEEN FOUND MORRADOTS AT THE MORTHEAST CORNER OF SECTION 28 AND THE MORTHEAST CORNER OF SECTION 30, TORNES OF C-12.0 ARTEN COLUMY NEW MEXICO. C-9.6 OF 10,584.91 FEET AS MEASURED BY 2.) LATTROE LONGITUDE AND ELLIPSODIAL HEIGHT BASED ON AZTEC CORS LI PHOSE 2.1 Slopes Reserve Pit Positive drain to reserve pit. CENTER OF PIT DESTRUCES USING AN TRANSFER MERCATOR PROJECTION FROM A MISSA ELLIPSCO. COMMERCED TO MADES. MANUES ELEMETONS AS PREDICTED BY SECTION. Ò 12' Deep 3.) (DOCTON OF UNDERGROUND UTLINES DEPARTO ARE APPRODUCED PROR TO DECIMARING UTLINES SHOULD BE FILLD VERFED. ALL OBSTRUCTION ACTIONS SHOULD BE FILLD VERFED WITH SEW ASSOCIO ANCHOR ONE-CALL AUTHORITES AT LISEST 48 HOURS PROPE TO CONSTRUCTION. Wellhead to back LAYDOWN A) T-POSTS HOSE BEEN SET TO DEFORE. THE EDGE OF DISTURBANCE LAWS WHICH ARE SO OFFSETS FROM THE EDGE OF THE STREET (BELL PRO.) Wellhead to front 5 79:08'09" W 160' 0 RIG ANCHOR RIG ANCHOR റ O PROPOSED CPS 20 LAT: 36.548964" N. LONG: 107.273217 W (NAD83) F+5.1 SLOPES TO BE CONSTRUCTED TO MATCH THE ORIGINAL CONTOURS TOTAL PERMITTED AREA 330' x 400' = 3.03 ACRES NOTE: Scorpion Survey & RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE). SCORPION SURVEY & CONSULTING, LLC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED, BURIED PIPELINES OR SCALE: 1" = 60' Consulting, L.L.C. 302 South Ash JOB No.: COPC487 DATE: 11/08/13 Aztec, New Mexico 87410 CABLES ON WELL PAD, IN CONSTRUCTION ZONE AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR

(505) 334-4007

DRAWN BY: TWT

TO CONSTRUCTION.



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:

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- 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 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:

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- 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.
- 2. 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 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:

- 1. 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:
 - i. 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

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- 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.

| al Tronchos ar | • | |
|----------------|--|---|
| ai irenches ai | nd Waste Left in Place in Temporary Pits | |
| Constituent | Method* | Limit** |
| | | · |
| Chloride | EPA Method 300.0 | 20,000 mg/kg |
| ТРН | EPA SW-846 Method 418.1 | 100 mg/kg |
| втех | 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 | 40,000 mg/kg |
| | Chloride TPH BTEX Benzene | Chloride EPA Method 300.0 TPH EPA SW-846 Method 418.1 BTEX EPA SW-846 Method 8021B or 8260B Benzene EPA SW-846 Method 8021B or 8015M |

| | 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 |
| | ВТЕХ | 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 |
| | BTEX | 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]