REGISTERED 1000 Rio Brazos Rd., Aztec. NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	State of New Mexico Minerals and Natural Resources Dartment vation Division St. Francis Dr. Summer e, NM 87505 Desed-Loop System, Below-Grad	Form C-144 July 21, 2008 For temporary pits, closed-loop sytems, and below-grade tanks. submit to the appropriate NMOCD District Office. For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.
	native Method Permit or Closur	
Type of action: X Permit Closur Modif Closur below Instructions: Please submit one application	t of a pit, closed-loop system, below-grade re of a pit, closed-loop system, below-grade ication to an existing permit re plan only submitted for an existing permi- grade tank, or proposed alternative method	tank, or proposed alternative method e tank, or proposed alternative method itted or non-permitted pit, closed-loop system, d op system, below-grade tank or alternative request
		e governmental authority's rules, regulations or ordinances.
I       Operator:       Burlington Resources Oil & Gas Control         Address:       PO Box 4289, Farmington, NM 87         Facility or well name:       SAN JUAN 27-5 UNIT	499	OGRID#: <u>14538</u>
API Number: <b>300390719</b> 4		er:
U/L or Qtr/Qtr:       G       Section:       5         Center of Proposed Design:       Latitude:	36.60606°N Longitude:	SW         County:         Rio Arriba           -107.37727°W         NAD:         X 1927         1983           n Allotment         In Allotment         In Allotment         In Allotment
2       Pit:       Subsection F or G of 19.15.17.11 NMAC         Temporary:       Drilling       Workover         Permanent       Emergency       Cavitation         Lined       Unlined       Liner type:         String-Reinforced       Unlined       Factory	P&A Thickness mil [] LLDPE [] Other Volume:	HDPE PVC Other bbl Dimensions Lx Wx D
	new well Workover or Drilling (Applies to notice of intent) hks Haul-off Bins Other	o activities which require prior approval of a permit or
Tank Construction material:	Produced Water         Metal         X       Visible sidewalls, liner, 6-inch lift and autole sidewalls only	tomatic overflow shut-off Unspecified
Alternative Method:	eptions must be submitted to the Santa Fe Enviro	onmental Bureau office for consideration of approval.
Form C-144	Oil Conservation Division	Page 1 of 5

t     Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, 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, hospite     four foot height, four strands of barbed wire evenly spaced between one and four feet     XAlternate. Please specify <u>4' hog wire fencing topped with two strands barbed wire.</u>	al, institution or church)
7       Netting:       Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)         X       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" fettering, providing Operator's name, site location, and emergency telephone numbers     X Signed in compliance with 19.15.3.103 NMAC	
<ul> <li>Administrative Approvals and Exceptions:         Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.     </li> <li>Please check a box if one or more of the following is requested, if not leave blank:         X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for (Fencing/BGT Liner)     </li> <li>Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.     </li> </ul>	consideration of approval.
10 <u>Siting Criteria (regarding permitting)</u> : 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search: USGS; Data obtained from nearby wells Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	Yes XNo
<ul> <li>Topographic map; Visual inspection (certification) of the proposed site</li> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes XNO
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applied to permanent pits)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes No XNA
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.	Yes XNo
<ul> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.</li> <li>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</li> <li>Written confirmation or verification from the municipality: Written approval obtained from the municipality</li> </ul>	Yes XNo
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> <li>Within the area overlying a subsurface mine.</li> </ul>	Yes XNo
<ul> <li>Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division</li> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design: NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological</li> </ul>	Yes XNo
Society; Topographic map Within a 100-year floodplain - FEMA map	Yes XNo

<u>Г'п</u>	
Temporary Pits, Emerger	ncy Pits and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19,15,17,9 NMAC weight items must be attached to the application. Please indicates have due to the test of the section B of 19,15,17,9 NMAC
Instructions: Each of the follo	wing items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. If (Below, scade Tracks), heaving a standard of the second state of the second state of the second state of the
and a construction	Coverow grade ranks) - Dascu apon the requirements of Damagnak ( b) of the start
	(rempositely and randing fills) - based upon the requirements of Damanak (3) (contaction of the second
	marce behavisuations - based upon the appropriate requirements of 10.15.17 to MAAAG
ing treatgit r tait - based i	upon the appropriate requirements of 19.15.17.11 NMAC
A Operating and Mainte	enance Plan - based upon the appropriate requirements of 19-15-17-12 NIMAG
i costue man (Prease	complete Boxes 14 through 18 if applicables bound or out
19.15.17.9 NMAC ar	ad 19.15.17.13 NMAC
Previously Approved Des	sign (attach copy of design) APP
12	or Permit
Closed-loop Systems Perm	it Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
	and e bemonstrations (only for on-site closure) - based upon the appropriate available to the table
	real the appropriate requirements of 19.15.17.11 NMAC
	nance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Closure Plan (Please c	omplete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9
Previously Approved Desi	
Previously Approved Oper	rating and Maintenance Plan API
13	
Permanent Pits Permit App	lication Checklist: Subsection B of 19.15.17.9 NMAC
instructions: Each of the follow	ing items must be attached to the application. Please indicate, by a check mark in the based with the
	exact upon the requirements of Paragraph (1) of Subsection P of 10,15,17,0 NAAA o
onling criteria Compila	ince Demonstrations - based upon the appropriate requirements of 10,15,17,10,810,40,7
L	ASSESSINCIL
Dike Destantion of C	Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
	uctural integrity Design: based upon the appropriate requirements of 10 to 17 to but the
L	ascu upon me appropriate requirements of 19.15.17.11 NMA C
Quality Control/Quality	Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Assurance Construction and Installation Plan
Operating and Maintena	ince Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Freeboard and Overtopr	bing Prevention Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Nuisance or Hazardous	Odors, including H2S, Prevention Plan
Emergency Response Pl	an
Oil Field Waste Stream	Characterization
Monitoring and Inspection	on Plan
Erosion Control Plan	
Closure Plan - based upo	on the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
14	
Proposed Closure: 19.15.17.1.	3 NMAC
Type: Drilling Workow	applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.
	er Emergency Cavitation P&A Permanent Pit XBelow-grade Tank Closed-loop System
Alternative Proposed Closure Method: X	
لنتا	Waste Excavation and Removal (Below-Grade Tank)
	Waste Removal (Closed-loop systems only)
	On-site Closure Method (only for temporary pits and closed-loop systems)
	In-place Burial On-site Trench
	Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
5	
Vaste Excavation and Remova	<b><u>U Closure Plan Checklist:</u></b> (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan.
X Confirmation Sampling Pt	- based upon the appropriate requirements of 19.15.17.13 NMAC
X Disposal Facility Name an	an (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
the second second second second second	a cruit Number (for Rallas, arithing thirds and drift outlines)
X Re-vegetation Plan - based	esign Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
X Site Reclamation Plan - based	upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
	sed upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

,

16 <u>Waste Romoval Closure For Closed-loop System</u> Instructions: Please identify the facility or facilitie are remard	ns That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NM s for the disposal of liquids, drifting thids and drift cuttings. Use attachment if more than	AC)
Disposal Facility Name	and changes. Ose and ament if more than	) two-facilities
Disposal Facility Name:	Disposal Facility Permit #:	
Will any of the proposed closed-loop system of	Disposal Facility Permit #:	
Yes (If yes, please or provide the informat Required for impacted areas which will not be used Soil Backfoll and Compared to the second	ion No	ure service and operations?
1 L_1 Some Dacknin and Cover Design Specific	Tor future service and operations: ation - based upon the appropriate requirements of Subsection H of 19.15.17.13 N propriate requirements of Subsection I of 19.15.17.13 NMAC	IMAC
Site Reclamation Plan - based upon the	appropriate requirements of Subsection G of 19.15.17.13 NMAC	
17 <u>Siting Criteria (Regarding on-site closure me</u> Instructions: Each string criteria requires a demonstratio certain string criteria may comize administration	ethods only: 19.15.17.10 NMAC m of compliance in the cluster plan. Recommendations of acceptable source material areas and its source in the cluster plan.	below. Requests regarding changes to
	instructions of equivalency are required. Please refer to 19:15.17.10 NMAC for suidance	o the Santa Fe Environmental Bureau office
Ground water is less than 50 feet below the bott - NM Office of the State Engineer - WATER OF	om of the buried waste.	Yes No
C	database search: USGS: Data obtained from nearby wells	
Ground water is between 50 and 100 feet below	the bottom of the buried waste	
- INM Office of the State Engineer - iWATERS d	latabase search; USGS: Data obtained from nearby wells	Yes No
Ground water is more than 100 feet below the be	ottom of the buried waste.	
<ul> <li>NM Office of the State Engineer - iWATERS d</li> </ul>	atabase search: USGS: Data obtained from nearby wells	Yes No
Within 300 feet of a continuously flowing watercours (measured from the ordinary high-water mark).	e, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake	Ves No
Topographic map: Visual inspection (certification)	on) of the proposed site	
Within 300 feet from a permanent residence, school, f - Visual inspection (certification) of the proposed (	nospital, institution, or church in existence at the time of initial application, site; Aerial photo; satellite image	Yes No
- NM Office of the State Engineer - iWATERS dat	water well or spring that less than five households use for domestic or stock watering esh water well or spring, in existence at the time of the initial application, abase: Visual inspection (certification) of the proposed site	Yes No
pursuant to NMSA 1978, Section 3-27-3, as amended.	defined municipal fresh water well field covered under a municipal ordinance adopted nicipality: Written approval obtained from the municipality	Yes No
a wettand		
a subsurace mine.	: Topographic map; Visual inspection (certification) of the proposed site	Yes No
<ul> <li>Written confirantion or verification or map from t</li> </ul>	he NM EMNRD-Mining and Mineral Division	Yes No
within an unstable area.		
Topographic map Within a 100-year floodplain.	: NM Bureau of Geology & Mineral Resources: USGS; NM Geological Society;	Yes No
- FEMA map		Yes No
18 On-Site Closure Plan Checklist: (19.15.17.13 NN	MAC) Instructions: Each of the following items must bee attached to the closure ettached.	
		e plan. Please indicate,
Proof of Surface Owner Notice Lead	based upon the appropriate requirements of 19.15.17.10 NMAC	
Construction/Design Plan of Puriol T	the appropriate requirements of Subsection F of 19.15.17.13 NMAC	
Construction/Design Plan of Burial Trench (	if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC	
Construction Design Plan or Temporary Pit (	for in place burial of a drying pady based upon the second	15.17.11 NMAC
	propriate requirements of 1915 F/14 NMAC	
Waste Material Samoling Plan - based upon a	based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC	
Disposal Facility Name and Permit Number	he appropriate requirements of Subsection F of 19.15.17.13 NMAC	
Soil Cover Design - based upon the annronria	for liquids, drilling fluids and drill cuttings or in case on-site closure standards can te requirements of Subsection H of 19.15.17.13 NMAC	tot be achieved)
	ate requirements of Subsection I of 19.15.17.13 NMAC	

<b>Operator</b> Application			
operator application	<u>Certification</u> ;		
I hereby certify that the in	formation submitted with this application is true.	accurate and complete to the	best of my knowledge and belief.
Name (Print):	Crystal Tafoya	Title:	Regulatory Technician
Signature:	Constal Talana	Date:	12/22/2008
e-mail address:	divetal talova el conocophillos, com	Telephone:	505-326-9837
20 OCD Approval:	Permit Application (including closure plan)	Closure Plan (only)	OCD Conditions (see attachment)
OCD Representative S			
Fitle:		OCD Para	Approval Date:
		OCD Peri	
report is required to be su	red within 60 days of closure completion): re required to obtain an approved closure plan pri- binitted to the division within 60 days of the compl s been obtained and the closure activities have bee	or to implementing any closu letion of the closure activities	re activities and submitting the closure report. The closure 5. Please do not complete this section of the form until an
		Closure	Completion Date:
22 Closure Method: Waste Excavation If different from ap	and Removal On-site Closure Method	Alternative Closure 1	Method Waste Removal (Closed-loop systems only)
nstructions: riease laent	g Waste Removal Closure For Closed-loop Syst	ems That Utilize Above Gro	ound Steel Tanks or Haul-off Bins Only:
Disposal Facility Name			gs were disposed. Use attachment if more than two facilities
Disposal Facility Name	:	Disposal Facility F	Permit Number:
Disposal Facility Name Disposal Facility Name		Disposal Facility F Disposal Facility F	Permit Number:
Disposal Facility Name Disposal Facility Name Were the closed-loop sy	:	Disposal Facility F Disposal Facility F	Permit Number:
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please Required for impacted d Site Reclamation (F	stem operations and associated activities performe demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation)	Disposal Facility F Disposal Facility F ed on or in areas that <i>will not</i>	Permit Number:
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please Required for impacted a Site Reclamation (I Soil Backfilling and Re-vegetation Appl	stem operations and associated activities performe demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation)	Disposal Facility F Disposal Facility F ed on or in areas that <i>will not</i>	Permit Number:
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please 1 Required for impacted of Site Reclamation (I Soil Backfilling and Re-vegetation Appl 4 Closure Report Attac the box, that the docum Proof of Closure N Proof of Deed Noi Plot Plan (for on-s Confirmation Sam Waste Material Sa Disposal Facility N Soil Backfilling an Re-vegetation App	stem operations and associated activities performed demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation) I Cover Installation ication Rates and Seeding Technique chment Checklist: Instructions: Each of the for ents are attached. Notice (surface owner and division) tice (required for on-site closure) ite closures and temporary pits) spling Analytical Results (if applicable) mpling Analytical Results (if applicable) Name and Permit Number d Cover Installation bication Rates and Seeding Technique Photo Documentation)	Disposal Facility F Disposal Facility F ed on or in areas that will nor No operations: Mowing items must be attack	Permit Number: Permit Number: be used for future service and opeartions? The d to the closure report. Please indicate, by a check mark in
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please of Required for impacted a Site Reclamation (I Soil Backfilling and Re-vegetation Appl d Closure Report Attac the box, that the docum Proof of Closure N Proof of Closure N Proof of Deed Noi Plot Plan (for on-s Confirmation Sam Waste Material Sa Disposal Facility N Soil Backfilling an Re-vegetation App Site Reclamation (	Astem operations and associated activities performed demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation) If Cover Installation ication Rates and Seeding Technique Chment Checklist: Instructions: Each of the for ents are attached. Notice (surface owner and division) tice (required for on-site closure) ite closures and temporary pits) upling Analytical Results (if applicable) mpling Analytical Results (if applicable) Name and Permit Number d Cover Installation Dication Rates and Seeding Technique Photo Documentation)	Disposal Facility F Disposal Facility F on or in areas that will not No operations:	Permit Number: Permit Number: be used for future service and opeartions?
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please of Required for impacted a Site Reclamation (I Soil Backfilling and Re-vegetation Appl Closure Report Attac the box, that the docum Proof of Closure N Proof of Deed Not Proof of Deed Not Plot Plan (for on-s Confirmation Sam Waste Material Sa Disposal Facility N Soil Backfilling an Re-vegetation App Site Reclamation ( On-site Closure Lo Derator Closure Certiff creby certify that the infor- closure complies with all time (Print):	Astem operations and associated activities performed demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation) I Cover Installation ication Rates and Seeding Technique Chment Checklist: Instructions: Each of the for ents are attached. Notice (surface owner and division) tice (required for on-site closure) ite closures and temporary pits) upling Analytical Results (if applicable) mpling Analytical Results (if applicable) Mame and Permit Number d Cover Installation dication Rates and Seeding Technique Photo Documentation) scation: Latitude:	Disposal Facility F Disposal Facility F ed on or in areas that will not No operations: 	Permit Number:
Disposal Facility Name Disposal Facility Name Were the closed-loop sy Yes (If yes, please of Required for impacted a Site Reclamation (I Soil Backfilling and Re-vegetation Appl Closure Report Attac the box, that the docum Proof of Closure N Proof of Closure N Proof of Deed Not Plot Plan (for on-s Confirmation Sam Waste Material Sa Disposal Facility N Soil Backfilling an Re-vegetation App Site Reclamation ( On-site Closure Lo Derator Closure Certiff ereby certify that the infor-	Astem operations and associated activities performed demonstrate complilane to the items below) treas which will not be used for future service and Photo Documentation) I Cover Installation ication Rates and Seeding Technique Chment Checklist: Instructions: Each of the fa- ents are attached. Notice (surface owner and division) tice (required for on-site closure) ite closures and temporary pits) upling Analytical Results (if applicable) mpling Analytical Results (if applicable) Mame and Permit Number d Cover Installation dication Rates and Seeding Technique Photo Documentation) seation: Latitude:	Disposal Facility F Disposal Facility F Disposal Facility F ed on or in areas that will not operations: llowing items must be attack Longitude: re report is ture, accurate and pecified in the approved close	Permit Number:

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	21.11	1.1	 

Oil Conservation Division

New Mexico Office of the State Engineer

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Township	27N Range: 05W	Sections:		
NAD27 X:	Y:	Zone:		Search Radius:
County:	Basin:	2009 32 <b>4</b>	Num	ber: Suffix:
Owner Name: (First)	(Last)		́ с	Non-Domestic C Domestic C All
POD / Surface Dat	a Report Avg	Depth to Water R	eport	Water Column Report
	Clear Form	WATERS Menu	J	Help

### WATER COLUMN REPORT 08/20/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest)							Depth	Depth	Water (in			
POD Number	Tws	Rng	Sec	đ	q	q	Zone	x	Y	Well	Water	Column
RG 81026	27N	05W	27	4	4	3				460	186	274
SJ 00199	27N	05W	03	2	1					1840		
SJ 00046	27N	05W	04	4	4					506	260	246

Record Count: 3

New Mexico Office of the State Engineer

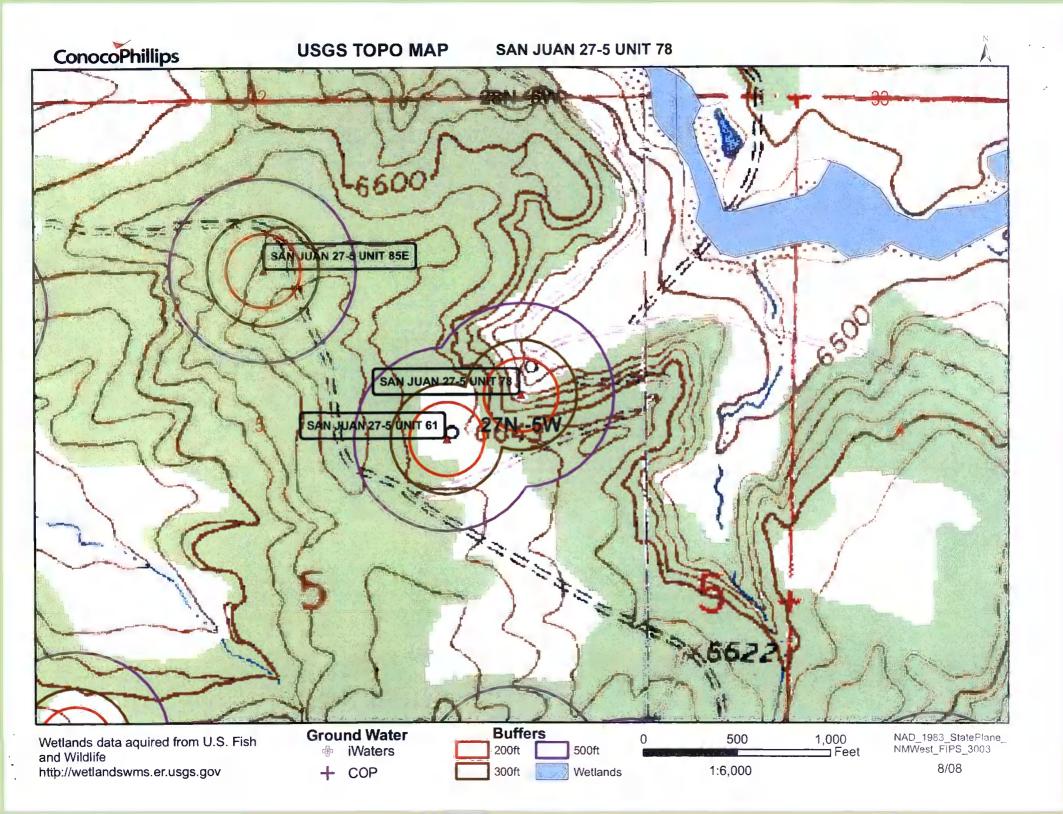
### New Mexico Office of the State Engineer POD Reports and Downloads

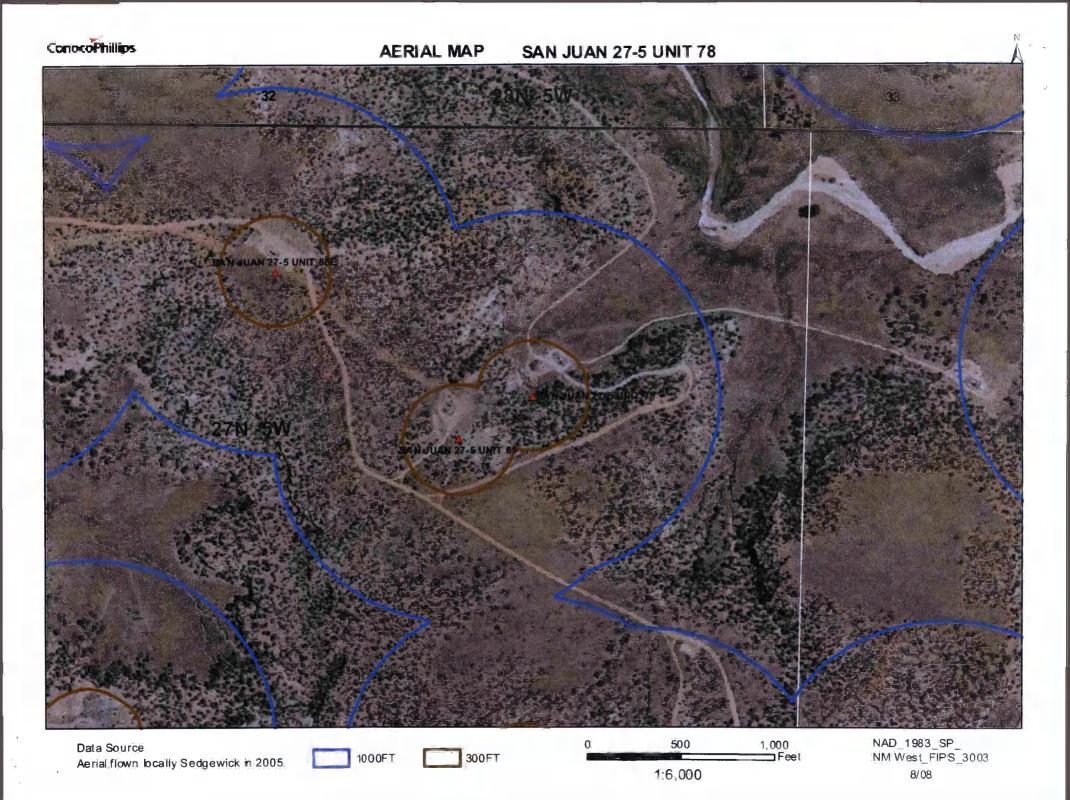
•
Township: 28N Range: 05W Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) CNon-Domestic CDomestic CAll
POD / Surface Data Report Avg Depth to Water Report Water Column Report
Clear Form iWATERS Menu Help

### WATER COLUMN REPORT 08/20/2008

						3=SW 4=SI smalles			Depth	Depth	Water (in
POD Number	Tws	Rng	Sec	Q Q (	a	Zone	x	Y	Well	Water	Column
SJ 01893	28N	05W	18	4					390	290	100
SJ 00047	28N	05W	28						465	265	200
SJ 00036	28N	05W	28	3					303	243	60

Record Count: 3





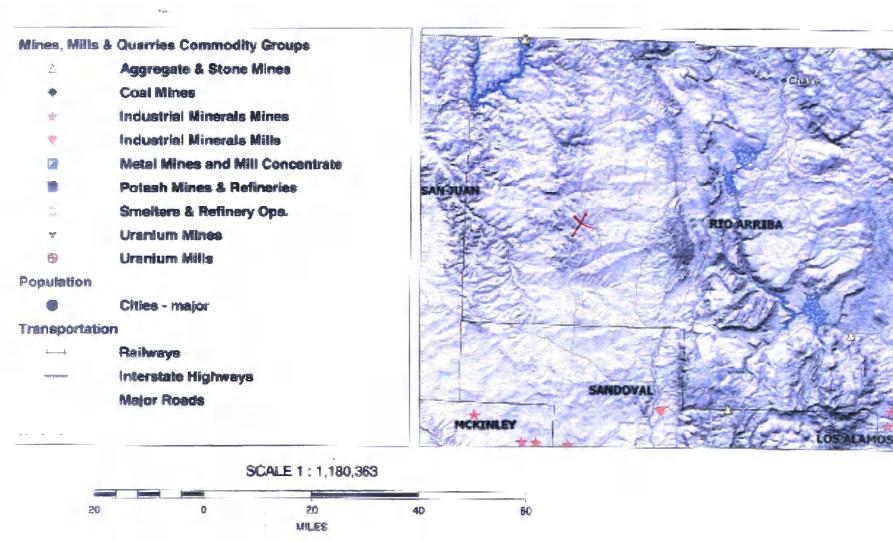
# Mines, Mills and Quarries Web Map

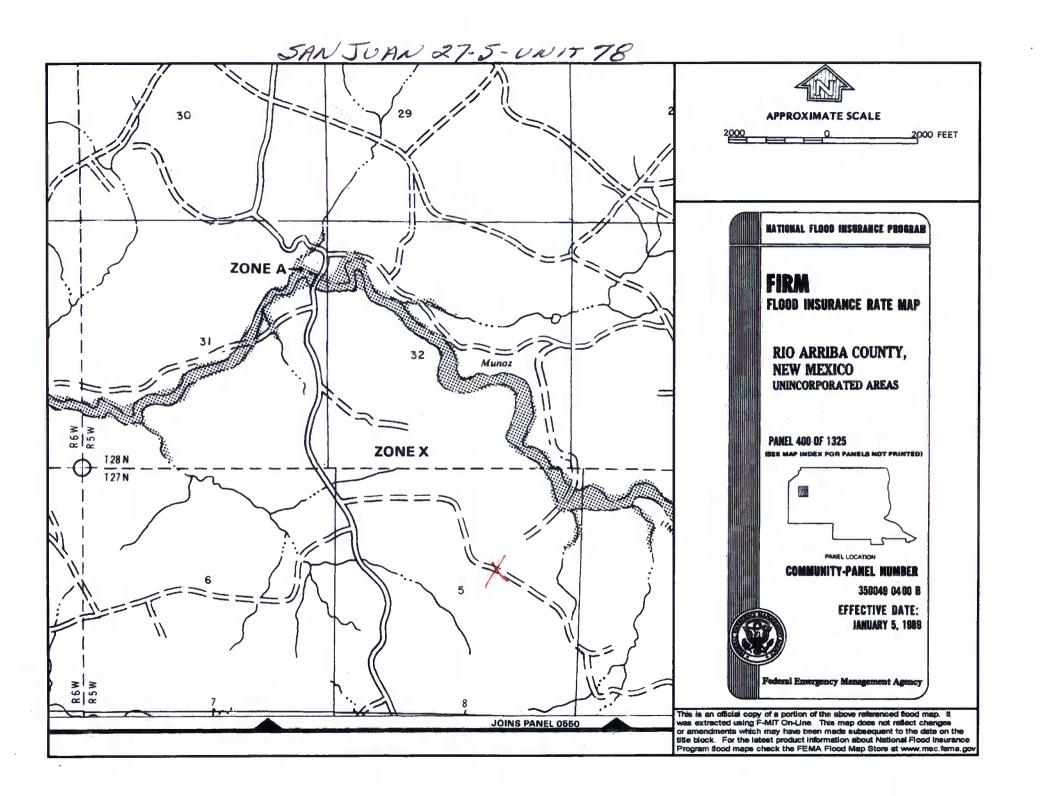
# **SAN JUAN 27-5 UNIT 78**

Espanola

SANTA

Unit Letter: G, Section: 05, Town: 027N, Range: 005W





### **SAN JUAN 27-5 UNIT 78**

### Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'SAN JUAN 27-5 UNIT 78', which is located at 36.60606 degree, North latitude and 107.37727 degree, West longitude. This location is located on the Santos Peak 7.5' USGS topographic quadrangle. This location is in section 5 of Township 27 North Range 5 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in Rio Arriba County, New Mexico. The nearest town is Turley, located 24.6 miles to the northwest. The nearest large town (population greater than 10,000) is Farmington, located 46.8 miles to the west (National Atlas). The nearest highway is US Highway 64, located 5.7 miles to the north. The location is on BLM land and is 3,629 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Blanco Canyon. New Mexico, Sub-basin. This location is located and receives 12 inches of rain each year. The vegetation at this location is classified as Inter-Mountain Basins Semi-Desert Shrub Steppe as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 249 feet. This estimation is based on the data published on the New Mexico Engineer's iWaters Database website and water depth data from ConocoPhillips' Cathodic wells. Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 908 feet to the east and is classified by the USGS as an intermittent stream. The nearest perennial stream is named Munoz Creek and is 1,210 feet to the northeast. The nearest water body is 1,583 feet to the northeast. It is classified by the USGS as a perennial lake and is 0.4 acres in size. The nearest spring is 22,409 feet to the east. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 6,657 feet to the southeast. The nearest wetland is a 46.5 acre Ravine located 1,178 feet to the northeast. The slope at this location is 8 degree, to the north as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is SAN JOSE FORMATION -- Siltstone, shale, and sandstone with a Sandstone dominated formations of all ages substrate. The soil at this location is 'Vessilla-Menefee-Orlie complex, 1 to 30 percent slopes' and is well drained and not hydric with severe erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 15.9 miles to the north as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

#### 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.

# Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

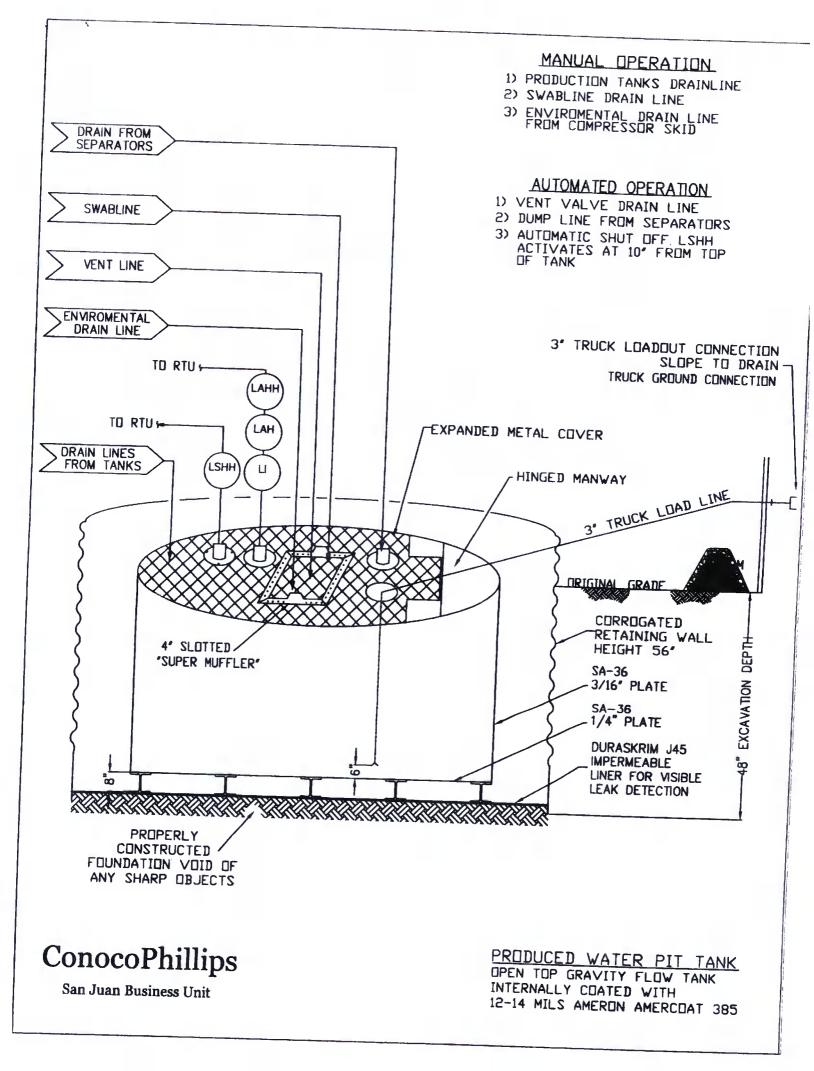
In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does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

### General Plan:

- 1. BR will design and construct a properly sized and approved BGT which will contain liquids and should prevent contamination of fresh water to protect the public health and environment.
- 2. BR signage will comply with 19.15.3.103 NMAC when BR is the operator. If BR is not the operator it will comply with 19.15.17.11NMAC. BR includes Emergency Contact information on all signage.
- 3. BR has approval to use alternative fencing that provides better protection. BR constructs fencing around the BGT using 4 foot hog wire fencing topped with two strands of barbed wire, or with a pipe top rail. A six foot chain link fence topped with three strands of barbed wire will be use if the well location is within 1000 feet of permanent residence, school, hospital, institution or church. BR ensures that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- 4. BR will construct a screened, expanded metal covering, on the top of the BGT.
- 5. BR shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight as shown on design drawing and specification sheet.
- 6. The BR below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom as shown on design drawing.
- 7. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a belowgrade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 8. BR will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.

9. BR has equipped the below-grade tanks with the ability to detect high level in the tank and provide alarm notification and shutdown process streams into the tank. Once high level is detected RTU logic closes the inlet separator sales valve and does not permit vent valve to open. This shutdown of the sales valve and gagging of the vent valves prevents any hydrocarbon process streams from entering the pit tank once a high level is detected. Furthermore, an electronic page is sent to the BR MSO for that well site and to the designated contract "Water-Hauling" Company indicating a high level and that action must be taken to address this alarm. The environmental drain line from BR's compressor skid under normal operating conditions is in the open position. The environmental drain line is in place to capture any collected rain water or spilled lubricants from our compressor skids. The swab drain line is a manually operated drain and by normal operating procedures is in the closed position. The tank drain line is also a manually operated drain and during normal operations it is in the closed position.

- 10. The geomembrane liner consists of a 45-mil flexible LLDPE material manufactured by Raven Industries as J45BB. This product is a four layer reinforced laminated containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. The J45BB is reinforced with 1300 denier (minimum) tri-directional scrim reinforcement. It exceeds ASTMD3083 standard by 10%. J45BB has a warranty for 20 years from Raven Industries and is attached. It is typically used in Brine Pond, Oilfield Pit liner and other industrial applications. The manufacture specific sheet is attached and the design attached displays the proper installation of the liner.
- 11. The general specification for design and construction are attached in the BR document.



# URL-SKRIM® LEG.

PROPERTIES	TEST METHOD	i	J30BE	b J	J36BE J45BE			
Appearance		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Rol Averages	· · · · · · · · · · · · · · · · · · ·	Typical Rol Averages	
		Black/Black		Blac	Black/Black		k/Black	
Thickness	ASTM D 5199	27 mil	30 mil	32 mil	36 mil			
Weight Lbs Per MSF (oz/yd²)	ASTM D 5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs (21.74)	168 lbs	40 mil 189 lbs	45 mil 210 lbs	
Construction		**Ex			(24.19)	(27.21)	(30.24)	
Ply Adhesion	ASTM D 413	10 16.	trusion laminate		ated tri-directio	nal scrim reinfo	rcement	
	7.01110413	16 lbs	20 lbs	19 lbs	24 lbs	25 lbs	31 lbs	
1" Tensile Strength	ASTM D 7003	88 lbf MD 63 lbf DD	110 lbf MD 79 lbf DD	90 lbf MD 70 lbf DD	113 lbf MD 87 lbf DD	110 lbf MD 84 lbf DD	138 lbf MD 105 lbf DD	
1" Tensile Elongation @ Break % (Film Break)	ASTM D 7003	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	
1" Tensile Elongation @ Peak % (Scrim Break)	ASTM D 7003	20 MD 20 DD	33 MD 33 DD	20 MD 20 DD	30 MD 31DD	20 MD 20 DD	36 MD 36 DD	
Tongue Tear Strength	ASTM D 5884	75 lbf MD 75 lbf DD	97 lbf MD 90 lbf DD	75 lbf MD 75 lbf DD	104 lbf MD 92 lbf DD	100 lbf MD 100 lbf DD	117 lbf MD 118 lbf DD	
Grab Tensile	ASTM D 7004	180 lbf MD 180 lbf DD	218 lbf MD 210 lbf DD	180 lbf MD 180 lbf DD	222 lbf MD 223 lbf DD	220 lbf MD 220 lbf DD	257 lbf MD 258 lbf DD	
rapezoid Tear	ASTM D 4533	120 lbf MD 120 lbf DD	146 lbf MD 141 lbf DD	130 lbf MD 130 lbf DD	189 lbf MD 172 lbf DD	160 lbf MD 160 lbf DD	193 lbf MD 191 lbf DD	
Dimensional Stability	ASTM D 1204	<1	<0.5	<1	<0.5			
uncture Resistance	ASTM D 4833	50 lbf	CAIL			<1	<0.5	
laximum Use Temperature			64 lbf	65 lbf	83 lbf	80 lbf	99 lbf	
Inimum Use Temperature		180° F	180° F					
) = Machine Direction		-70° F	-70° F					

MD = Machine Direction DD = Diagonal Directions

Note: Minimum Roll Averages are set to take into account product variability in addition to testing variability between laboratories.

\*Dimensional Stability Maximum Value

\*\*DURA-SKRIM J30BB, J36BB & J45BB are a four layer reinforced laminate containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. DURA-SKRIM J30BB, J36BB & J45BB are reinforced with a 1300 denier (minimum) tri-directional scrim reinforcement.

Note: RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all lubinty for resulting loss or damage.

# RAVEN INDUSTRIES

# PLANT LOCATION

Sioux Falls, South Dakota

# SALES OFFICE

P.O. Box 5107 Sioux Falls, SD 57117-5107 (605) 335-0174 (605) 331-0333 FAX 800-635-3456

8

# RAVEN INDUSTRIES INC. EXPOSED GEOMEMBRANE LIMITED WARRANTY

Raven Industries Inc. warrants Dura-Skrim J30BB, J36BB, and J45BB to be free from manufacturing defects and to be able to withstand normal exposure to sunlight for a period of 20 years from the date of sale for normal use in approved applications in the U.S and Canada, excluding Hawaii. This warranty is effective for products sold and shipped from January 1, 2008 to December 31, 2008.

This Limited Warranty does not include damages or defects in the Raven geomembrane resulting from acts of God, casualty or catastrophe including but not limited to: earthquakes, floods, piercing hail, or tornadoes. The term "normal use" as used herein does not include, among other things improper handling during transportation, unloading, storage or installation, the exposure of Raven geomembranes to harmful chemicals, atypical atmospheric conditions, abuse of Raven geomembranes by machinery, equipment or people; improper site preparation or covering materials, excessive pressures or stresses from any source or improper consumer as defined in the Magnuson Moss Warranty or any similar federal, state, or local statues. The parties expressly agree that the sale hereunder is for commercial or industrial use only.

Should defects or premature loss of use within the scope of the above Limited Warranty occur, Raven Industries Inc. will, at its option, repair or replace the Raven geomembrane on a pro-rata basis at the then current price in such manner as to charge the Purchaser/User only for that portion of the warranted life which has elapsed since purchase of the material. Raven Industries Inc. will, at its will have the right to inspect and determine the cause of any alleged defect in the Raven geomembrane and to take appropriate steps to repair or replace the Raven geomembrane if a defect exists which is covered under this warranty. This Limited Warranty extends only to Raven's geomembrane, and does not extend to the installation service of third parties nor does it extend to materials furnished or installed by others in connection with the intended use of the Raven geomembranes.

Any claim for any alleged breach of this warranty must be made in writing, by certified mail, to the General Manager of Engineered Films Division of Raven Industries Inc. within ten (10) days of becoming aware of the alleged defect. Should the required notice not be given, the defect and all warranties are waived by the Purchaser, and Purchaser shall not have any rights under this warranty. Raven Industries Inc. shall not be obligated to perform repairs or replacements under this warranty unless and until the area to be replaced is clean, dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or replacement of Raven geomembrane to be free from all water, dirt, sludge, residuals and liquids of any kind. If after inspection it is associated with the site inspection.

In the event the exclusive remedy provided herein fails in its essential purpose, and in that event only, the Purchaser shall be entitled to a return of the purchase price for so much of the material as Raven Industries Inc. determines to have violated the warranty provided herein. Raven Industries Inc. shall not be liable for direct, indirect, special, consequential or incidental damages resulting from a breach of this warranty including, but not limited to, damages for loss of production, lost profits, personal injury or property damage. Raven Industries Inc. shall not be obligated to reimburse Purchaser for any repairs, replacement, modifications or alterations made by Purchaser unless Raven Industries Inc. specifically authorized, in writing, said repairs, replacements, modifications or alteration in advance of them having been made. Raven Industry's liability under this warranty shall in no event exceed the replacement cost of the material sold to the Purchaser for the particular installation in which it failed.

Raven Industries Inc. neither assumes nor authorizes any person other than the undersigned of Raven Industries Inc. to assume for it any other or additional liability in connection with the Raven geomembrane made on the basis of the Limited Warranty. The Limited Warranty on the Raven geomembrane herein is given in lieu of all other possible material warranties, either expressed or implied, and by accepting delivery of the material; Purchaser waives all other possible warranties, except those specifically given. This Limited Warranty may only be modified by written document mutually executed by Owner and Raven Industries Inc.

Limited Warranty is extended to the purchaser/owner and is non-transferable and non-assignable; i.e., there are no third-party beneficiaries to this warranty.

Purchaser acknowledges by acceptance that the Limited Warranty given herein is accepted in preference to any and other possible materials warranties.

THIS LIMITED WARRANTY SHALL BE GOVERNED BY SOUTH DAKOTA LAW AND VENUE FOR ALL LEGAL PROCEEDINGS IN CONNECTION WITH THIS LIMITED WARRANTY SHALL BE IN MINNEHAHA COUNTY, SOUTH DAKOTA. RAVEN INDUSTRIES INC. MAKES NO WARRANTY OF ANY KIND OTHER THAN THAT GIVEN ABOVE AND HEREBY DISCLAIMS ALL WARRANTIES, BOTH EXPRESSED OR IMPLIED, OF MERCHANTABILITY OF ANY KIND OTHER THAN PARTICULAR PURPOSE. THIS IS THE ONLY WARRANTY: THAT APPLIES TO THE MATERIALS REFERRED TO HEREIN AND RAVEN INDUSTRIES INC. DISCLAIMS ANY LIABILITY FOR ANY WARRANTIES GIVEN BY ANY OTHER PERSON OR ENTITY, EITHER WRITTEN OR ORAL.

RAVEN INDUSTRIES' WARRANTY BECOMES AN OBLIGATION OF RAVEN INDUSTRIES INC. TO PERFORM UNDER THE WARRANTY ONLY UPON RECEIPT OF FINAL PAYMENT AND EXECUTION BY A DULY AUTHORIZED OFFICER OF RAVEN INDUSTRIES INC.

# Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Maintenance and Operating Plan

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

### General Plan:

x.

- BR will operate and maintain a BGT to contain liquids and solids and maintain the integrity of the liner, liner system and secondary containment system to prevent contamination of fresh water and protect public health and environment. BR will accomplish this by performing an inspection on a monthly basis, installing cathodic protection, and automatic overflow shutoff devices as seen on the design plan.
- 2. BR will not discharge into or store any hazardous waste in the BGT.
- 3. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a below-grade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 4. As per 19.17.15.12 Subsection D, Paragraph 3, BR will inspect the below-grade tank at least monthly reviewing several items which include 1) containment berms adequate and no oil present, 2) tanks had no visible leaks or sign of corrosion, 3) tank valves, flanges, and hatches had no visible leaks and 4) no evidence of significant spillage of produced liquids. In addition, BR's multi-skilled operators (MSOs) are required to visit each well location once per week. If detected on either inspection, BR shall remove any visible or measurable layer of oil from the fluid surface of a below-grade tank in an effort to prevent significant accumulation of oil overtime. The written record of the monthly inspections will include the items listed above and will be maintained for five years.
- 5. BR shall require and maintain a 10" adequate freeboard to prevent overtopping of the below-grade tank.
- 6. If the below grade tank develops a leak, or if any penetration of the pit liner or below grade tank, occurs below the liquid's surface, then BR shall remove all liquid above the damage or leak line within 48 hours. BR shall notify the appropriate district office. BR shall repair or replace the pit liner or below grade tank, within 48 hours of discovery. If the below grade tank or pit liner does not demonstrate integrity, BR shall promptly remove and install a below grade tank or pit liner that complies with Subsection I of 19.15.17.11 NMAC. BR shall notify the appropriate district office of a discovery of leaks less than 25 barrels as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.

## Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Closure Plan

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of Below Grade Tanks (BGTs) on Burlington Resources Oil & Gas Company, LP locations hereinafter known as BR locations. This is BR's standard procedure for all BGTs. A separate plan will be submitted for any BGT which does not conform to this plan.

### General Requirements:

- BR shall close a below-grade tank within the time periods provided in Subsection A of 19.15.17.13 NMAC. This will include a) below-grade tanks that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I o f19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) permitted below-grade tanks within 60 days of cessation of the below-grade tank's operation., or c) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, BR will file the C144 Closure Report as required.
- BR shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.
- 3. BR will receive prior approval to remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves. Documentation of how the below-grade tank was disposed of or recycled will be provided in the closure report.
- 4. If there is any on-site equipment associated with a below-grade tank, then BR shall remove the equipment, unless the equipment is required for some other purpose.
- 5. BR shall test the soils beneath the below-grade tank to determine whether a release has occurred. BR shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method that the chloride concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BR shall notify the division of its results on form C-141.
- 6. If BR or the division determines that a release has occurred, then BR shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

- 7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then BR shall backfill the excavation with compacted, nonwaste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.
- 8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include
  - i. Operator's name

- ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 9. The surface owner shall be notified of BR's closing of the below-grade tank prior to closure as per the approved closure plan via certified mail, return receipt requested.
- 10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping 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.
- 11. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will used on federally jurisdicted lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. BR will repeat seeding or planting will be continued until successful vegetative growth occurs.
- 12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
- 13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the belowgrade tank. Closure report will be filed on C-144 and incorporate the following:
  - Soil Backfilling and Cover Installation •
  - Re-vegetation application rates and seeding techniques •
  - Photo documentation of the site reclamation
  - Confirmation Sampling Results
  - Proof of closure notice