#### District I 1625 N. French Dr., Hobbs, NM 88240

State of New Mexico Energy Minerals and Natural Resources Form C-144

1301 W Grand Ave., Artesia, NM 88210

1000 Rio Brazos Rd , Aztec, NM 87410

Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office.

District IV 12

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the

220 S St Francis Dr.	, Santa Fe, NM 87505	appropriate inviocal district Office
1703		Pit, Closed-Loop System, Below-Grade Tank, or
1100	<u>Prop</u>	osed Alternative Method Permit or Closure Plan Application
	Type of action:	X Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
		Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
		Modification to an existing permit
		Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
		below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the

environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Burlington Resources Oil & Gas Company, LP OGRID#: 14538
Address: PO Box 4289, Farmington, NM 87499
Facility or well name: RANDLEMON 1C & RANDLEMON 100
API Number: 3004534901 & 3004534711 OCD Permit Number:
U/L or Qtr/Qtr: M(SW/SW) Section: 23 Township: 31N Range: 11W County: San Juan
Center of Proposed Design: Latitude: 36.87834 °N Longitude: 107.96668 °W NAD: 1927 X 1983
Surface Owner: Federal State X Private Tribal Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC  Temporary: Drilling Workover Permanent Emergency Cavitation P&A Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other String-Reinforced Liner Seams: Welded Factory Other Volume: bbl Dimensions L x W x D
Closed-loop System: Subsection H of 19.15.17.11 NMAC   Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)   Drying Pad Above Ground Steel Tanks Haul-off Bins Other Lined Unlined Liner type: Thickness mil LLDPE HDPE PVD Other Liner Seams: Welded Factory Other
Drying Pad
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6  Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks)							
Fencing. Subsection B of 19.13.17.11 NMAC (Appries 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, hospital, institution or church)							
Four foot height, four strands of barbed wire evenly spaced between one and four feet							
X Alternate. Please specify 4' hogwire fence with a single strand of 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)							
8							
Signs: Subsection C of 19.15 17.11 NMAC							
12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers							
X Signed in compliance with 19.15.3.103 NMAC							
Administrative Approvals and Exceptions:  Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance							
Please check a box if one or more of the following is requested, if not leave blank:							
Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration (Fencing/BGT Liner)	eration of appr	roval					
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.							
10							
10 Siting Criteria (regarding permitting) 19.15.17.10 NMAC							
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of 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	Yes	XNo					
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					
- Topographic map; Visual inspection (certification) of the proposed site							
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	XNo					
(Applies to temporary, emergency, or cavitation pits and below-grade tanks)	□NA						
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image							
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	No					
(Applied to permanent pits)  Visual impression (contification) of the proposed sites Aprial photos Satellita image	XNA						
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image		V No					
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	X No					
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.		,					
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance 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	XNo					
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Within 500 feet of a wetland.						
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	Yes	XNo					
Within an unstable area.	Yes	XNo					
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map							
Within a 100-year floodplain - FEMA map	Yes	XNo					

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Temporary Pits, Emergency Pits and Below-grade Tanks Permit Application Attachment Checklist Subsection B of 19.15.17.9 NMAC
Instructions. Each of the following items must be attached to the application Please indicate, by a check mark in the box, that the documents are attached.
X   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
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
X Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API or Permit
12 Closed-loop Systems Permit Application Attachment Checklist:Subsection B of 19.15.17.9 NMAC
Instructions. Each of the following items must be attached to the application Please indicate, by a check mark in the box, that the documents are attached
Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9
NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design)  API
Previously Approved Operating and Maintenance Plan API
13
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15 17.9 NMAC
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
Climatological Factors Assessment
Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
Dike Protection and Structural Integrity Design: based upon the appropriate requirements of 19.15.17.11 NMAC  Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
Quality Control/Quality Assurance Construction and Installation Plan
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
Nuisance or Hazardous Odors, including H2S, Prevention Plan
Emergency Response Plan
Oil Field Waste Stream Characterization
Monitoring and Inspection Plan
Erosion Control Plan
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit X Below-grade Tank Closed-loop System  Alternative
Proposed Closure Method: X 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
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
15
Waste Excavation and Removal Closure Plan Checklist (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan.
Please indicate, by a check mark in the box, that the documents are attached.
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
X Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
<ul> <li>X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)</li> <li>X Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> </ul>
X   Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
X Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

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16 Waste Removal Closure For Closed-loop Systems That Utilize Above G	Ground Steel Tanks or Haul-off Bins Only:(19,15,17 13,D NMAC)							
Instructions Please identify the facility or facilities for the disposal of liqui- facilities are required	ds, drilling fluids and drill cuttings. Use attachment if more than two	,						
Disposal Facility Name:	Disposal Facility Permit #.							
Disposal Facility Name: Disposal Facility Permit #:								
Will any of the proposed closed-loop system operations and associa Yes (If yes, please provide the information No								
Required for impacted areas which will not be used for future service and operations:  Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19 15 17 13 NMAC  Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC								
17 Siting Criteria (Regarding on-site closure methods only: 19.15 17 Instructions Each siting criteria requires a demonstration of compliance in the closic certain siting criteria may require administrative approval from the appropriate distribution of consideration of approval Justifications and/or demonstrations of equivalents.	ire plan Recommendations of acceptable source material are provided below rict office or may be considered an exception which must be submitted to the S							
Ground water is less than 50 feet below the bottom of the buried water.  - NM Office of the State Engineer - IWATERS database search; USG		Yes No						
Ground water is hetween 50 and 100 feet below the bettem of the	weight waste	Yes No						
Ground water is between 50 and 100 feet below the bottom of the backet.  - NM Office of the State Engineer - iWATERS database search; USGS		N/A						
- -	·							
Ground water is more than 100 feet below the bottom of the buried - NM Office of the State Engineer - iWATERS database search; USGS		Yes No						
· ·	•							
Within 300 feet of a continuously flowing watercourse, or 200 feet of any comeasured from the ordinary high-water mark).	Yes No							
- Topographic map; Visual inspection (certification) of the proposed si								
Within 300 feet from a permanent residence, school, hospital, institution, o - Visual inspection (certification) of the proposed site, Aerial photo; sat	Yes No							
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal fee 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; Visual inspection (certification) of the proposed site								
Within incorporated municipal boundaries or within a defined municipal fres pursuant to NMSA 1978, Section 3-27-3, as amended	sh water well field covered under a municipal ordinance adopted	☐Yes ☐No						
<ul> <li>Written confirmation or verification from the municipality, Written a</li> <li>Within 500 feet of a wetland</li> </ul>	pproval obtained from the municipality	Yes No						
- US Fish and Wildlife Wetland Identification map. Topographic map;	Visual inspection (certification) of the proposed site							
Within the area overlying a subsurface mine.		Yes No						
- Written confiramtion or verification or map from the NM EMNRD-M	ining and Mineral Division							
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Ge Topographic map	cology & Mineral Resources; USGS; NM Geological Society;	YesNo						
Within a 100-year floodplain FEMA map		Yes No						
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instruction by a check mark in the box, that the documents are attached.	ons: Each of the following items must bee attached to the clo	osure plan. Please indicate,						
Siting Criteria Compliance Demonstrations - based upon the	e appropriate requirements of 19.15.17.10 NMAC							
Proof of Surface Owner Notice - based upon the appropriate	requirements of Subsection F of 19.15.17.13 NMAC							
	ased upon the appropriate requirements of 19.15.17.11 NMAC							
	rial of a drying pad) - based upon the appropriate requirement	s of 19.15.17.11 NMAC						
Protocols and Procedures - based upon the appropriate requi								
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC								
Waste Material Sampling Plan - based upon the appropriate	•	In account to a self and the se						
Disposal Facility Name and Permit Number (for liquids, dr. Soil Cover Design - based upon the appropriate requirement	lling fluids and drill cuttings or in case on-site closure standards to of Subsection H of 19.15.17.13 NMAC	as cannot be achieved)						
Re-vegetation Plan - based upon the appropriate requirement								

19
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 belief
Name (Print): Marie E Jaramillo Title: Staff Regulatory Technician
Signature: \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
e-mail address: matte:e\jaramillo@conocoptillips.com Telephone: 505-326-9865
20
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Dyrungh Sell Approval Date: 2/1910
Title:OCD Permit Number:
Title: OCD Permit Number:
21
Closure Report (required within 60 days of closure completion): Subsection K of 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. The closure
report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an
approved closure plan has been obtained and the closure activities have been completed.
Closure Completion Date:
22 Clause Mathods
Closure Method:
Waste Excavation and Removal On-site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)
If different from approved plan, please explain.
23
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:
Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities
were utilized.
Disposal Facility Name: Disposal Facility Permit Number:
Disposal Facility Name Disposal Facility Permit Number
Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?
Yes (If yes, please demonstrate complilane to the items below)
Required for impacted areas which will not be used for future service and operations:
Site Reclamation (Photo Documentation)
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
24
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check 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)
Plot Plan (for on-site closures and temporary pits)
Confirmation Sampling Analytical Results (if applicable)
Waste Material Sampling Analytical Results (if applicable)
Disposal Facility Name and Permit Number
<u> </u>
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
Site Reclamation (Photo Documentation)
On-site Closure Location: Latitude: Longitude: NAD 1927 1983
25
Operator Closure Certification:
I hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief I also certify that
the closure complies with all applicable closure requirements and conditions specified in the approved closure plan
Name (Print): Title:
Signature: Date:
e-mail address: Telephone:



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

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

	AN ANYMAN AN A	(quarte							(NAD83 UTN		<b>)</b>	(In feet	•
POD Number	Sub basin Use	County	∉Q 64	Q 16	Q 4	Sec	Tws	Rng	X			Depth V WaterC	
SJ 00287	DOM	SJ	4	2	3	24	31N	11W	237677	4085770*	38	6	32
SJ 00363	DOM	SJ	4	1	3	26	31N	11W	235582	4084235*	25	5	20
SJ 00365	DOM	SJ	4	4	2	24	31N	11W	238505	4086140*	71	40	31
SJ 00371	DOM	SJ	2	1	3	26	31N	11W	235582	4084435*	29	9	20
SJ 00379	DOM	SJ	4	4	2	24	31N	11W	238505	4086140*	65	40	25
SJ 00405	DOM	SJ	4	3	4	24	31N	11W	238068	4085354*	69	42	27
SJ 00494	DOM	SJ		4	4	26	31N	11W	236686	4083894*	88	60	28
SJ 00555	DOM	SJ	4	2	2	24	31N	11W	238519	4086542*	60	19	41
SJ 00555 X	DOM	SJ		4	2	24	31N	11W	238406	4086241*	58	39	19
SJ 00560	DOM	SJ		4	2	13	31N	11W	238453	4087847*	39	25	14
ŚJ 00561	DOM	SJ		3	4	26	31N	11W	236281	4083910*	38	20	18
SJ 00562	STK	SJ		3	4	26	31N	11W	236281	4083910*	40	20	20
SJ 00610	MPP	SJ		2	4	26	31N	11W	236699	4084294*	80	50	30
SJ 00675	DOM	SJ	3	4	1	26	31N	11W	235800	4084621*	36	22	14
SJ 00705	DOM	· SJ	1	1	3	26	31N	11W	235382	4084435*	18	8	10
SJ 00913	DOM	SJ		3	4	24	31N	11W	237969	4085455*	81	55	26
SJ 00926	DOM	SJ		1	4	26	31N	11W	236294	4084309*	62	32	30
SJ 00946	DOM	SJ		3	3	13	31N	11W	237235	4087090*	135	100	35
SJ 01042	DOM	SJ		4	4	26	31N	11W	236686	4083894*	100	30	70
SJ 01047	DOM	SJ	4	3	4	24	31N	11W	238068	4085354*	205	70	135
SJ 01142	DOM	SJ	4	4	4	13	31N	11W	238533	4086943*	30	8	22
SJ 01173	DOM	SJ	4	4	4	13	31N	11W	238533	4086943*	46	28	18
SJ 01233	DOM	SJ		4	1	26	31N	11W	235901	4084722*	49	27	22
SJ 01366	DOM	SJ		1	4	24	31N	11W	237985	4085856*	30	11	19
SJ 01375	DOM	SJ		2	2	24	31N	11W	238420	4086643*	30	11	19
SJ 01405	DOM	SJ		3	4	24	31N	11W	237969	4085455*	30	9	21
SJ 01455	DOM	SJ	4	3	4	24	31N	11W	238068	4085354*	101	66	35
SJ 01519	DOM	SJ		2	4	26	31N	11W	236699	4084294*	69	47	22
SJ 01537	DOM	SJ		4	4	13	31N	11W	238434	4087044*	52	28	24
location was derived from	n PLSS - see Help								١				

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

•		Sub	, (3) T-111					Twe		als to the		Depth D	epth V	Väter
	POD Number	basin Üse	Count	y 64 1	16	4	Sec	Tws	Rng	The second of X	mannoles le Y	Well	VaterCo	olumn
	SJ 01538	DOM	SJ		4	4	13	31N	11W	238434	4087044*	52	30	22
	SJ 01539	DOM	SJ			3	13	31N	11W	237436	4087291*	52	30	22
	SJ 01540	DOM	SJ			4	13	31N	11W	238235	4087260*	52	30	22
	SJ 01541	DOM	SJ			3	13	31N	11W	237436	4087291*	52	30	22
	SJ 01542	DOM	SJ		4	4	13	31N	11W	238434	4087044*		\	
	SJ 01545 X	DOM	SJ		3	3	26	31N	11W	235471	4083938*	27	10	17
	SJ 01551	DOM	SJ	ı	4	2	13	31N	11W	238453	4087847*	64	42	22
	SJ 01553	DOM	SJ		4	3	24	31N	11W	237559	4085470*	44	35	9
	SJ 01559	DOM	SJ			2	24	31N	11W	238202	4086458*	50	27	23
	SJ 01600	DOM	SJ			1	24	31N	11W	237394	4086489*	30	6	24
	SJ 01609	DOM	SJ		4	4	13	31N	11W	238434	4087044*	40	18	22
	SJ 01620	DOM	′SJ		2	4	26	31N	11W	236699	4084294*	67	26	41
	SJ 01628	DOM	SJ		2	4	26	31N	11W	236699	4084294*	66	25	41
	SJ 01640	DOM	SJ		4	2	13	31N	11W	238453	4087847*	32	7	25
	SJ 01644	DOM	SJ		4	4	13	31N	11W	238434	4087044*	23	6	17
	SJ 01645	DOM	SJ		4	4	13	31N	11W	238434	4087044*	22	6	16
	SJ 01663	DOM	SJ		4	4	13	31N	11W	238434	4087044*	45	25	20
	SJ 01670	DOM	SJ			3	24	31N	11W	237351	4085687*	45	27	18
	SJ 01683	DOM	SJ		4	4	13	31N	11W	238434	4087044*	45	25	20
	SJ 01699	DOM	SJ		4	4	13	31N	11W	238434	4087044*	42	12	30
	SJ 01729	DOM	SJ		4	2	13	31N	11W	238453	4087847*	48	28	20
	SJ 01730	DOM	SJ		4	4	13	31N	11W	238434	4087044*	40	24	16
	SJ 01731	DOM	SJ		4	4	13	31N	11W	238434	4087044*	43	25	18
	SJ 01744	DOM	SJ		2	2	24	31N	11W	238420	4086643*	44	20	24
	SJ 01767	DOM	SJ		4	4	13	31N	11W	238434	4087044*	42	18	24
	SJ 01789	DOM	SJ		1	3	26	31N	11W	235483	4084336*	29	12	17
	SJ 01801	DOM	SJ			4	13	31N	11W	238235	4087260*	22	15	7
	SJ 01817	MUL	SJ		4	2	23	31N	11W	236789	4086300*	65	20	45
	SJ 01879	DOM	SJ			4	13	31N	11W	238235	4087260*	26	8	18
	SJ 01986	DOM	SJ	2	2	2	24	31N	11W	238519	4086742*	38	21	17
	SJ 01986 S	DOM	SJ	2	2	2	24	31N	11W	238519	4086742*	45	30	15
	SJ 02011	DOM	SJ		2	4	26	31N	11W	236699	4084294*	55	38	17

\*UTM location was derived from PLSS - see Help

(quarters are smallest to largest) (NAD83 UTM in meters)

s) (In feet)

•		Sub		73	Q	2.					C	) Pepth I	Depth	Water
	POD Number	basin Use	_	64	16	4								Column
	SJ 02093	DOM	SJ		4	4	13	31N		238528	4086862	40	20	20
	SJ 02124	DOM	SJ		1	1	24	31N		237214	4086689*	55	40	15
	SJ 02129	DOM			4	2	23	31N	11W	236789	4086300*	72	35	37
	SJ 02149	DOM	SJ		4	4	13	31N	11W	238434	4087044*	35		
	SJ 02161	DOM	SJ		4	3	23	31N	11W	235926	4085520*	40	25	15
	SJ 02171	DOM	SJ	3	4	3	24	31N	11W	237458	4085369*	45	25	20
	SJ 02215	DOM	SJ		3	4	27	31N	11W	234663	4083969*	54	23	31
	SJ 02289	DOM	SJ	4	4	4	13	31N	11W	238533	4086943*	45	16	29
	SJ 02395	DOM	SJ	3	1	1	13	31N	11W	237155	4088191*	95	35	60
	SJ 02468	DOM	SJ	3	2	4	27	31N	11W	234978	4084254*	49	30	19
	SJ 02482	DOM	SJ	2	1	4	27	31N	11W	234775	4084473*	75	55	20
	SJ 02495	DOM	SJ	1	2	4	13	31N	11W	238342	4087544*	28	12	16
	SJ 02499	DOM	SJ	1	1	2	25	31N	11W	237853	4085152*	66	45	21
	SJ 02549	DOM	SJ	3	3	4	27	31N	11W	234562	4083868*	49	30	19
	SJ 02644	DOM	SJ	4	1	4	24	31N	11W	238084	4085755*	45	18	27
	SJ 02656	DOM	SJ	4	2	4	27	31N	11W	235178	4084254*	21	9	12
	SJ 02676	DOM	SJ		3	4	27	31N	11W	234663	4083969*	19	7	12
	SJ 02758	DOM	SJ	2	4	2	24	31N	11W	238505	4086340*	69	51	18
	SJ 02791	DOM	SJ	2	4	2	24	31N	11W	238505	4086340*	74	54	20
	SJ 02801	DOM	SJ	3	4	4	13	31N	11W	238333	4086943*	36	5	31
	SJ 02834	DOM	SJ	3	3	3	25	31N	11W	236989	4083776*	200	160	40
	SJ 02838	DOM	SJ	4	4	4	13	31N	11W	238533	4086943*	38	10	28
	SJ 02839	DOM	SJ	1	4	2	24	31N	11W	238305	4086340*	55	19	36
	SJ 02846	DOM	SJ	3	3	2	24	31N	11W	237900	4086156*	45	18	27
	SJ 02853	DOM	SJ	4	3	4	27	31N	11W	234762	4083868*	22	6	16
	SJ 02855	DOM	SJ	4	4	4	13	31N	11W	238533	4086943*	31		
	SJ 02871	DOM	SJ	4	2	4	27	31N	11W	235178	4084254*	22	11	11
	SJ 02887	DOM	SJ	4	4	1	26	31N	11W	236000	4084621*	51	28	23
	SJ 02888	DOM	SJ	3	3	2	24	31N	11W	237900	4086156*	65		
	SJ 02898	DOM	SJ	4	1	2	26	31N	11W	236420	4085007*	50		
	SJ 02914	DOM	SJ	3	2	4	27	31N	11W	234978	4084254*	25	15	10
	SJ 02924	MUL	SJ	2	3	2	24	31N	11W	238100	4086356*	33	15	18

\*UTM location was derived from PLSS - see Help

(quarters are smallest to largest) (NAD83 UTM in meters)

QQQ Sub Depth Depth Water Y Well WaterColumn POD Number basin Use County 64 16 4 Sec Tws Ring... X CPMCL. SJ 02928 DOM SJ 2 3 2 24 31N 11W 238100 4086356\* 70 SJ 02978 PRO SJ 3 1 2 23 31N 11W 236309 4086603\* 800 SJ 02984 DOM SJ 4 4 27 31N 11W 234966 4084052\* 20 SJ 03018 DOM SJ 3 4 13 31N 11W 238133 4086958\* 20 8 12 SJ 03045 DOM SJ 1 25 31N 11W 237627 4084566\* 200 SJ 03064 DOM SJ 4 13 31N 11W 238333 4086943\* 45 SJ 03084 DOM SJ 2 4 4 13 31N 11W 238533 4087143\* 19 11 8 SJ 03085 DOM SJ 2 4 4 13 31N 11W 238533 4087143\* 18 8 10 SJ 03124 DOM SJ 2 4 13 31N 11W 238542 4087344\* 20 5 15 SJ 03125 DOM SJ 4 2 4 13 31N 11W 238542 4087344\* 20 5 15 DOM SJ 03126 SJ 1 1 1 26 31N 11W 235405 4085232\* 41 21 20 SJ 03158 SJ 2 4 1 26 31N 11W 236000 4084821\* 280 25 255 SJ SJ 03181 DOM 27 9 1 4 4 31N 11W 234966 4084052\* 19 10 DOM SJ 03198 SJ 1 3 3 25 31N 11W 236989 4083976\* 600 100 500 SJ 03247 DOM SJ 3 4 27 31N 11W 234562 4084068\* 70 DOM 238542 SJ 03264 SJ 9 2 2 4 13 31N 11W 4087544\* 20 11 SJ 03323 DOM SJ 4 1 3 26 31N 11W 235582 4084235\* 30 6 24 SJ 03408 DOM 1 3 2 237900 SJ 24 31N 11W 4086356\* 26 11 15 DOM 60 SJ 03412 SJ 2 4 13 31N 11W 238443 4087445\* DOM SJ 03413 SJ 2 4 238443 4087445\* 60 13 31N 11W SJ 03438 DOM SJ 238477 4 4 24 31N 11W 4085338\* 40 DOM 238333 SJ 03440 SJ 4 4 13 31N 11W 4087143\* 20 6 14 SJ 03450 DOM SJ 236989 95 3 3 3 25 31N 11W 4083776\* 144 49 DOM SJ 03505 SJ 234562 4083868\* 3 3 4 27 31N 11W 50 14 36 SJ 03540 DOM SJ 1 2 4 27 31N 11W 234978 4084454\* 40 21 19 DOM 51 39 SJ 03600 SJ 2 4 27 31N 11W 234978 4084454\* 12 DOM 238342 4087544\* 30 16 SJ 03623 SJ 1 2 4 13 31N 11W 14 DOM 32 SJ 03650 SJ 3 3 2 24 31N 11W 237900 4086156\* 15 17 16 SJ 03670 DOM SJ 3 4 13 31N 11W 238133 4086958\* 26 10 SJ 03695 POD1 DOM SJ 4 1 24 31N 11W 237696 4086371\* 25 13 12 SJ 03696 POD1 DOM SJ 1 24 11W 237696 4086371\* 24 12 12 2 4 31N SJ 03697 POD1 DOM SJ 26 236598 4084193\* 80 50 30 3 2 4 31N 11W

\*UTM location was derived from PLSS - see Help

(In feet)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

Sub			Q	Q	1 14.5		6 P .				See a See and	epth W	wr
POD Number basir	use (	County	64	16	4	Sec	Tws	Rng	<b>X</b> ,	Y	Well W	/aterCol	ບຫຼາກ
SJ 03707 POD1	STK	SJ	1	4	2	24	31N	11W	238305	4086340*	60	40	20
SJ 03712 POD1	DOM	SJ	1	3	4	13	31N	11W	237933	4087158*	19	11	8
SJ 03736 POD1	DOM	SJ	1	2	4	13	31N	11W	238342	4087544*	19	6	13
SJ 03755 POD1	DOM	SJ		4	1	24	31N	11W	237754	4086327	27	7	20
SJ 03772 POD1	DOM	<sub>_</sub> SJ	1	2	4	27	31N	11W	235035	4084480	41	30	11
SJ 03822 POD1	DOM	SJ	1	3	2	25	31N	11W	237781	4084810	220	200	20
SJ 03827 POD1	DOM	SJ	2	4	4	23	31N	11W	236710	4085834	17	6	11
SJ 03844 POD1	DOM	SJ	3	3	2	24	31N	11W	237971	4086065	37	11	26
SJ 03845 POD1	DOM	SJ	4	3	2	24	31N	11W	238118	4086116	40	14	26
SJ 03857 POD1	STK	SJ	3	2	1	14	31N	11W	236033	4088283	220	60	160
SJ 03885 POD1	EXP	SJ	1	2	3	13	31N	11W	237508	4087404	25	17	8
SJ 03885 POD2	EXP	SJ	1	2	3	13	31N	11W	237534	4087384	25	17	8
SJ 03885 POD4	EXP	SJ	1	2	3	13	31N	11W	237526	4087372	25	17	8
						_			Avera	age Depth to	Water:	27 fee	t
										Minimum	Depth:	5 fee	Ł
										Maximum	Depth:	200 fee	t

Record Count: 138

PLSS Search:

Section(s): 13, 14, 15, 22, Township: 31N Range: 11W

23, 24, 25, 26,

27

\*UTM location was derived from PLSS - see Help

ConocoPhillips TOPO\_RANDLEMON 1C & RANDLEMON 100 **RANDLEMON 1C & RANDLEMON 100 ELEVATION 5728'** Ø **AZTEC A 1A ELEVATION 5788'** GW @ 200' 22 RANDLEMON ARANDLEMON 1C BUFFERS Data Source Aerial flown locally Sedgewick in 2005. iWaters NAD\_1983\_SP\_ NM West\_FIPS\_ 1:10,000 **iWaters** 200FT Wetlands X SEC Wetlands Data Aquired from U.S. Fish and Wildlife Http://wetlandswms.er.usgs.gov 300FT 3003 COP ATR-QTR-QTR 1,000 0 250 500 500FT **USGS** Topo January 4, 2010 \_\_ Feet

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

Fator	Builington	Dagange at	Táca ti	on: Unit	Sec 2355	2 (Dan 11
me of W	ell/Wells.or	Pipeline Se	erviced A	ztec "A"	#/A /	<u>2 C</u> kng . / /
	Complet		epths 8"	PUC X é		e F F F
If Casing	Strings are			•	used 4 Ba	gs Cement
If Cement	or Bentonit	e Plugs hav	-		epths & amo	ounts used
	thickness of	,				esh, Clear,
Depths ga	s encountere	ed: None			·	
_	ed depth with	. "		e breeze u	sed: <u>3ao'</u> ≐	1500 lbs
- · · · · · · · · · · · · · · · · · · ·	iodes placed			250,240,	230 220	
	- ent pipes pl		•	· /: . J		
	perforation	, , , , , , , , , , , , , , , , , , , ,				J
Remarks:		, , , , , , , , , , , , , , , , , , , ,				
		• .	-		:	

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

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

Energy, Minerals and Natural Resources Department

District Office

State Lease - 6 copies Fee Lease - 5 copies DISTRICT 1

PO Box 1980 Hobbs, NM 88240

**OIL CONSERVATION DIVI** 

P. O. Box 2089

WELL API NO 30-045-2

30-04	5-29483	

Form C-105

Revised 1-1-89

DISTRICT II

P O Drawer DD, Arte	sia, NM 8821	0	Santa	Fe, New	Mexico 875	04-208	18		:700	5. Indica	ite Type of Lease			
						1(*)	刑, 6	(9)(1)	77 mg			FEE X		
<u>DISTRICT III</u> 1000 Rio Brazos Rd . Aztec, NM 87410										6. State	Oil & Gas Lease No	•		
WELL COM	PLETIO	N OR	RECC	MPLE	TION RE	POR						A Company of		
18. TYPE OF WELL										7. Lease	Name or Unit Agra	ement Name		
OIL WELL	GAS	WELL X	7	DRY	OTHER									
b. TYPE OF COMP	PLETION	_	_											
NEW WORK DEEPEN BACK RESVR OTHER										Aztec A				
2. Name of Operator BURLINGTON RESOURCES OIL & GAS COMPANY											8. Well No.			
3. Address of Oper		CES OIL	a GAS C	OMPANY						9. Pool name or Wildcat				
PO BOX 4289, Farmington, NM 87499										Blanco Mesaverde				
4. Well Location														
Unit Le	mer i	: 1515		From The	South		Line and		865	reet	From The <u>Ea</u>	st Line		
Section		<u> </u>	Towr			Range	11W	/	NMPM		San Juan	County		
10. Date Spudded 3-24-98		e T.D. Rea 28-98	ched	12. Date C 4-6-	ompl. (Ready t	o Prod.)	. ,		RKB, RT GF , 5800 KB	7, etc.)	14 Elev. Casinghe	ead		
15. Total Depth			Back T.D.		if Multiple Com	pi. How	18. Inte		Rotary Tools	<del></del>	Cable Tools			
****			•		Many Zones?		Dri	lled By						
5146	ai(s), of this c	5077		om. Name			<u> </u>		0-5146 20. Was Directional Survey Made					
Producing Interval(s), of this completion - Top, Bottom, Name     4411-4955 Mesaverde										,				
21. Type Electric an CNL-GR	d Other Logs	Run		. <del>.</del>		_			22. Was W					
23.			ASING	RECO	)RD (Rep	ort al	string	s set i	n well)	No		<del></del>		
CASING SIZE					TH SET		HOLE SIZ			MENTING	RECORD	AMOUNT PULLED		
9 5/8				242		12 1/4			195 cu.ft.					
7 20#		*		2645		8 3/4		694 cu.ft.			<del> </del>			
			111ED DE	0000							71101110 050	70000		
SIZE			LINER RECORD		SACKS CEMENT		SCREEN		25. SIZE		TUBING REC	PACKER SET		
4 1/2	2502		512			30,2,111			2 3/8		4938	- AGREAGE		
28. Perforation record (interval, size, and number) 27. ACID, SHOT, FRACTURE, CEMENT, SC 4411, 4436, 4444, 4483, 4485, 4504, 4506, 4531, 4549, DEPTH INTERVAL AMOUNT										ND KIND MATERIAL USED				
4551, 4577, 4620,			-		4411-495	5				sik wtr, 150,000# 20/40 Arizona sd				
4721, 4746, 4776, 4955	4797, 4839	, 4845, 4	897, 4912	2, 4948,	<b> </b>			<del> </del>						
28.				/	PROD	UCTIO	ON	<b>1</b>	· • · ·			i		
Date First Production		Produ	ction Metho		gas lift, pumpin	g - Size a	and type pu	ımp)	W		(Prod. or Shut-in)			
4-6-98 Date of Test	Hours Tests	ours Tested Choke Size			Flowing Prod'n for Oil - Bbl			Gas - MCF		- 8bl.	Gas - Oil Ratio			
4-6-98				Test Penod		,	•	tot Gauge	•					
Flow Tubing Press.	Casing Pres	Casing Pressure Calculated 2		24- Oil - Bbi G					er - Bbi	Oil Gravity - API - (Corr.)				
SI 449	SI 641		our Rate					L	17-114			··		
29. Disposition of G	as (Sold, Use To be s		vented, etc.	,					Test Witnes	sed By				
30. List Attachment			•					-				<del></del>		
31. I hereby certify t	None	atina en	wa on both	erdae of this	form is tain an	d comoio	to to the be	et of my be	owlodes as-	t haliri				
31. The Deby Certify 1	na ene inioni	$\overline{}$		_		u comple	ne iU (/16 DE	as or my Kr	owiedge and	, u <del>cil</del> el				
- No. 1	Dan.	New	11	/ Nac		نداد کام		<b>+</b> 0.	Danislatas		-14	Date 4 12 00		



### **AERIAL\_RANDLEMON 1C & RANDLEMON 100**



Data Source Aernal flown locally Sedgewick in 2005 Wetlands Data Aquired from U.S. Fish and Wildlife Http://wetlandswms er usgs gov USGS Topo 300FT SJB Tri City Outlines
1000FT CITY NAME
AZTEC
BLOOMFIELD
FARMINGTON

1:10,000

0 250 500

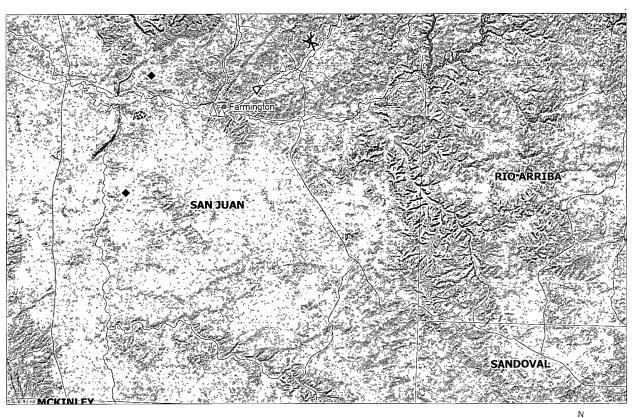
1,000

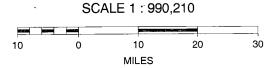
⊐ Feet

NAD\_1983\_SP\_ NM West\_FIPS\_ 3003 January 4, 2010

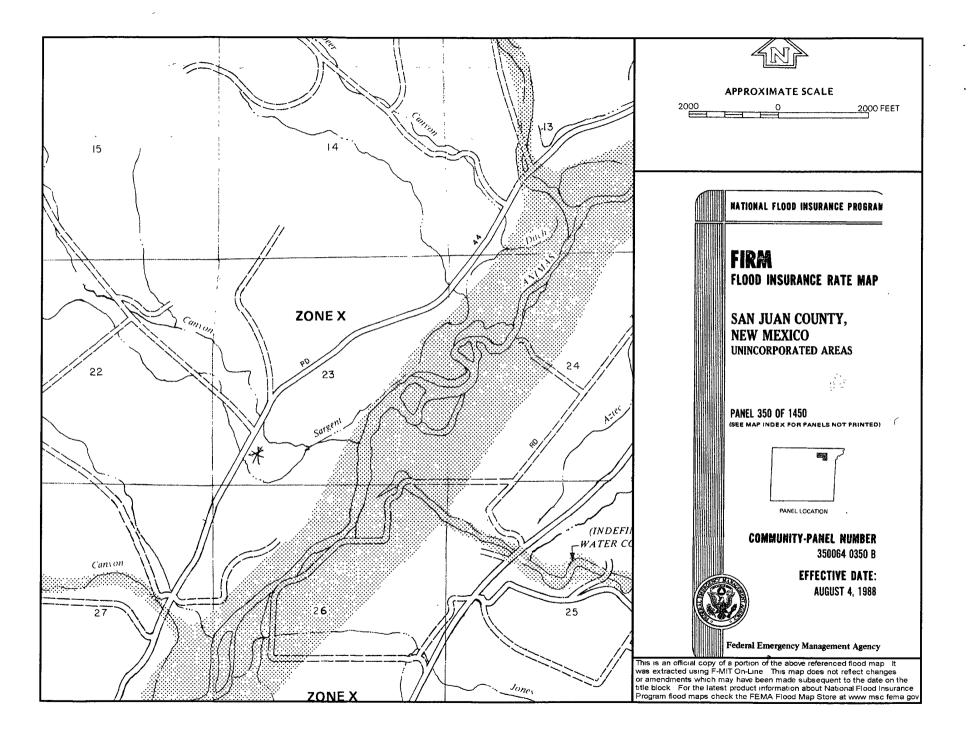
## RANDLEMON 1C & 100 MINES MILLS & QUARRIES

Mines, Mills & Quarries Commodity Groups **Aggregate & Stone Mines Coal Mines Industrial Minerals Mines** Ø **Industrial Minerals Mills Metal Mines and Mill Concentrate** A **Potash Mines & Refineries** Smelters & Refinery Ops. **Uranium Mines Uranium Mills ⊕ Population** 0 Cities - major **Transportation** Railways **Interstate Highways Major Roads** 









#### Hydrogeological report for Randlemon 1C & Randlmon 100

#### Regional Geological context:

Quaternary and recent deposits in the San Juan Basin include stream-deposited alluvium and older terrace deposits, landslide deposits, and Aeolian sand. Most Quaternary and younger deposits area unconsolidated and form a thin covering over older bedrock sediments.

Stream-deposited alluvium and older terrace deposits are associated with major streams and rivers in the San Juan Basin. The alluvium consists of unconsolidated sediments that range from silt to cobbles in size but predominantly are sand and gravel. Along major streams the alluvium is varied in composition, depending on the mix of material from the various erosional source areas and fluvialy-driven sorting. Alluvial deposits also occur as a thin veneer of fine-grained sediments in the valleys of intermittent streams. Landslide deposits are mapped on the northeastern flank of the Chuska Mountains and locally in the San Juan Mountains. These colluvial deposits consist of material derived from the topographically higher source areas. The landslide material on the flank of Chuska Mountains consists of reworked sand from the Chuska Sandstone; the deposits in the San Juan Mountains primarily are derived from volcanic or volcaniclastic sources. Unconsolidated wind-blown deposits are common in the central part of the basin, although they generally are not mapped on small scale geologic maps. Typically, these deposits are very thin, but local dunes near dry washes, which are excellent sources of fine-grained material, may reach heights of 20 feet. These recent Aeolian deposits are not known to yield water to wells.

#### **Hydraulic Properties:**

In the absence of other sources of water, alluvial deposits, where present, are commonly relied upon as a source of water for domestic and livestock use. Along the major rivers and streams, wells are of conventional vertical design, whereas in the valleys of intermittent streams, where the hydraulic conductivities and saturated thickness are generally small, most wells are constructed as galleries of horizontal drains feeding to a central collector. Reported well yields range from less than 1 gallon per minute to as much as 1,100 gallons per minute. The median yield of 48 wells is 15 gallons per minute.

Hydraulic conductivities of sand and gravel can vary from 10 to 1,000,000 gallons per day per foot squared (roughly 1 to 100,000 feet per day) (Freeze and Cherry, 1979, table 2.2.) but a more typical range is from 15 feet per day for fine sand to about 1,000 feet per day for coarse gravel (Lohman, 1972, table 17). Tests along the San Juan River upstream from Farmington indicate that the hydraulic conductivity of alluvium ranges from 0.006 to 220 feet per day (Peter et al, 1987, p. 29). The thickness of alluvium at this site was reported to range from about 14 to 61 feet, and the saturated thickness was less than 25 feet in all 13 test holes. Water occurs in the alluvium under unconfined conditions. No tests have been made where the storage coefficient of the alluvium was determined.

However, a typical specific yield for moderate to well-sorted unconsolidated sediments would be in the range of 0.1 to 0.25.

No known hydraulic data exists for the landslide and recent Aeolian deposits in the basin. No instances are known where these deposits are used as a source of water.

#### References:

Freeze, R.A., and Cherry, J.A., 1979, Groundwater: Englewood cliffs, N.J., Prentice-Hall, Inc., 604 p.

Lohman, S.W., 1972, Ground-water hydraulics: U.S.G.S. Professional Paper 708, 70 p. Peter, K.D., Williams, R.A., and King, K.W., 1987, Hydrogeologic characteristics of the Lee Acres landfill area, San Juan County, New Mexico: U.S.G.S. Water Resources Investigations Report 87-4246, 69 p.

#### Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Randlemon 1C & Randlemon 100 is not located in an unstable area. The location is not over a mine and is not on the side of a hill as indicated on the Mines, Mills and Quarries Map and Topographic Map. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse as indicated on the Topographic Map. The location is not within a 100-year floodplain area as indicated on the FEMA Map. The Cathodic well data from the Aztec A 1A has an elevation of 5788'and groundwater depth of 200'. The subject well has an elevation of 5728' which is 60' lesser than the Aztec A 1A, therefore the groundwater depth is greater than 140'. There are three iWATERS data points located in the area as indicated on the TOPO Map. The hydro geologic analysis indicates the groundwater depth and the Alluvium Quaternary formation will create a stable area for this new location.

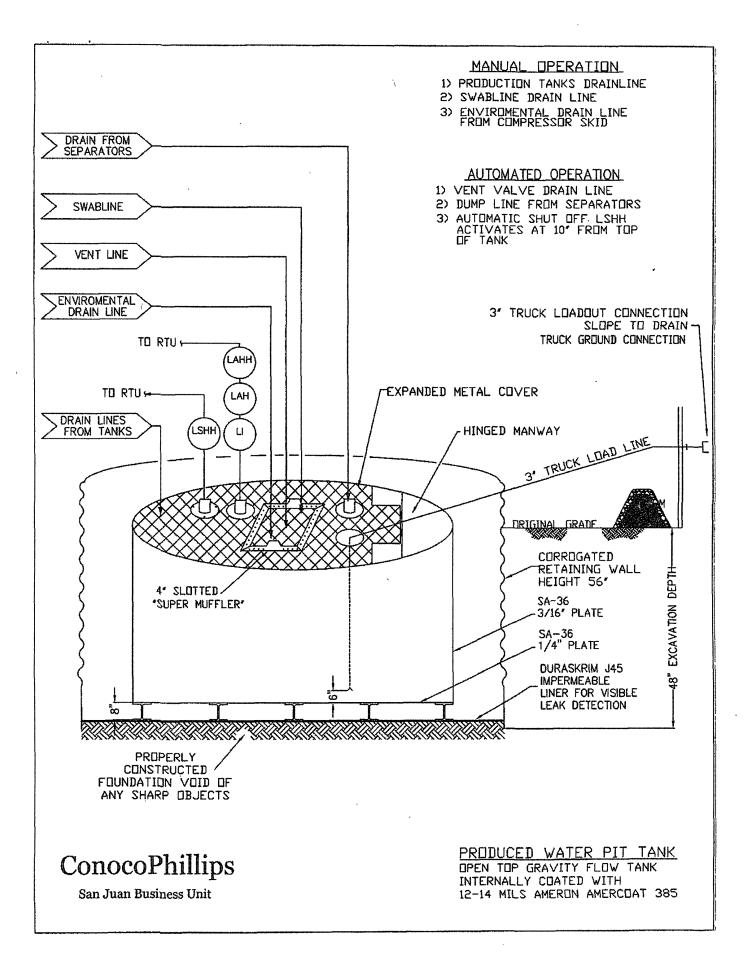
#### Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

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:

- 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.
- 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.
- 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.
- The general specification for design and construction are attached in the BR document.



# DURA-SKRIM®

# J30, J35 & J45

PROPERTIES	TEST METHOD	J30BB		J36	вв	J45BB		
		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	
Appearance		Black	/Black	, Black/i	Black	Black/Black		
Thickness	ASTM D 5199	27 mil	30 mil	32 mil	36 mil	40 mil ,	45 mil	
Weight Lbs Per MSF (cz/yd²)	ASTM D 5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs (21.74)	168 lbs (24.19)	189 lbs (27.21)	210 lbs (30.24)	
Construction	**Extrusion laminated with encapsulated tri-directional scrim reinforcement							
Ply Adhesion	ASTM D 413	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	650 MD 550 DD	750 MD 750 DD	
1 Tensile Elongation @ Reak % (ScrimiBreak)	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 (61 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	
Trapezoid 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	<1	<0.6	
Puncture Resistance	ASTM D 4833	50 lbf	64 (bf	65 lbf	83 lbf	80 lbf	99 lbf	
Maximum Use Temperature		180° F						
Minimum Use Temperature		-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 refiance upon contained information or recommendations and disclaims all liability for resulting loss or damage.

PLANT LOCATION

SALES OFFICE

INDUSTRIES

Sioux Falls, South Dakota

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

08/06

### 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. These dates will be updated prior 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 application or installation. Raven geomembrane material warranty is intended for commercial use only and is not in effect for the 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 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 repaired or 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 determined that there is no claim under this Limited Warranty, Purchaser shall reimburse Raven Industries Inc. for its costs 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 properly 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 AND FITNESS FOR A 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:

- 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 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.
- 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:

- 1. 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 of 19.15.17.11 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.
- 2. 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 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 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, non-waste 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 the following:
  - 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