<u>District I</u> 1625 N French Dr., Hobbs, NM 88240

State of New Mexico
Energy Minerals and Natural Resources

Form C-144 July 21, 2008

District II

Department Oil Conservation Division 1220 South St. Francis Dr. For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office

<u>District III</u> 1000 Rio Brazos Rd , Aztec, NM 87410

1301 W Grand Ave , Artesia, NM 88210

Santa Fe, NM 87505

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

Distr	ict	IV		
1220	S	St	Francis Dr , Santa Fe, NM	87505
	_	_	· -	

Proposed 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 hability 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 Address: PO Box 4289, Farmington, NM 87499 OGRID#: 14538
Facility or well name: Lewis Park 1M
X Pit: Subsection F or G of 19 15.17 11 NMAC
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
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off Visible sidewalls and liner Visible sidewalls only Other
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration and the Santa Fe E

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, hospital, insti 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.	itution or churc	ch)
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" 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: X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consi (Fencing/BGT Liner) Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	ideration of ap	proval.
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). - Topographic map; Visual inspection (certification) of the proposed site	Yes	XNo
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks)	☐Yes ☐NA	XNo
- 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. (Applied to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes X NA	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	XNo
 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	Yes	X No
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. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes	XNo
Within a 100-year floodplain - FEMA map	Yes	XNo

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
X Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9
Tryanogeologic Data (Temporary and Entergency Fits) Sased upon the requirements of 19.15.17.10 NMAC
X Design Plan - based upon the appropriate requirements of 19.15.17.10 NMAC
X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
X 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
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 (I) 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: X Drilling Workover Emergency Cavitation P&A Permanent Pit X Below-grade Tank Closed-loop System
Alternative
Proposed Closure Method: X Waste Excavation and Removal (Below-Grade Tank)
Waste Removal (Closed-loop systems only)
Non-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)
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
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.
X 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
X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
Re-vegetation Plan - based upon the appropriate requirements of Subsection 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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Waste Removal Closure For Closed-loop Systems That Utilize Above 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 liquids, drilling fluids and drill cuttings. Use attachment if more than tware required	o facilities
Disposal Facility Name: Disposal Facility Permit #:	
Disposal Facility Name: Disposal Facility Permit #	
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future. Yes (If yes, please provide the information No	e service and operations?
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 NM 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	1AC
17	
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan Recommendations of acceptable source material are provided certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to for consideration of approval Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 10 NMAC for guidance.	the Santa Fe Environmental Bureau office
Ground water is less than 50 feet below the bottom of the buried waste.	Yes X No
- NM Office of the State Engineer - iWATERS database search; USGS: Data obtained from nearby wells	
Ground water is between 50 and 100 feet below the bottom of the buried waste	Yes X No
- NM Office of the State Engineer - 1WATERS database search; USGS; Data obtained from nearby wells	
Ground water is more than 100 feet below the bottom of the buried waste.	X Yes No
- NM Office of the State Engineer - IWATERS database search, USGS, Data obtained from nearby wells	∐N/A
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	Yes X No
- Topographic map; Visual inspection (certification) of the proposed site	Yes X No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	Yes X 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 fresh water well field covered under a municipal ordinance adopted	Yes XNo
pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes X No
Within the area overlying a subsurface mine.	Yes X No
- Written confirantion or verification or map from the NM EMNRD-Mining and Mineral Division	
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources, USGS; NM Geological Society; Topographic map	Yes XNo
Within a 100-year floodplain - FEMA map	Yes XNo
On-Site Closure Plan Checklist: (19.15 17.13 NMAC) Instructions: Each of the following items must bee attached to the cloby a check mark in the box, that the documents are attached.	sure plan. Please indicate,
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19 15 17.10 NMAC	
X Proof of Surface Owner Notice - based upon 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 of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of	of 19.15.17.11 NMAC
X Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC	
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMA	.C
X Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC	connect he cohi
 Disposal Faculty Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC 	camiot be achieved)
X Re-vegetation Plan - based upon the appropriate requirements of Subsection 1 of 19 15 17.13 NMAC	
X Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	

			
19 Operator Application	. Cartification:		
	information submitted with this application is true, ac	ccurate and complete to the	hest of my knowledge and helief
Name (Print):	Tamra Sessions	Title:	Staff Regulatory Technician
Signature	Jamosessien	Date:	2-25-09
e-mail address	sessitd@conocophillips.com	Telephone.	505-326-9834
20	4	7	
OCD Approval:	Permit Application (including closure plan)	Closure Plan (only)	OCD Conditions (see attachment)
OCD Representative	Signature:		Approval Date: 3-9-09
-			Approval Date.
Title:	Enviro/spec	OCD Peri	nit Number:
21			
	ired within 60 days of closure completion): s		
			ure activities and submitting the closure report. The closure
•	submittea to the aivision within 60 days of the comple as been obtained and the closure activities have beer	•	es. Please do not complete this section of the form until an
approved crossic plan n	us been obtained and the closure delivines have been		
		☐ Closur	e Completion Date:
22			
Closure Method:			
Waste Excavation	on and Removal On-site Closure Method	Alternative Closure	e Method Waste Removal (Closed-loop systems only)
If different from	approved plan, please explain.		
	approved plant, preser explain.		
23			
	ling Waste Removal Closure For Closed-loop Syste		· · · · · · · · · · · · · · · · · · ·
were utilized.	ntijy the factility or facilities for where the tiquias, a	ruung jiwas ana arui cuu	ings were disposed. Use attachment if more than two facilities
Disposal Facility Nai	ne:	Disposal Facility	y Permit Number:
Disposal Facility Nai			y Permit Number:
•	system operations and associated activities performe	- '	
	se demonstrate complilane to the items below)	No	
	·	<u> </u>	
	ed areas which will not be used for future service and n (Photo Documentation)	орегинова.	
=	and Cover Installation		
	pplication Rates and Seeding Technique		
	- Traces and Seeding Teeringse		
24 Classes Bass 4 A	Andrew A Charliffer To Co. B. J. Ca.		The state of the s
	ttachment Checklist: Instructions: Each of the forments are attached.	ottowing tiems must be att	ached to the closure report. Please indicate, by a check mark in
	re Notice (surface owner and division)		
	Notice (required for on-site closure)		
	on-site closures and temporary pits)		
	• • •		
=	Sampling Analytical Results (if applicable)		
	I Sampling Analytical Results (if applicable)		
=	ty Name and Permit Number		
=	g and Cover Installation		
Re-vegetation	Application Rates and Seeding Technique		
Site Reclamati	on (Photo Documentation)		
On-site Closur	e Location: Latitude:	Longitude:	NAD 1927 1983
25			···
Operator Closure Co	ertification:		
		sure report is ture accurate	e and complete to the best of my knowledge and belief. I also certify that
	h all applicable closure requirements and conditions	-	
Name (Print).		Title	
Signature:		Date:	
			
e-mail address:		Telephone:	



SJ 03306

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

265739

4083645

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

	(quarter				•	st)	(NAD83 UT	M in meters)		(In feet))
POD Number	County	100	1.00 10 5 1950	Sec	The second second of the	Rng	X	Y	Depth I :: Well)	Depth Nater (Water Column
SJ 00012	San Juan					08W		4084189	1021	475	546
SJ 00198	San Juan	4	3 3	32	31N	08W	258895	4081451	2003		
SJ 01167	San Juan	3	4 4	24	31N	08W	266352	4084410	465	390	75
SJ 01822	San Juan	2	2 2	25	31N	W80	266540	4084216	550	500	50

Record Count:5 Average Depth to Water: 466 feet

4 4 1 25 31N 08W

Minimum Depth: 390 feet Maximum Depth: 500 feet

600

500

100



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

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

(quarters are smallest to largest)

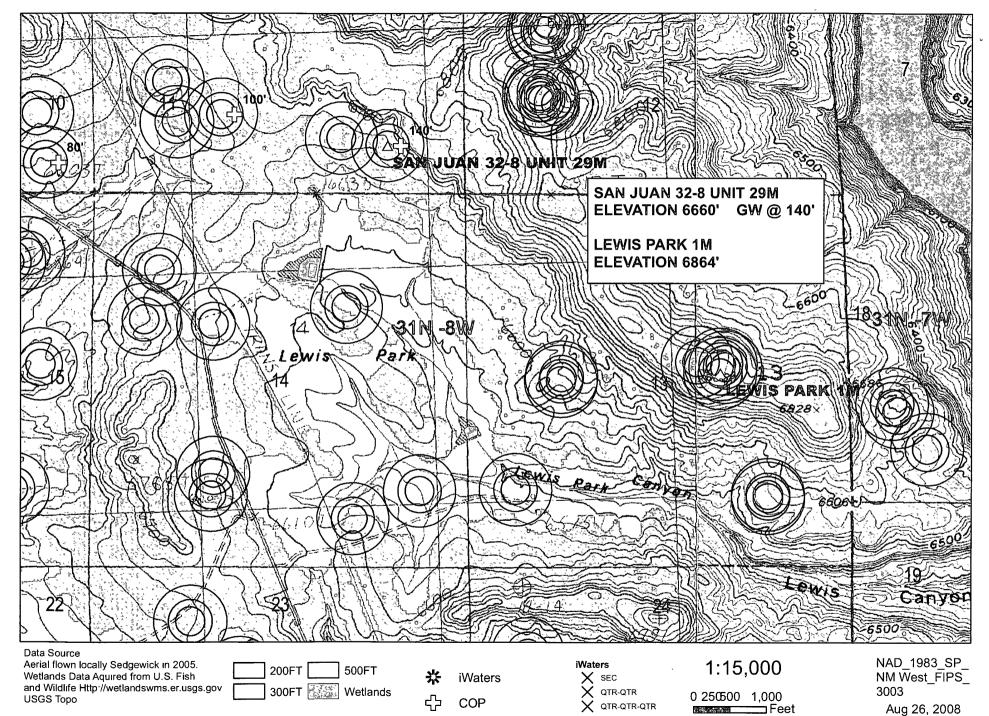
(NAD83 UTM in meters)

(In feet)

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ROD Number	County 6	OFFIT L		710 Ac.	Sec	Ťŵs	Rng	X	Y	epth D Well V	epth \ Vater G	Water olumn
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SJ 03426	San Juan	4	2	1	14	31N	07W	273560	4087251	540	420	120
SJ 03649	San Juan		4	1	02	31N	07W	273538	4090167	600	300	300
Record Count:3								P	Average Depth	to Wate	r: 396 fe	et

Minimum Depth: 300 feet Maximum Depth: 470 feet





TIERRA CORROSION CONTROL, INC. <u>DRILLING LOG</u>

COMPANY: Conoco Phillips

LOCATION: San Juan 32-8 29M

STATE: NM BIT SIZE: 7 7/8'

LBS COKE BACKFILL: 3,400# ANODE TYPE: 2" X 60" Duriron

DATE: May 7, 2008

LEGALS: S11 T31N R8W

DRILLER: Gilbrt Peck

CASING SIZE/TYPE: 8" X 20' PVC

VENT PIPE: 360' ANODE AMOUNT: 15' COUNTY: San Juan

DEPTH: 360'

COKE TYPE: Asbury PERF PIPE: 180'

BOULDER DRILLING: None

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS
20	Casing		310	Sand Stone	.2
25	Sand Stone		315		.3
30			320		.2
35		.3	325		.2
40		.3	330		.2
45		.2	335		3
50		.3	340		1.3
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65		.2	355	-	.2
70		.3	360	▼	td
75		.3	365		
80		.3	370		
85		.2	375		
90		3	380		
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115		.4	405	 	
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125		.5	415		
130	 -	,6	420		
135		.8	425	<u> </u>	
140			430		
145	Gray Shale	.8	435		
150	Gray Shale	1.1	440		
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170		.4	460		_
175		.7	465		
180		.7	470		
185		.7	475		
190		.7	480		
195		.5	485		
200		.5	490		
205		.7	495		_
210	Our Chala	.6	500		_
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220	Sand Stone	.9			
225		.8			
230	Our Chala	.9			-
235	Gray Shale	1.0			_
240		1.0	ļ		
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250	Sand Stone	.5_			
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	5	235	1.0	4.0
	6	225	.8	4.0
	7	215	1.0	4.2
	8	205	.7	3.9
Ĭ	9	195	.5	3.5
	10	185	.7	3.3
ı	11	175	.7	2.8
	12	165	.7	2.8
	13	155	1.1	1.8
	14	145	1.1	1.6
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WATER DEPTH: 140' ISOLATION PLUGS: None LOGING VOLTS: 12.26

VOLT SOURCE: AUTO BATTERY

TOTAL AMPS: 8.5

TOTAL GB RESISTANCE: 1.44

REMARKS:

Drilled on 248A by rectifier and old

groundbed

Form 3160-4

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

SUBMIT IN DUPLICATE

(See other in-structions on reverse side)

FOR APPROVED OMB NO 1004-0137

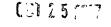
Expires. December 31, 1991

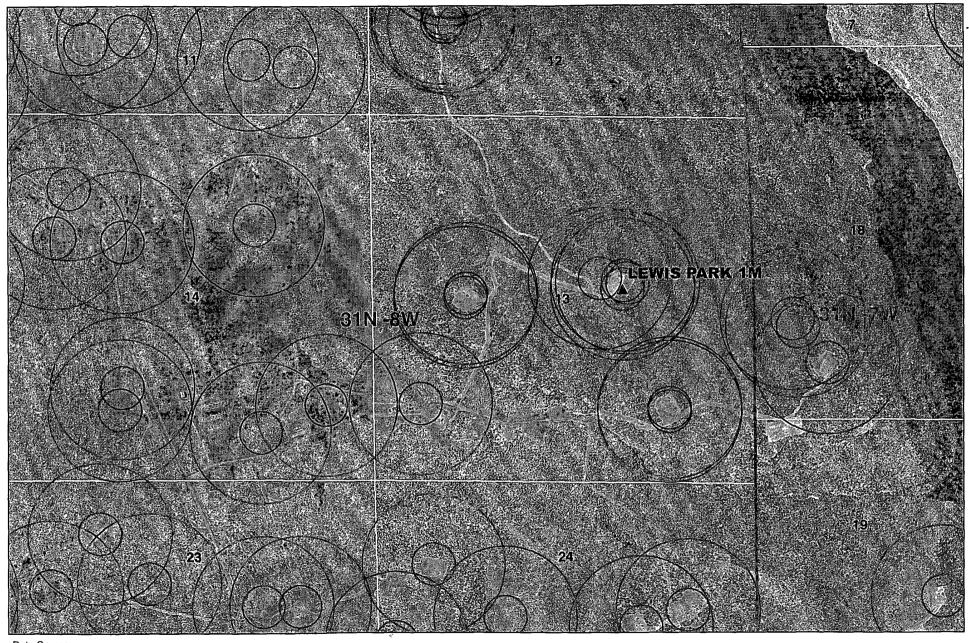
5 LEASE DESIGNATION AND SERIAL NO

VELL C										j	SF - 08085	4
	OMPL	ETION	N OR	RECOMP	LETION	REP	ORT AND	LO	G*	6 IF	INDIAN, ALLOTTE	E OR TRIBE NAME
a TYPE OF	WELL		WELL	CAS X	DRY	Other				1		
			WELL	MELL CO	n r				•	7 UI	NIT AGREEMENT	NAME
b TYPE OF					F	_				L	San Juan 3	
	METT X	WORK OVER	DEEP-	PLUG BACK	OIFF RESVR	Other			_	8. FA	ARM OR LEASE N	AME, WELL NO
										<u> </u>	29M	
NAME OF								•••		9. AF	WELL NO.	
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AUUKES:	S ANU IEL	EPHUNEN RO Farmin	vo naton N	M 87499 (!	505) 326-9	700				10. F	Blanco Me:	
LOCATIO	N OF WEL	L (Report lo	ocation cle	M 87499 (5 early and in acco FSL, 1097' FE	rdance with an	y State re	quirements)." =	n (117)	THE NAME OF	11 5		R BLOCK AND SURVEY
At surface	e U	nit P (SES	SE) 661"	FSL. 1097' FE	:L			W			OR AREA	
		•	•	-		A P	A STATE OF	w =	-	1	Sec. 11 T31	IN R8W, NMPM
At top pro	od. interval i	reported bel	low	Same as a	above 🕟		OCT 2 3	200	17	1		<i>I</i> D OCT 25 '07
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DATE OF	ionro I	A	DE LO	149 KASE	COMPLETE	U 60 == -2 *	<u> </u>	1			San Juan	New Mexico
DATE SPUI 7/5/07	/DUED 16	. DATE T.D. 7/13/0		JIT. DATE	10/15/07	y to prod.)	1	18. EL	EVATIONS (DF, R	KB, RT, I KB	BR, ETC.)* 6 675 '	19. ELEV. CASINGHEAD
	PTH, MD &T			BACK T.D., MD &T		ILTIPLE CO	OMPL	J	TERVALS		Y TOOLS	CABLE TOOLS
		ſ	,-			HOW N			SILLED BY			
821				8215'		2		<u>L</u>		yes		<u> </u>
PRODUCTI	ION INTERV	'AL (S) OF TH	HIS COMPL	ETION-TOP, BOT	TOM, NAME (MD	OVT ONA) *				25. WAS DIRECT SURVEY MA	
Blanco	Mesa V	erde 520	0' - 609	10']	No
(OTHER LOGS								27. WAS	S WELL CORED	
Cemen	nt bond	Log w/	Gamm	a Ray Casi	ing Collar	S						No
							(Report all string:					
ASING SIZE		WEIGHT,	LB /FT	DEPTH SET (ESIZE		MENT, C	EMENTING RECO	ORD	AM	MOUNT PULLED
	40	22.24							1000		*	
9 5/8" H-	-40	32.3#	~~~		8 3/4"		surface: 180		(230 cf)	1160 C	7 bbls	
		32.3# 20# 10.5#, 1	11.6#	245° 2, 3869' 8218'	8 3/4" 6 1/4"		surface; 180 surface; 630 TOC 3000'; 3	SX	(1284 cf)	116. (7 bbls 60 bbls	
9 5/8" H- 7" J-55		20# 10.5#, 1	11.6# LINER RE	3869' 8218'	8 3/4"		surface; 630	SX	(1284 cf)			
9 5/8" H- 7" J-55 4 1/2" J-		20# 10.5#, 1		3869' 8218'	8 3/4" 6 1/4"	EN (MD)	surface; 630 TOC 3000'; 3 30. SIZE	sx 30 sx	(1284 cf) (664 cf) DEPTH SET (TU	60 bbls BING RECORD	CKER SET (MD)
9 5/8" H- 7" J-55 4 1/2" J-	55	20# 10.5#, 1	LINER RE	3869' 8218' CORD	8 3/4" 6 1/4"	EN (MD)	surface; 630 TOC 3000'; 3 30.	sx 30 sx	(1284 cf) (664 cf)	TU	60 bbls BING RECORD	
9 5/8" H- 7" J-55 4 1/2" J-!	55 TOP (MD)	20# 10.5#, 1	LINER RE	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4"	EN (MD)	surface; 630 TOC 3000'; 3 30. SIZE 2-3/8"	sx 30 sx	(1284 cf) (664 cf) DEPTH SET (TU MD)	60 bbls BING RECORD PAG	CKER SET (MD)
9 5/8" H- 7" J-55 4 1/2" J-5 SIZE	55 TOP (MD)	20# 10.5#, 1	LINER RE	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT* SCREE		surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Blickfoam w/1	TU MD) CEMEN	BING RECORD PAGE T SQUEEZE, E	CKER SET (MD) TC: Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-! SIZE PERFORAT SPF 5630' - !	TOP (MD) TION RECOR	20# 10.5#, 1 BOTTO	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT* SCREE		surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Blickfoam w/1	TU MD) CEMEN	60 bbis BING RECORD PAG	CKER SET (MD) TC: Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-! SIZE PERFORAT SPF 5630' - :	TOP (MD) TION RECOR 5872' = -6090' =	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT" SCREE 32 5630" - (6090'	surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, SIICKfoam w/1	TU MD) CEMEN 007004	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ SCF.
9 5/8" H- 7" J-55 4 1/2" J-! SIZE PERFORAT SPF 5630' - :	TOP (MD) TION RECOR	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT* SCREE	6090'	surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-5 SIZE PERFORAT SPF 5630' - 5 5884' -	TOP (MD) TION RECOR 5872' = -6090' =	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT" SCREE 32 5630" - (6090'	surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630' - 5 5884' -	TOP (MD) TION RECOR 5872' = -6090' =	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT" SCREE 32 5630" - (6090'	surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-5 SIZE PERFORAT SPF 5630' - 5 5884' -	TOP (MD) TION RECOR 5872' = -6090' =	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER REDM (MD)	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" NT" SCREE 32 5630" - (6090'	surface; 630 TOC 3000°; 3 30. SIZE 2-3/8"	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-! SIZE PERFORAT SPF 5630' - :	TOP (MD) TION RECOR 5872' = -6090' =	20# 10.5#, 1 80TTO 17 holes 13 holes	LINER RE DM (MD) uze and num S	3869' 8218' ECORD SACKS CEME!	8 3/4" 6 1/4" SCREE 32 5630' - 6	6090' 5564'	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI	5x 30 sx D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-1 SIZE PERFORAT SPF 5630' - 5 200' - 5	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3	20# 10.5#, 1 BOTTO RD (Interval, s 17 holes 13 holes	LINER RE DM (MD) uze and num S	3869' 8218' ECORD SACKS CEME	8 3/4" 6 1/4" SCREE 32 5630' - (5564' PR	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI	5x 30 sx D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC.	CEMEN 007004 Fotal N	80 bbls BING RECORD PAG YT SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 SG	CKER SET (MD) TC. Sand, tailed w/ GCF. Sand, tailed w/
9 5/8" H- 7" J-55 4 1/2" J-1 SIZE PERFORAT SPF 5630' - 5 5200' - 5	TOP (MD) FION RECOR 5872' = -6090' = 5564' = 3	BOTTO	LINER REDM (MD) LINER REDM (MD) LINER REDM (MD)	3869' 8218' ECORD SACKS CEMER	8 3/4" 6 1/4" SCREE 32 5630' - 5200' -	6090' 5564' PROPERTY STATES	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI	5X 30 8X D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC. T	TU MD) CEMEN 00700# Fotal N	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 SG WELL STATUS (FI	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF.
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630' - 5 5200' - 5	TOP (MD) FION RECOR 5872' = -6090' = 5564' = 3	20# 10.5#, 1 BOTTO RD (Interval, s 17 holes 13 holes	LINER REDM (MD) LINER REDM (MD) LINER REDM (MD)	3869 8218 ECORD SACKS CEMEN	8 3/4" 6 1/4" SCREE 32 5630' - (5564' PR	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI	5x 30 sx D, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC. T	CEMEN 007004 Fotal N	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 SG WELL STATUS (FI	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF.
9 5/8" H- 7" J-55 4 1/2" J-2 SIZE PERFORAT SPF 5630' - 5 5200' - 5	TOP (MD) TION RECOR 5872' = -6090' = 55564' = 3	BOTTO	LINER REDM (MD) LINER REDM (MD) LINER REDM (MD)	3869 8218 ECORD SACKS CEMEN	8 3/4" 6 1/4" SCREE 32 5630' - (5200' - (Flowing, gas tit, px Flowing PRODIN FOR	6090' 5564' PROPERTY STATES	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACII ODUCTION To and type of pump	SX 30 SX DD, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, lickfoam w/1 20/40 TLC. T	TU MD) CEMEN 00700# Fotal N	BING RECORD PAGE ST SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 SG WELL STATUS (PS SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF.
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630" - 5 5200" - 5 FIRST PRO SI OF TEST	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3	BOTTO	LINER RED M (MD) S S S PRODUC	3869' 8218' ECORD SACKS CEME! TION METHOD (F CHOKE SIZE 1/2" CALCULATED	8 3/4" 6 1/4" SCREE 32 5630' - (5200' - (Flowing, gas tit, px Flowing PRODIN FOR	6090' 5564' PROPERTY STATES	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACII ODUCTION To and type of pump	SX 30 SX DD, SHO 60Q S 7300#	(1284 cf) (664 cf) DEPTH SET (8148' T. FRACTURE, lickfoam w/1 20/40 TLC. T	CEMEN 00700# Fotal N otal N:	60 bbls BING RECORD PAG VT SQUEEZE, E \$ 20/40 Brady 12 = 1332200 S 20/40 Brady 2= 1411900 SG WELL STATUS (FI SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF.
9 5/8" H- 7" J-55 4 1/2" J-1 PERFORAT SPF 5630' - 5 9 5884' - 5200' - 5 FIRST PRO SI OF TEST	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3	20# 10.5#, 1 BOTTO RD (Interval, si 17 holes 13 holes HOURS TES 1 CASING PRE	LINER RED M (MD) S S S PRODUC	3869' 8218' ECORD SACKS CEMEN	8 3/4" 6 1/4" SCREE 32 5630' - 1 5200' - 1 Flowing gas th, pr Flowin PRODN FOR TEST PERIOD	6090' 5564' PRE	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODUCTION TO and type of pump St. GAS-MCF	5X 30 9X D, SHO 60Q S 7300# GAS-h	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	CEMEN 00700# Fotal N otal N:	60 bbls BING RECORD PAG VT SQUEEZE, E \$ 20/40 Brady 12 = 1332200 S 20/40 Brady 2= 1411900 SG WELL STATUS (FI SI R-BBL	CKER SET (MD) CTC. Sand, tailed w/ SCF. Sand, tailed w/ CF. roducing or shul-in) GAS-Oil RATIO
9 5/8" H- 7" J-55 4 1/2" J-2 PERFORAT SPF 5630' - 5 5200' - 5 FIRST PRO SI OF TEST 10/11/07 TUBING PR	TOP (MD) FION RECOR 5872' = -6090' = 5564' = 3 DOUCTION	20# 10.5#, 1 BOTTO RD (Interval, signature) 17 holes 13 holes HOURS TEST 1 CASING PRE	LINER REDM (MD) LINER REDM (MD)	3869 8218 ECORD SACKS CEMER THOM METHOD (F CHOKE SIZE 1/2* CALCULATED 24-HOUR RATE	8 3/4" 6 1/4" SCREE 32 5630' - 1 5200' - 1 Flowing gas th, pr Flowin PRODN FOR TEST PERIOD	6090' 5564' PRE	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" AGII ODUCTION Ze and type of pumil	5X 30 9X D, SHO 60Q S 7300# GAS-h	(1284 cf) (664 cf) DEPTH SET (8148' T. FRACTURE, Bickfoam w/1 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 S WELL STATUS (P SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. roducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)
9 5/8" H- 7" J-55 4 1/2" J-1 SIZE PERFORAT SPF 5630' - 5 5200' - 5 FIRST PRO SI OF TEST 10/11/07 TUBING PR	TOP (MD) FION RECOR 5872' = -6090' = 5564' = 3 DOUCTION	20# 10.5#, 1 BOTTO RD (Interval, si 17 holes 13 holes HOURS TES 1 CASING PRE	LINER RED M (MD) LINER RED M (MD) LINER RED M (MD) PRODUCTED ESSURE	3869 8218 ECORD SACKS CEMER THOM METHOD (F CHOKE SIZE 1/2* CALCULATED 24-HOUR RATE	8 3/4" 6 1/4" SCREE 32 5630' - 1 5200' - 1 Flowing gas th, pr Flowin PRODN FOR TEST PERIOD	6090' 5564' PRE	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODUCTION TO and type of pump St. GAS-MCF	5X 30 9X D, SHO 60Q S 7300# GAS-h	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	60 bbls BING RECORD PAG VT SQUEEZE, E \$ 20/40 Brady 12 = 1332200 S 20/40 Brady 2= 1411900 SG WELL STATUS (FI SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. roducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)
9 5/8" H- 7" J-55 4 1/2" J-2 SIZE PERFORAT SPF 5630' - 5 5200' - 5 FIRST PRO SI OF TEST 10/11/07 TUBING PI	TOP (MD) FION RECOR 5872' = -6090' = 5564' = 3 DOUCTION	20# 10.5#, 1 BOTTO BO (Interval, see 13 holes 13 holes 14 hours Tes 15 holes 13 holes 15 hole	LINER RED M (MD) LINER RED M (MD) LINER RED M (MD) PRODUCTED ESSURE	3869 8218 ECORD SACKS CEMER THOM METHOD (F CHOKE SIZE 1/2* CALCULATED 24-HOUR RATE	8 3/4" 6 1/4" SCREE 32 5630' - 1 5200' - 1 Flowing gas th, pr Flowin PRODN FOR TEST PERIOD	6090' 5564' PRE	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODUCTION TO and type of pump St. GAS-MCF	5X 30 9X D, SHO 60Q S 7300# GAS-h	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 S WELL STATUS (P SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. Froducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630' - 5 5200' - 5 TUBING PI 1374# DISPOSITION SIST OF ATT will be a	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3 DOUCTION TOP (MD) TOP (MD) TOP (MD) TOP (MD)	BOTTO	LINER RED M (MD) PRODUCTED ESSURE Fluel, ventes sold nco Mess.	3869 8218 ECORD SACKS CEMENT SA	8 3/4" 6 1/4" SCREE 32 5630' - 5200' - Flowing gas th, pr. Flowin PRODN FOR TEST PERIOD OIL—BBL	6090°	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODUCTION TO and type of pump GAS_MCF 4554 mcf/d	SX 30 8X D, SHOOD, SHOOD STOOM STOOM STOOM STOOM STOOM STOOM SHOOD STOOM	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 S WELL STATUS (P SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. Froducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630' - 5 5200' - 5 TUBING PI 1374# DISPOSITION SIST OF ATT will be a	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3 DOUCTION TOP (MD) TOP (MD) TOP (MD) TOP (MD)	BOTTO	LINER RED M (MD) PRODUCTED ESSURE Fluel, ventes sold nco Mess.	3869 8218 ECORD SACKS CEMER SA	8 3/4" 6 1/4" SCREE 32 5630' - 5200' - Flowing gas th, pr. Flowin PRODN FOR TEST PERIOD OIL—BBL	6090°	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODUCTION TO and type of pump GAS_MCF 4554 mcf/d	SX 30 8X D, SHOOD, SHOOD STOOM STOOM STOOM STOOM STOOM STOOM SHOOD STOOM	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	60 bbls BING RECORD PAGE T SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady S 2= 1411900 S WELL STATUS (P SI R-BBL	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. Froducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)
9 5/8" H- 7" J-55 4 1/2" J- SIZE PERFORAT SPF 5630' - 5 5 5884' - 5 200' - 5 10/11/07 TUBING PE 1374# DISPOSITION LIST OF ATT will be a	TOP (MD) TION RECOR 5872' = -6090' = 5564' = 3 DOUGTION TACHMENTS Basin Day of that the fo	BOTTO	LINER REDM (MD) PRODUCTED ESSURE Tuel, venter sold nco Messattached info	3869 8218 ECORD SACKS CEMER SACKS CEMER SACKS CEMER THOM METHOD (F	8 3/4" 6 1/4" SCREE 32 5630' - 5200' - Flowing gas th, pr. Flowin PRODN FOR TEST PERIOD OIL—BBL	6090° 5564° PRE umping—size g Oit.—BE	Surface; 630 TOC 3000°; 3 30. SIZE 2-3/8" ACI ODDUCTION TO and type of pump GAS_MCF 4554 mcf/d	SX 30 8X D, SHOOD, SHOOD STOOM STOOM STOOM STOOM STOOM STOOM SHOOD STOOM	(1284 cf) (664 cf) DEPTH SET (8148' T, FRACTURE, Bickfoam w/1 20/40 TLC. T Sickfoam w/9 20/40 TLC. T	TU MD) CEMEN 00700# Total N 9720 # otal N WATE	BING RECORD PAGE TO SQUEEZE, E 20/40 Brady 2 = 1332200 S 20/40 Brady 2 = 1411900 SG WELL STATUS (FI SI R-BBL N	CKER SET (MD) TC. Sand, tailed w/ SCF. Sand, tailed w/ CF. Froducing or shul-in) GAS-OIL RATIO OIL GRAVITY-API (CORR.)

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department of agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.





Data Source
Aenal flown locally Sedgewick in 2005.
Wetlands Data Aquired from U.S. Fish
and Wildlife Http://wetlandswms.er.usgs.gov
USGS Topo

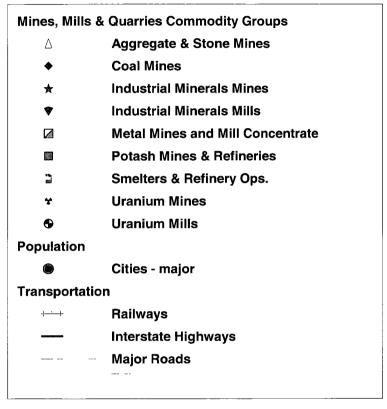
300FT City Limits

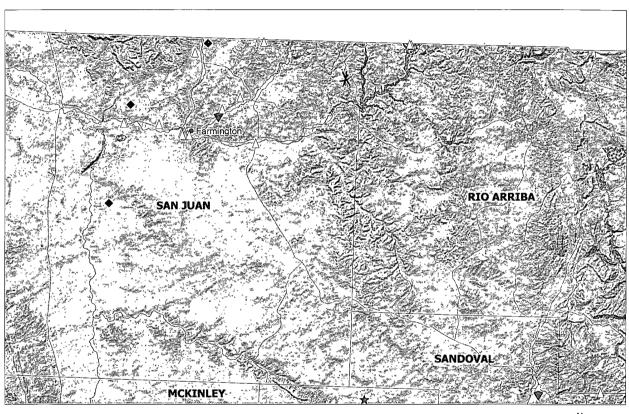
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0 250500 1,000 Feet NAD_1983_SP_ NM West_FIPS_ 3003

Feb 25, 2009

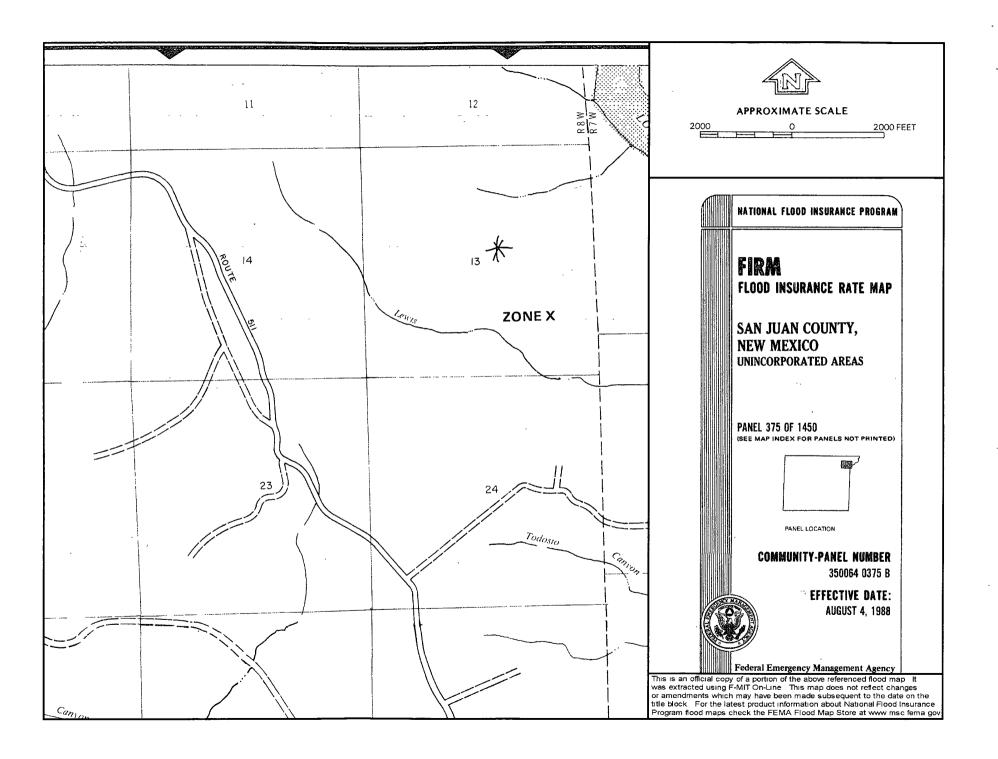
Lewis Park 1M Mines, Mills & Quarries











Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Lewis Park 1M 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 San Juan 32-8 Unit 29M has an elevation of 6660' and groundwater depth of 140'. The subject well has an elevation of 6834' which is greater than the San Juan 32-8 Unit 29M, therefore the groundwater depth is greater than 300'. There are no iWATERS data points located in the area as indicated on the TOPO Map. The hydro geologic analysis indicates the groundwater depth and the San Jose formation will create a stable area for this new location.

Hydrogeological report for Lewis Park 1M

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.

Tally, Ethel

From:

Tally, Ethel

Sent:

Wednesday, February 25, 2009 1:07 PM

To:

'mark_kelly@nm.blm.gov' Sessions, Tamra D

Cc: Subject:

PIT CLOSURE NOTIFICATION

The following temporary pits will be closed on-site. The new OCD Pit Rule 17 requires the surface owner be notified.

Allison Unit 40N San Juan 31-6 Unit 7M EPNG A 1B San Juan 32-8 Unit 16B

The following locations will have a temporary pits that will be closed on-site.

Lewis Park 1M

Please call Tamra Session (X9834) or myself (X4027) if you have questions or concerns.

Thank You,

Ethel Tally ConocoPhillips-SJBU 3401 É. 30th Farmington NM 87402 (505)599-4027 Ethel.Tally@ConocoPhillips.com DISTRICT I 1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 12, 2005

DISTRICT II 1301 West Grand Avenue, Artesia, N.M. 88210

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

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410

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

☐ AMENDED REPORT

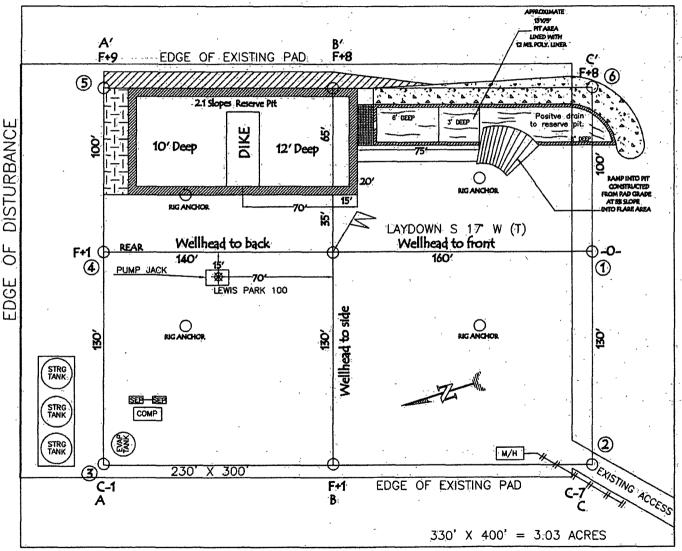
WELL LOCATION AND ACREAGE DEDICATION PLAT

'API N	umber			⁸ Pool Code	Pool Name BASIN DAKOTA/BLANCO MESAVERDE							
⁴ Property Cod	le			*i.	Property 1	lame	· · · · · · · · · · · · · · · · · · ·	6.4	fell Number			
					ĻEWIS PAR	RK		,	1 M			
OGRID No.	7		, ,	· · · · · · · · · · · · · · · · · · ·	Operator 1	Vame			Elevation			
	.		BURLING	GTON RE	SOURCES OIL	& GAS COME	ANY LP	:6	5834			
					10 Surface	Location						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
G	13	31-N	8-W		2445'	ŅŌŔŢĦ	1760'	EAST	SÁN JUAN			
÷		-	11 Bott	om Hole	Location If	Different Fro	m Surface					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
1 [1′3	31-N	8-W	[]	2490'	SOUTH	710'	EAST	SAN JUAN			
Dedicated Acres DK 320.0 A MV 320.0 A	CRES	E 1/2 E 1/2	is Joint or	İnfili	¹⁴ Consolidation C	ode	¹⁶ Order No.	* * * * * * * * * * * * * * * * * * *				

OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	` ^	BLM "54" BC	GLO.	"13" BC 🕦	
SURFACE LAT: 36;53,8461 LONG: 1.07;37:4 NAD 1927 LAT: 36.897439 LONG: 107:6244 NAD 1983	312' Ŵ.	2572.79°	N 89 14		17 OPERATOR CERTIFICATION I hereby certify that the information contained hereto, is true and complete to the best of my knowledge and belief, and that this organisation either owns: a working interest or unleased mineral interest in the land including the proposed bettom hole location pursuant to a contract with an owner of such a mineral or a working interest, or to a voluntary positing agreement or a compulsory positing order heretofore entered by the division.
	1	SURFACE OCT 100	1760'	2600.07 BC 2561.48	Printed Name 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Surveys MEV
BOTTOM HOLE LAT: 36'53.8062' N LONG: 107'37.2141 NAD 1927 LAT: 36.896775' N. LONG: 107.620846' NAD 1983	' w.	2621.06° N	N 89° 25° 50° W	Ñ O 39 42" W	Signature and Sand Development Surveyor: Signature and Sand Development Surveyor: 15703

BURLINGTON RESOURCES OIL & GAS COMPANY LP LEWIS PARK 1M, 2445' FNL & 1760' FEL SECTION 13, T-31-N, R-8-W, NMPM, SAN JUAN COUNTY, NM GROUND ELEVATION: 6834', DATE: APRIL 9, 2008



WORKING DAYS PRIOR TO CONSTRUCTION CONTRACTOR SHOVLD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED FOR UNDERGROUND UTILITIES OR PIPELINES

LATITUDE: 36' 53.8461' N L'ONGITUDE: 107' 37.4312' W

NAD 27

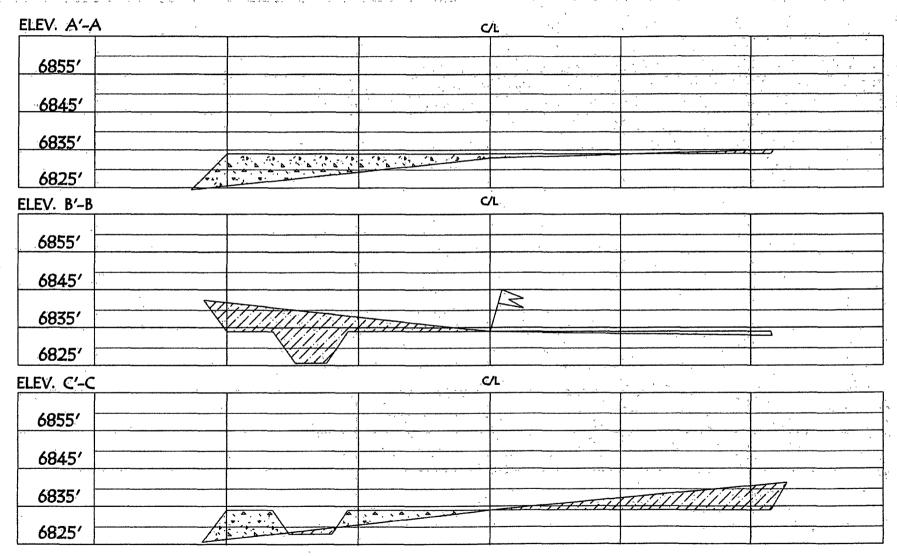
RESERVE PIT DIKE. TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE)

LATITUDE: 36 53 50.7" N LONGITUDE: 107 37 28.0" W

NAD 83

BURLINGTON RESOURCES OIL & GAS COMPANY LP

LEWIS PARK 1M, 2445' FNL & 1760' FEL SECTION 13, T-31- N, R-8-W, NMPM, SAN JUAN COUNTY, NM GROUND ELEVATION: 6834', DATE: APRIL 9, 2008



NOTE: VECTOR SURVEYS LLC IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED
PIPLINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

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

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

- 1. BR will design and construct a properly sized and approved temporary pit which will contain liquids and solids and should prevent contamination of fresh water and protect public health and environment.
- Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration.
- 3. BR will sign the well location in compliance with 19.15.3.103 NMAC.
- 4. BR shall construct all new fences around the temporary pit utilizing 48" steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
- 5. BR shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
- 6. BR shall construct the pit so that the slopes are no steeper than two horizontal feet to one vertical foot.
- 7. Pit walls will be walked down by a crawler type tractor following construction.
- 8. All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements.
- 9. Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
- 10. All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
- 11. BR will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. BR will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. BR will minimize the number of field seams in corners and irregularly shaped areas.
- 12. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 13. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 14. The volume of the pit shall not exceed 10 acre-feet, including freeboard.
- 15. Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit.
- 16. The lower half of the blow pit (nearest lined pit) will be lined with a 20-mil, string reinforced, LLDPE liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11 F.11.
- 17. BR will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.

Burlington Resources Oil & Gas Company, LP San Juan Basin Maintenance and Operating Plan

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

- BR will operate and maintain a temporary pit to contain liquids and solids and maintain the integrity of the liner and liner system to prevent contamination of fresh water and protect public health and environment.
- 2. BR will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
- 3. BR will not discharge or store any hazardous waste in any temporary pit.
- 4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
- 5. If a leak develops below the liquid's level, BR shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. BR shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels. BR shall notify the Aztec Division office 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.
- 6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 8. BR shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will stored on-site until closure of pit.
- 9. Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
- 10. BR will maintain the temporary pit free of miscellaneous solid waste or debris.
- 11. During drilling operations, BR will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. BR will file this log with the Aztec Division office upon closure of the pit.
- 12. After drilling operations, BR will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at BR's office electronically and will be filed with the Aztec Division office upon closure of the pit.
- 13. BR shall maintain at least two feet of freeboard for a temporary pit.
- 14. BR shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
- 15. BR shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. BR may request additional time to remove liquids from the Aztec Division office if it is not feasible to remove liquids within 48 hours.

Burlington Resources Oil & Gas Company, LP San Juan Basin Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

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

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

- All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division—approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011).
- 2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
- 3. The surface owner shall be notified of BR's closing of the temporary pit prior to closure as per the approved closure plan via certified mail, return receipt requested.
- 4. Within 6 months of the Rig Off status occurring BR will ensure that temporary pits are closed, re-contoured, and reseeded.
- 5. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email, or verbally. The notification of closure will include the following:
 - i. Operator's name
 - Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at the San Juan County Landfill located on CR 3100.
- 7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

Components	Tests Method	Limit (mg/Kg)		
Benzene	EPA SW-846 8021B or 8260B	0.2		
BTEX	EPA SW-846 8021B or 8260B	50		
TPH	EPA SW-846 418.1	2500		
GRO/DRO	EPA SW-846 8015M	500		
Chlorides	EPA 300.1	(1000)500		

- 9. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of 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. If standard testing fails BR will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
- 10. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
- 11. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011
- 12. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Reshaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 13. Notification will be sent to OCD when the reclaimed area is seeded.
- 14. 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 federal 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. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Туре	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS) = Purity X Germination/100

Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)

Purity

50 percent

Germination

40 percent

Percent PLS

20 percent

Source No. two (better quality)

Purity

80 percent

Germination

63 percent

Percent PLS

50 percent

5 lb. bulk seed required to make 2 lb. bulk seed required to make

1 lb. PLS 1 lb. PLS

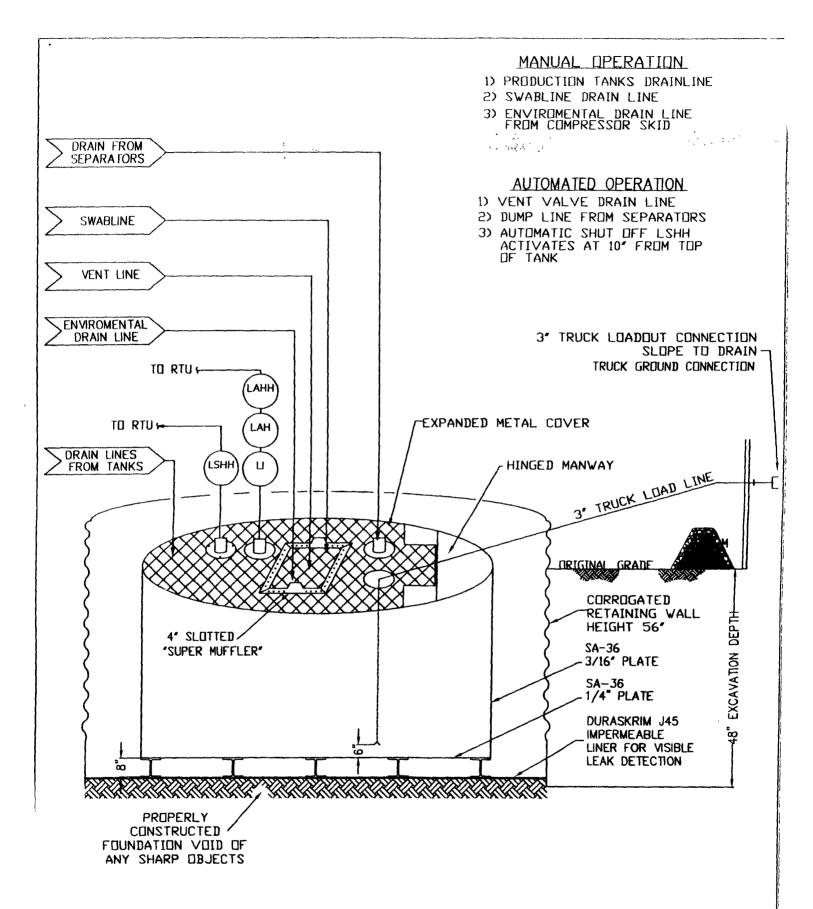
15. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.

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.

- 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.
- 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.



ConocoPhillips

San Juan Business Unit

PRODUCED WATER PIT TANK
OPEN TOP GRAVITY FLOW TANK
INTERNALLY COATED WITH
12-14 MILS AMERON AMERCOAT 385

ILIA SKING BOLES LAG

PROPERTIES	TEST METHOD	J	oše'	J 36	EE.	J4	ibe.
4. ·		Min Roll Averages	Typical Roll Averages	Min. Rolf Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages
Appearance .		Black/Black		Black/Black		Black/Black	
Thickness	ASTM D 5199	2 7 mil	30 mil	32 mil	36 mil	40 mil	45 mil
Weight Lbs Per MSF (oz/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	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
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	<0.5
Puncture Resistance	ASTM D 4833	50 lbf	64 lbf	65 lbf	83 lbf	80 lbf	99 lbf
Maximum Use Temperature		180° F	180° F	180° F	180° F	180° F	180° F
Minimum Usø Temperature		-70° F	-70° F	-70° F	-70° F	-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: RAYEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO to guarantee of satisfactory results from reliance upon contained information or recommendations and discremes all subtrity for resulting loss or damage.

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**



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 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 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.

- 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 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.
- 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