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

1301 W Grand Ave , Artesia, NM 88210

State of New Mexico Energy Minerals and Natural Resources

> Department Oil Conservation Division 1220 South St. Francis Dr.

July 21, 2008 For temporary pits, closed-loop sytems, and below-grade

Form C-144

tanks, submit to the appropriate NMOCD District Office

1000 Rto Brazos Rd , Aztec, NM 87410  District IV	Santa Fe, NM 87505	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	Clared Language B. L. C.	appropriate NMOCD District Office
<u> </u>	Closed-Loop System, Below-Gra	
Proposed	Alternative Method Permit or Clo	osure Plan Application
	ermit of a pit, closed-loop system, below-grade	
	losure of a pit, closed-loop system, below-grade	e tank, or proposed alternative method
<u></u>	Iodification to an existing permit	
	losure plan only submitted for an existing perm elow-grade tank, or proposed alternative method	• • • •
		oop system, below-grade tank or alternative request
	quest does not relieve the operator of liability should operation	
environment Nor does approval relieve the c	operator of its responsibility to comply with any other applicab	ole governmental authority's rules, regulations or ordinances
Dperator: Burlington Resources Oil & Ga	s Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington, NM	87499	
Facility or well name: Howell 12		
API Number: 30-045-:	34476 OCD Permit Num	nber:
J/L or Qtr/Qtr: <b>I(NESE)</b> Section:	34 Township: 28N Range:	8W County: San Juan
Center of Proposed Design: Latitude:	<b>36.61590' N</b> Longitude:	<b>107.66195' W</b> NAD: 1927 X 1983
Surface Owner: X Federal	State Private Tribal Trust or Indi	ian Allotment
Permanent Emergency Cavitation  X Lined Unlined Liner type  X String-Reinforced  Liner Seams X Welded X Factory	e: Thickness 20 mil X LLDPE	HDPE
3		
<u> </u>	f 19.15.17.11 NMAC	
Type of Operation: P&A Drilli	ing a new well Workover or Drilling (Applies notice of intent)	to activities which require prior approval of a permit or
Drying Pad Above Ground Stee	el Tanks Haul-off Bins Other	
Lined Unlined Liner type	Thickness mil LLDPE	HDPE PVD Other
Liner Seams. Welded Factory	Other	RECEIVED
4		
Below-grade tank: Subsection I of 19.1		utomatic overflow shut-off
Volume: bbl	Type of fluid.	
Tank Construction material:		021222328 021222328
Secondary containment with leak detection		utomatic overflow shut-off
	Visible sidewalls only Other	·
Liner Type Thickness m	il HDPE PVC Other	
5 Alternative Method:		
Submittal of an exception request is required.	Exceptions must be submitted to the Santa Fe Enviro	onmental 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)									
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.									
7									
Netting: Subsection E of 19 15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)									
Screen Netting Other									
Monthly inspections (If netting or screening is not physically feasible)									
Signs: Subsection C of 19.15.17.11 NMAC									
12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers									
X Signed in compliance with 19.15.3.103 NMAC									
9									
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 cons	ideration of an	proval							
Exception(s) Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	iociation of ap	provar							
Exception(s) requests must be submitted to the Santa re Extriorimental bureau office for consideration of approval.									
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.	Yes	X No							
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells									
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa	Yes	X No							
lake (measured from the ordinary high-water mark).									
- 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	Yes	X No							
application.		_							
(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)	XNA								
- Visual inspection (certification) of the proposed site, Aerial photo; Satellite image									
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering	Yes	X No							
purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.		E I							
- 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	Yes	X No							
adopted pursuant to NMSA 1978, Section 3-27-3, as amended									
- Written confirmation or verification from the municipality; Written approval obtained from the municipality		V Na							
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 confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	L	<u> </u>							
Within an unstable area.	□Yes	XNo							
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	🗀 🚟	ا ```ت							
Society; Topographic map		1							
Within a 100-year floodplain	Yes	XNo							
- FEMA map	I -								

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.  Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15 17.9 NMAC
Trydrogeologic Report (Declow-grade Tailss) - 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
Tryansgeotogic Data (Temporary and Embrgoins) First Stated 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
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
12 Closed Ican Systems Pownit Application Attachment Chaplifets Subjection P. of 10.15.17.0 NIA.C.
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  Cil Field Wests Strong Characterization
☐ 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
14
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 Below-grade Tank Closed-loop System  Alternative
Proposed Closure Method: Waste Excavation and Removal
Waste Removal (Closed-loop systems only)
X On-site Closure Method (only for temporary pits and closed-loop systems)
X In-place Burial On-site Trench
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.
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 NMAC
Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17 13 NMAC
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15 17.13 NMAC

16 Wasta Damayal Clasura For Clased Ioan Systems That Utiliza Abaya Cround Steel Tanks on Haul off Dire Only (10.15.17.12.D.NNAAC)									
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 faculty or faculties for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two	facilities								
are required.									
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 service and operations?									
Yes (If yes, please provide the information No	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	AC								
17									
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC  Instructions: Each sting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided by certain sting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 10 NMAC for guidance.									
Ground water is less than 50 feet below the bottom of the buried waste.	Yes X No								
- NM Office of the State Engineer - tWATERS database search; USGS: Data obtained from nearby wells	□N/A								
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	□N/A								
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									
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 harmonical foot of a minoral demonstration in management that less than four households are found and a second surface.	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 pursuant to NMSA 1978, Section 3-27-3, as amended.	Yes X No								
<ul> <li>Written confirmation or verification from the municipality, Written approval obtained from the municipality</li> <li>Within 500 feet of a wetland</li> <li>US Fish and Wildlife Wetland Identification map, Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	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;	Yes XNo								
Topographic map Within a 100-year floodplain	Yes X No								
- FEMA map	Yes X No								
On-Site Closure Plan Checklist: (19.15.17 13 NMAC) Instructions: Each of the following items must be attached to the clos	ure plan. Please indicate,								
by a check mark in the box, that the documents are attached.									
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	E10 15 17 11 NRAAG								
Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of X Protocols and Procedures - based upon the appropriate requirements of 19.15 17.13 NMAC	19.15.17 11 NMAC								
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19 15 17.13 NMAC									
X Waste Material Sampling Plan - 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 or in case on-site closure standards of the control of the contr	cannot be achieved)								
X Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC									
Re-vegetation Plan - based upon the appropriate requirements of Subsection 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									

Form C-144 Oil Conservation Division Page 4 of 5

19		•			,
Operator Application					
I hereby certify that the	e information submitted with this a	pplication is true, accui	rate and complete to the	best of my knowledge and belief.	
Name (Print).	Crystal Tafo	ya	Title	Regulatory Technician	
Signature:	Canstal	Taloua	Date:	10/3/08	
e-mail address	crystar.tafoya@conoco	ophylips.com	Telephone:	505-326-9837	
OCD Representativ		. =	Closure Plan (only)	OCD Conditions (see att	
Title: En	viro/spec		OCD Pern	nit Number:	
Instructions Operators report is required to be	quired within 60 days of closus are required to obtain an approve submitted to the division within 6 has been obtained and the closure	ed closure plan prior to O days of the completio	o implementing any closi on of the closure activitie ompleted	re activities and submitting the cl	•
If different from	n approved plan, please explain.	ite Closure Method	Alternative Closure		Closed-loop systems only)  ns Only:
	lentify the facility or facilities for				
were utilized.					
Disposal Facility Na	ame.		Disposal Facility	Permit Number	
Disposal Facility Na			Disposal Facility		
	op system operations and associate	_	_	t be used for future service and o	peartions?
Yes (If yes, ple	ase demonstrate complilane to the	items below)	_No		
	ted areas which will not be used for on (Photo Documentation)	or future service and op	erations:		
Soil Backfilling	g and Cover Installation				
Re-vegetation	Application Rates and Seeding Tec	chnique			
the box, that the do Proof of Clost Proof of Deed Plot Plan (for Confirmation Waste Materia Disposal Facil Soil Backfillir Re-vegetation	Attachment Checklist: Instruction and Comments are attached.  The Notice (surface owner and comments are attached).  The Notice (required for on-site closures and temporary Sampling Analytical Results (if all Sampling Analytical Results lity Name and Permit Numbering and Cover Installation Application Rates and Seeding tion (Photo Documentation) are Location:  Latitude:	division) osure) pits) f applicable) (if applicable)	owing items must be atta	ched to the closure report. Pleas	e indicate, by a check mark in
25					
Operator Closure C I hereby certify that the			-		owledge and belief. I also certify that
Name (Print):			Title		
Signature.	<u> </u>		Date:		
e-mail address:			Telephone:		

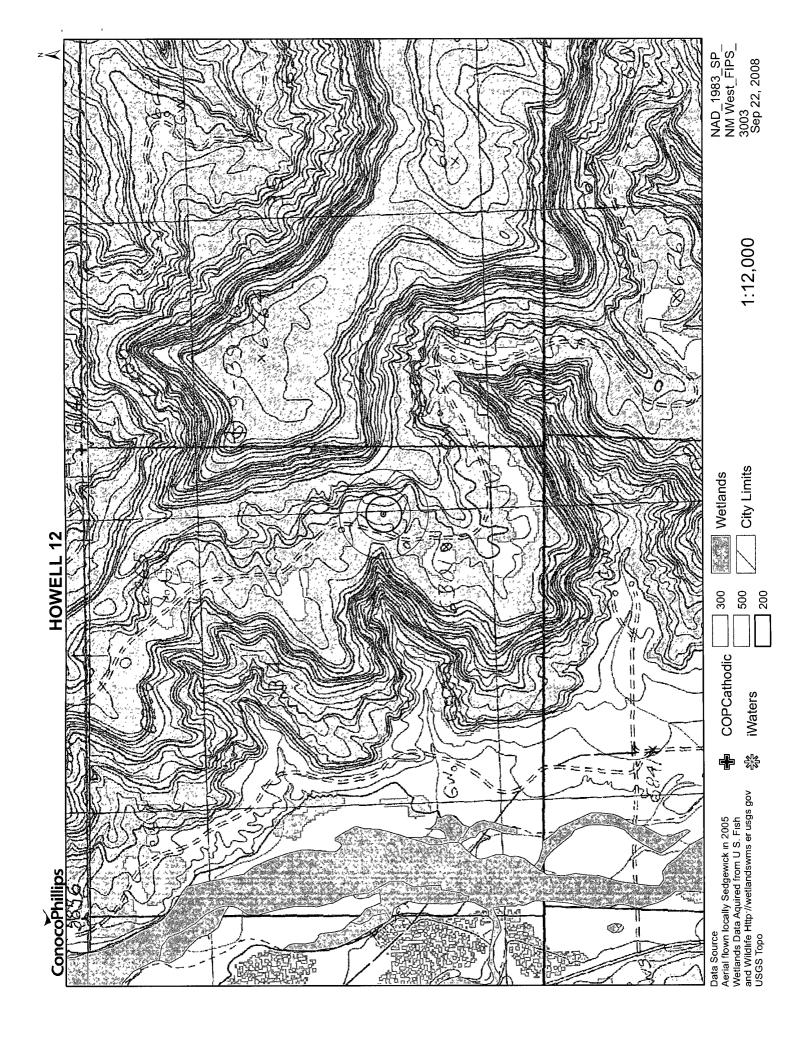
# New Mexico Office of the State Engineer POD Reports and Downloads

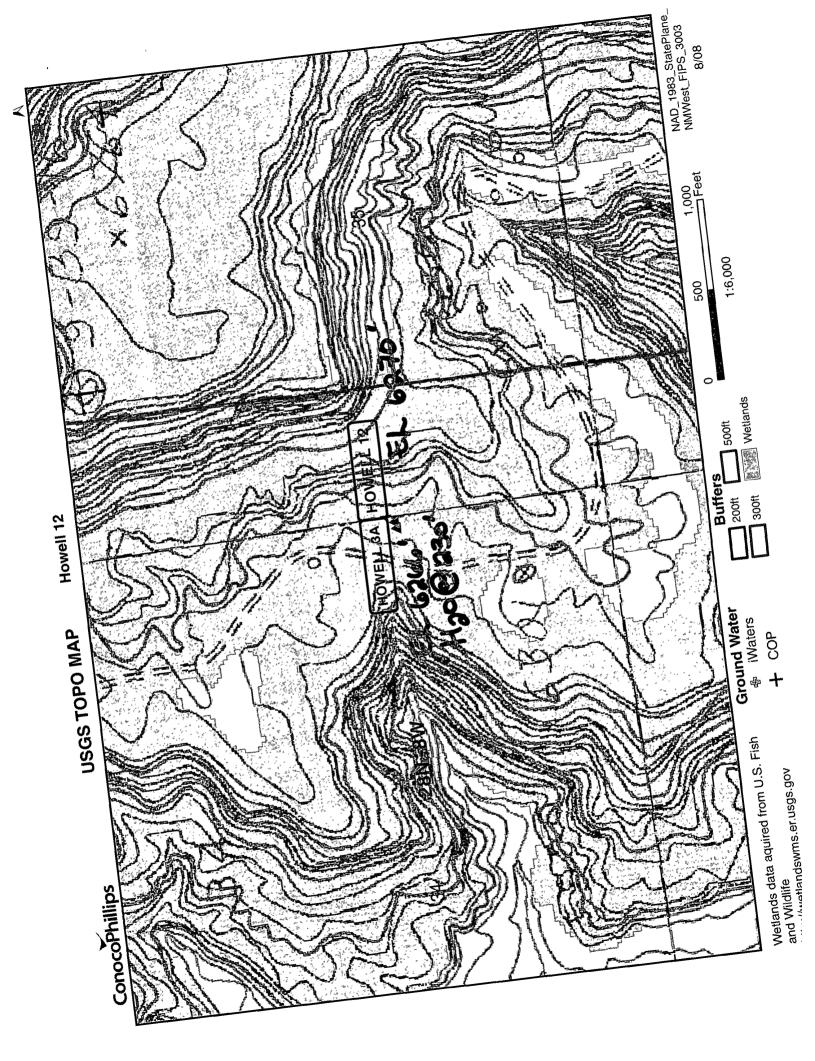
Towns	hip: 28N	Range: 08W	Sections: 3	3,34,35,2	6,27,28	<u>-</u>	— - 4 -	<u>andennan ann dan dan dan dan dan dan dan dan</u>
NAD27	X: [ ]	<b>Y</b> : (	Zone:		Search R	adius:	-	
County:		Basin:			Number	:: ::	Suffix	ς:
Owner Name: (F	ïrst)	(L	ast) All		⊖Non-D	omestic	© Dome	estic
. Word to	POD / Surf	ace Data Report	er Column Repo		to Water R	eport .	,	
		Clear Form	iWATERS N	1enu	Help			<del>gin in an angagagaga</del>
		W	ATER COLUMN	REPORT	10/01/20	08		
POD Number	(quarters	s are 1=NW 2= s are biggest Rng Sec q q	to smalles		Y	Depth Well	Depth Water	Wate Colum

No Records found, try again

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

Towns	ship: 27N	Range: 08W	Sections: 2,3	3,4		unageninosponosponosponosponosponosponosponos	<del>ain, minne kaan</del>
NAD27	X: [	Y:	Zone:		Search Radius:	1	
County:		Basin:			Number:	Suffix:	
Owner Name: (I	First)	(L	ast) All	1 1	○ Non-Domesti	c ② Domesti	с
ي خود	POD / Sui	face Data Repor	t Av.		o Water Report	noting the little	
	[	Clear Form	WATERS Me	enu (	Help		
		W.	ATER COLUMN R	EPORT 1	L0/01/2008	e e e e e e e e e e e e e e e e e e e	
POD Number	(quarter Tws	s are bigges Rng Sec q q	=NE 3=SW 4=SE t to smallest q Zone	-	Dept Y Well	_	Wat∈ olum





2386

30-045-26444

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

Operator MERIDIAN OIL INC.	Location:	Unit_I	Sec. 34	rwp 28	Rng 8
Name of Well/Wells or Pipeline Servi	cedHOWE	LL #3A		<u></u>	
				срв	3 1819w
Elevation6266' Completion Date 8/9/87	Total Dep	oth 600'	Land :	Type*_	N/A
Casing, Sizes, Types & Depths	N/A				
If Casing is cemented, show amounts	& types use	ed	N/A		
If Cement or Bentonite Plugs have be	en placed,	show de	epths & a	amount	s used
Depths & thickness of water zones wi Fresh, Clear, Salty, Sulphur, Etc				nen po	ssible:
Depths gas encountered: N/A					
Type & amount of coke breeze used:	N/A				
Depths anodes placed: 530', 520', 510',	500', 480', 4	27', 417	', 407', 3	397', 38	87 <b>'</b>
Depths vent pipes placed: N/A					· - ~ >
Vent pipe perforations: 380'			DECI	EIN	
Remarks: gb #1			MAY3	<u>1</u> 1991	
			OIL CO	N. L.	
			Die	7 9	

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

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

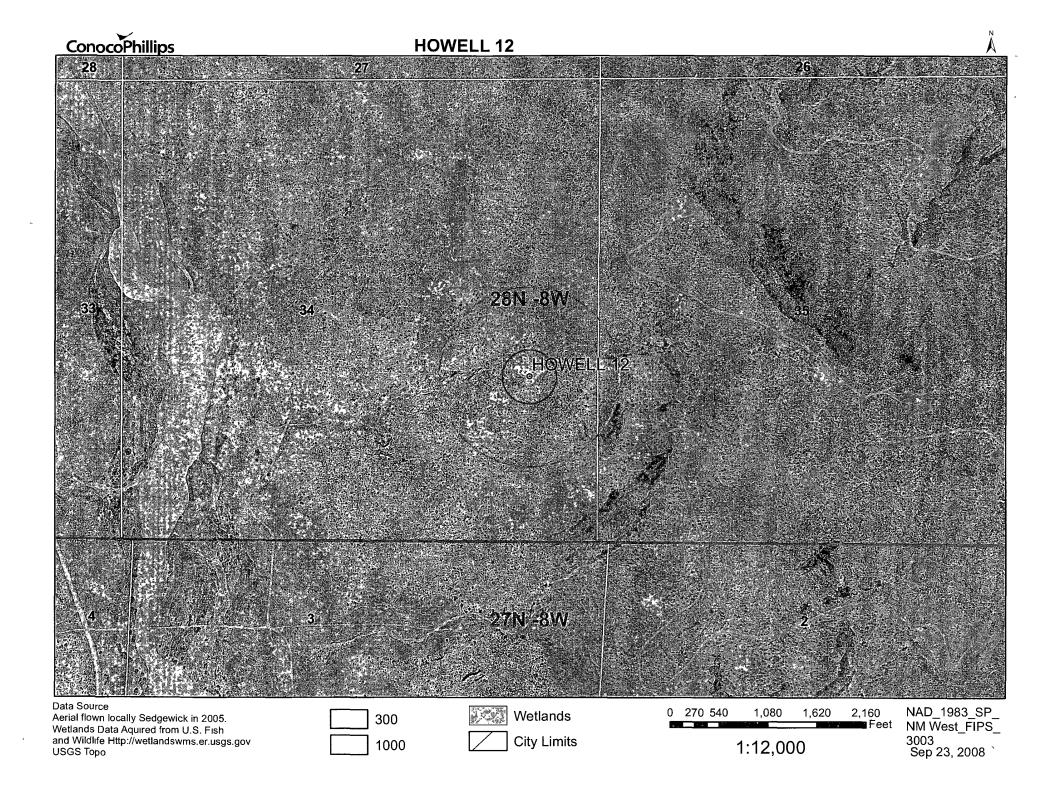
Form 3160-4 (August 1999)

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

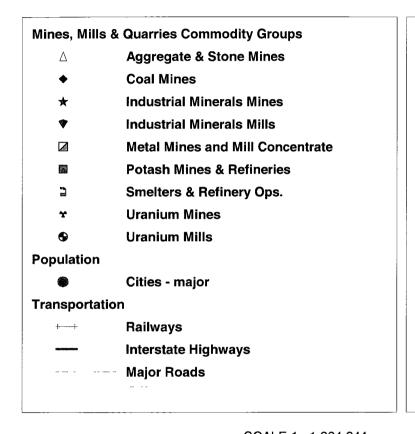
FORM APPROVED OMB No 1004-0137 Expires: November 30, 2000

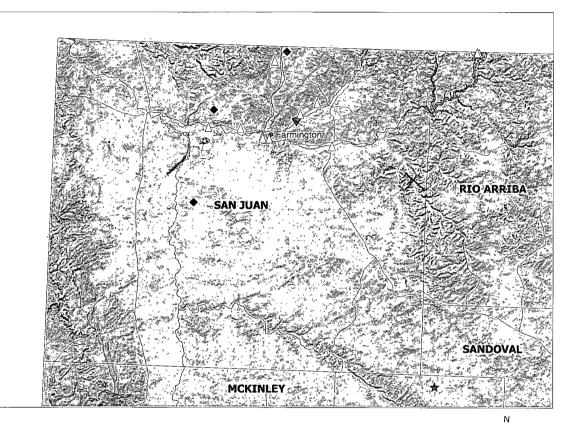
#### WELL COMPLETION OR RECOMPLETION REPORT AND LOG

							ONI AN			3.	NMSF			
la. Type of	_	Oil Well	_	_		Other					If Indian	, Allo	ttee or	Tribe Name
b. Type of	Completion	Othe		□ Work O	ver 🗖	Deepen	Plug Bac	ck 🛛 🗅	Oiff Res	vr. 7.	Unit or (	CA Ag	reeme	nt Name and No.
	IGTON RES		S O&G CC	LP			le@br-inc.		~ Q II	117	Lease N HOWE	LL 3A		l No.
3. Address	3401 EAS FARMING	T 30TH TON, NI	M 87499				hone No. (ir 505.326.97		(dode)	A" 3	PI Wei		30-045	5-26444-00-C2
4. Location At surface	Sec 34	T28N R	on clearly ar 8W Mer NN 0800FEL	ΛP		-		(4)	JUN	2003	OF I	nd Poo	ol, or E ACRA	xploratory
At top pr	rod interval r	eported b	elow					C 011	L COA	S. D	or Are	Sec	34 T2	Block and Survey 8N R8W Mer NMP
At total d	depth								DIST	3	2. Canal	or Pa JAN	rish	13. State NM
14. Date Spi 07/16/19				ate T.D. Rea //24/1985	ched	1	6. Date Cor D & A 05/23/20	DA BERGO	y, to Pro	11,	Vati	OHS (L	F, KB 6 GL	, RT, GL)*
18. Total De	epth:	MD TVD	5304	19	Plug Back	T.D.	MD TVD	5293		0 Depth	Bridge Pl	ug Set		ID VD
21. Type Ele CCL-GF		er Mecha	nical Logs R	un (Submit	copy of eac	n)			Was DS	Il cored? T run? onal Surve	⊠ No ⊠ No y? ⊠ No	) <u>[</u>	ਜੋ Yes ≀	(Submit analysis) (Submit analysis) (Submit analysis)
3. Casing an	d Liner Reco	ord (Repo	ort all strings	s set in well)									<u> </u>	
Hole Size	Size/G	rade	Wt (#/ft.)	Top (MD)	Bottom (MD)	Stage Ce Dep		No. of Sks Type of Cer	1	Slurry Vo (BBL)	ol. Cen	nent T	ор*	Amount Pulled
12.250		WC-50	32.0			12	-0.4	160					_	
8.750 6.250	<del></del>	00 J-55 00 J-55	20.0 11.0	<del></del>	0 28 8 53		50 C				_	_		
							,,,,,,							
<u> </u>								<u></u>					$\dashv$	
24. Tubing		(D)   D		(MD)	V   D		. I B i	D- d (1	450	G T	Do de C	. () ()	· · ·	2 d - D - d (14D)
Size 1	Depth Set (M	5101	acker Depth	(MD) 3	Size De	pth Set (MI	) Pack	er Depth (N	MD)	Size	Depth Se	et (ML	")   '	Packer Depth (MD)
25. Producir	ng Intervals					6. Perforati	on Record							
	ormation	CRA	Тор	3205	ottom 4132	Per	forated Inte		22	Size	No. Ho		OPEN	Perf. Status
A) B)	CHA	CRA		3205	41321	-	34	205 TO 41	32	0.330	ļ	_20	UPEN	
C)														
D) 27. Acid, Fr	acture Treat	ment. Cer	ment Squeez	e Etc					L		<u> </u>			
	Depth Interva		T T	., 2.0.			Amou	int and Typ	e of Ma	terial				
	32	05 TO 4	132 615 BB	L 20 #LINEA	R GEL, 1,18	5,100 SCF N	12, 200,000#	# 20/40 BRA	ADY SD					
			<del></del>											
38 D														
28. Producti	Test	Hours	Test	Oil	Gas	Water	Oil Gravity		Gas	I Pro	duction Met	hod		
	Date 05/23/2003	Tested 1	Production	BBL	MCF 258.0	BBL 0.0	Corr API		Gravity	[			ופ בפת	M WELL
Choke	Tbg Press	Csg	24 Hr	Oil	Gas	Water	Gas Oil		Well Stat	us		FLOW	STRO	IN WELL
Size 2	Flwg 152 SI 152	Press 290.0	Rate	BBL 0	MCF 258	BBL 0	Ratio		G	SI				
28a. Produc						1						ACCI	PTE	O FOR RECOR
	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API		Gas Gravity	Pro	oduction Mc	höď	1111	1062003
Produced					+=	Water	Gas Oil		W 11 Cc .				$\sigma \omega v$	<del>ۥ᠃᠁᠘ᢕᢕ</del> ┙
Produced Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	BBL	Ratio		Well Stat	us		gad	MING	TON FIELD OFFIC



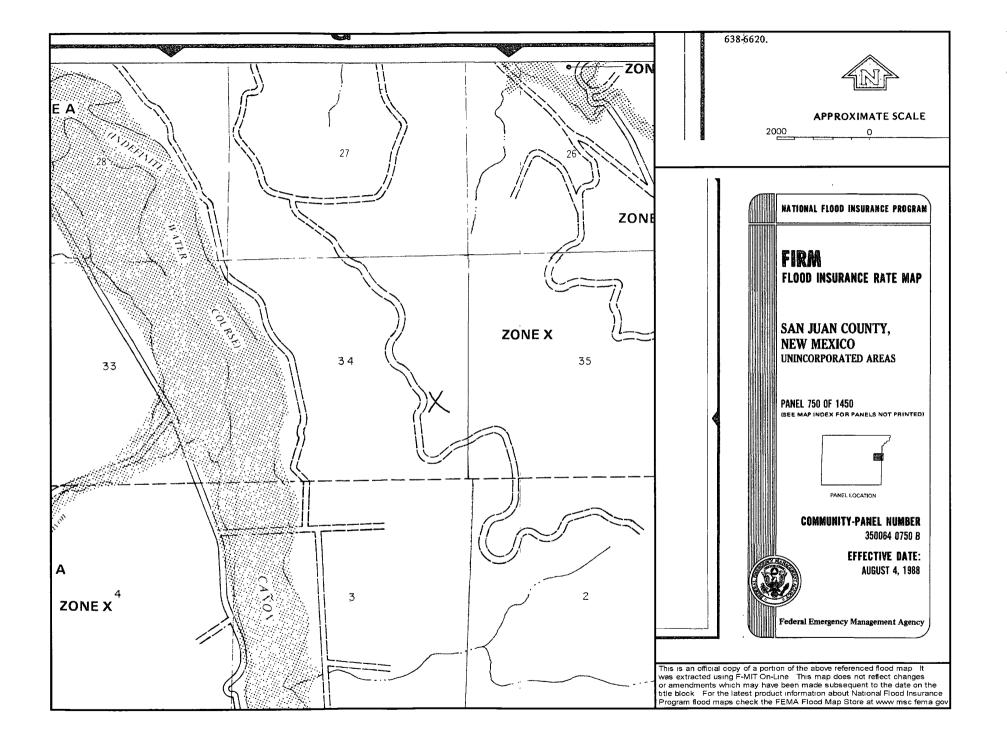
# Howell 12 Mines, Mills and Quarries Web Map











## Tafoya, Crystal

From:

Tafoya, Crystal

Sent:

Thursday, July 10, 2008 8:16 AM

To:

'mark\_kelly@nm.blm.gov'

Subject:

OCD Pit Closure Notification

The following temporary pits will be closed on-site. The new OCD Pit Rule 17 requires the surface owner be notified. Please feel free to contact me at any time if you have any questions. Thank you!

Allison Unit 2B

Allison Unit 40N

Angel Peak B 27E

Ballard 11F

Cain 725S

Canyon Largo Unit 250N

Canyon Largo Unit 279E

Canyon Largo Unit 288E

Canyon largo Unit 297E

Canyon Largo Unit 465E

Carson SRC 4E

Day B 4P

Day B 5A

East 17S

**EPNG A 1B** 

**EPNG B 1M** 

Federal A 1E

Filan 5M

Filan 5N

Fogelson 4 100

Fogelson 4 100S

Grambling C 202S

Hagood 19

Hamner 9S

Hardie 4P

Hare 295

Heaton Com 100

Helms Federal 1G

Howell 2

Huerfanito Unit 103F

**Huerfanito Unit 29S** 

Huerfanito Unit 39S

Huerfanito Unit 47S Huerfanito Unit 50E

Huerfanito Unit 75E

Huerfanito Unit 83E

Huerfanito Unit 87E

Huerfanito Unit 90E

Huerfanito Unit 90M

**Huerfanito Unit 98S** 

Huerfano Unit 108F

Huerfano Unit 282E

Huerfano unit 305

Huerfano unit 307

Huerfano Unit 554

Johnston Federal 24S

## Hydrogeological report for Howell 12

#### **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.

### Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Howell 12 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 groundwater depth is considered to be greater than 100' as determined by the topographic map and the Cathodic well data from the Howell 3A with an elevation of 6266' and groundwater depth of 230'. The subject well has an elevation of 6270' which is slightly greater than the Howell 3A, therefore the groundwater depth is greater than 100'. There are no iWATERS data points located in the area as indicated on the TOPO Map. The Cathodic data provided the indication of groundwater depth is greater than 100'. The hydro geologic analysis indicates the groundwater depth and the San Jose formation will create a stable area for this new location.

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

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 12, 2005 Instructions on back

District II 1301 W Grand Avenue, Artesia, NM 88210

OIL CONSERVATION DIVISION CENTER 1220 South St. Francis Dr OCT 2 3 2007

propriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

District III 1000 Rio Brazos Rd., Aztec, NM 87410

<sup>12</sup> Declicated Acres

Santa Fe. NM 87505

Bureau of Land Management AMENDED REPORT

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

301.#4 Acres

151.44 Acres

WELL LOCATION AND ACREAGE DEDICATION FIELD AFFICE

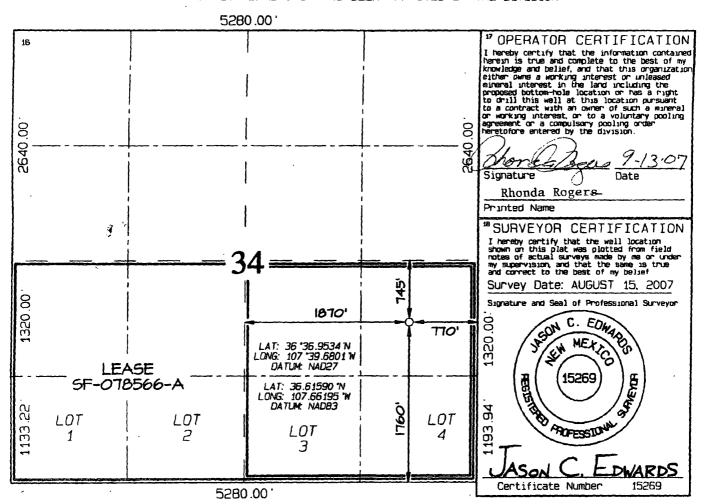
'API	Number		*Poo1	Code	'Pool Name						
30-04	5-344	שר ז	71629 /72439   BASIN FRUITLAND COAL / So. BLANCO PICTU					CO PICTU	JRED	CLIFF	5
Property	Code				*Property	Name			*Wel	1 Number	,
7118			HOWELL 12						12		
OGAID I	No.	*Operator Name							*Elevation		
1453	8		BURLI	INGTON RESOURCES OIL & GAS COMPANY, LP 6270							
					<sup>10</sup> Surface	Location					
UL or lot no	Section	Township	Range	Last Last	Feet from the	North/South Line	Feet from the	East/West li	ne	Count	y
Ι	34	28N	8W		1760	SOUTH	770	EASŢ		SAN .	JUAN
		11 [	Bottom	Hole L	ocation I	f Different	From Surf	ace			
UL or lot no	Section	Qt/tanwo?	Range	Lot Idn	Feat from the	North/South line	Feet from the	East/West 1:	ne	Count	y

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

Double or Infill

(S/2) - FC

(SE/4) - PC



## 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

#### General Plan:

- All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division—approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011).
- 2. The preferred method of closure for all temporary pits will be 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	<b>5</b> 00
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.