District I

1625 N French Dr , Hobbs, NM 88240

District II 1301 W Grand Ave, Artesia, NM 88210 District III

1000 Rio Brazos Rd, Aztec, NM 87410

District IV 1220 S St Francis Dr , Santa Fe, NM 87505 **Energy Minerals and Natural Resources** Department

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

State of New Mexico

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

Form C-144

tanks, submit to the appropriate NMOCD District Office

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

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:	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
	X Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
	below-grade tank, or proposed alternative method

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

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

1	
Operator: Burlington Resources Oil & Gas Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington, NM 87499	· · · · · · · · · · · · · · · · · · ·
Facility or well name: Huerfanito Unit COM 133E	
API Number: 30-045-34433	OCD Permit Number:
U/L or Qtr/Qtr: P(SE/SE) Section: 16 Township: 26N	Range: 9W County: San Juan
Center of Proposed Design: Latitude: 36°48.393000' N	Longitude: 107°78759500' W NAD: X 1927 1983
Surface Owner: Federal X State Private Trit	bal Trust or Indian Allotment
X Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: X Drilling Workover Permanent Emergency Cavitation P&A X Lined Unlined Liner type Thickness 12 mil X String-Reinforced Liner Seams. X Welded X Factory Other	X LLDPE HDPE PVC Other Volume. 4400 bbl Dimensions L 65' x W 45' x D 10'
Closed-loop System: Subsection H of 19.15.17.11 NMAC Type of Operation P&A Drilling a new well Workover or notice of inter Drying Pad Above Ground Steel Tanks Haul-off Bins Lined Unlined Liner type: Thickness mil Liner Seams: Welded Factory Other	Other LLDPE HDPE PVD Other RECEIVED
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume:bbl	6-inch lift and automatic overflow shut-off
Visible sidewalls and liner Visible sidewalls only Oth Liner Type. Thickness mil HDPE PVC	er Other
5 Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted to the	e Santa Fe Environmental Bureau office for consideration of approval.

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	tution or chur	ch)			
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.					
- Anglian Comment of the Comment of					
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)					
Screen Netting Other					
Monthly inspections (If netting or screening is not physically feasible)					
8					
Signs: Subsection C of 19.15 17.11 NMAC					
12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers					
X Signed in compliance with 19 15.3.103 NMAC					
Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.					
Please check a box if one or more of the following is requested, if not leave blank:					
Administrative approval(s) Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval.	deration of ap	proval.			
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.					
10 Siting Critario (regardine pormittino), 10 15 17 10 NMAC					
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	1				
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	XNo			
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells					
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	∐Yes	X No			
- Topographic map; Visual inspection (certification) of the proposed site	ı				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial	Yes	XNo			
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) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	XNA				
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering	Yes	XNo			
purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.	ا ا ا				
- NM Office of the State Engineer - 1WATERS 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 Within 500 feet of a wetland.	Yes	X No			
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	LI™	<u> </u>			
Within the area overlying a subsurface mine.	Yes	XNo			
- Written confirmation 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	∐Yes	XNo			
Society; Topographic map		_			
Within a 100-year floodplain - FEMA map	Yes	X No			

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 X					
 X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC X Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC 					
X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15 17.12 NMAC					
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-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 Manitoring and Impropriate Plan					
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 Below-grade Tank Closed-loop System					
Type. XDrilling Workover Emergency 1. 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)					
XIn-place Burnal 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					

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Waste Removal Closure For Closed-loop Systems That Utilize Above Grantstructions: Please identify the facility or facilities for the disposal of liquid:	pund Steel Tanks or Haul-off Bins Only: (19.15 17 13.D NMAC) s, drilling fluids and drill cuttings. Use attachment if more than two fo	acilities	į		
are required.					
Disposal Facility Name:					
	Disposal Facility Permit #:		ations?		
Will any of the proposed closed-loop system operations and associated Yes (If yes, please provide the information No		rvice and oper	ations?		
Required for impacted areas which will not be used for future service and op Soil Backfill and Cover Design Specification - based upon the Re-vegetation Plan - based upon the appropriate requirements of Site Reclamation Plan - based upon the appropriate requirements.	appropriate requirements of Subsection H of 19.15.17.13 NMA0 of Subsection I of 19 15.17.13 NMAC	C	·		
17 Siting Criteria (Regarding on-site closure methods only: 19.15.17. Instructions Each sting criteria requires a demonstration of compliance in the close certain siting criteria may require administrative approval from the appropriate dist for consideration of approval. Justifications and/or demonstrations of equivalency of approval.	ure plan-Recommendations of acceptable source material are provided belo trict office or may be considered an exception which must be submitted to the				
Ground water is less than 50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS:		Yes N/A	X No		
Ground water is between 50 and 100 feet below the bottom of the buri	ied waste	Yes	X No		
- NM Office of the State Engineer - 1WATERS database search; USGS;		□ N/A	L_J		
Ground water is more than 100 feet below the bottom of the buried wa	aste	XYes	□No		
- NM Office of the State Engineer - tWATERS database search; USGS;		□ N/A	□		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any oth (measured from the ordinary high-water mark)		Yes	XNo		
- Topographic map; Visual inspection (certification) of the proposed site			<u></u>		
Within 300 feet from a permanent residence, school, hospital, institution, or a - Visual inspection (certification) of the proposed site, Aerial photo; satel	• •	Yes Yes	X No		
Within 500 horizontal feet of a private, domestic fresh water well or spring the purposes, or within 1000 horizontal fee of any other fresh water well or spring - NM Office of the State Engineer - iWATERS database; Visual inspection within incorporated municipal boundaries or within a defined municipal frest pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approximates and the section of the sec	g, in existence at the time of the initial application on (certification) of the proposed site the water well field covered under a municipal ordinance adopted	Yes	XNo		
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map, Topographic map; V		Yes	XNo		
Within the area overlying a subsurface mine. - Written confirantion or verification or map from the NM EMNRD-Mir		Yes	X No		
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geo		Yes	X No		
Topographic map Within a 100-year floodplain. - FEMA map		Yes	XNo		
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instruction by a check mark in the box, that the documents are attached.	s: Each of the following items must bee attached to the closus	re plan. Pleas	indicate,		
X Siting Criteria Compliance Demonstrations - based upon the a	ppropriate requirements of 19.15.17.10 NMAC				
X Proof of Surface Owner Notice - based upon the appropriate re	equirements 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					
	of a drying pad) - based upon the appropriate requirements of 1	9.15.17.11 NM	IAC		
X Protocols and Procedures - based upon the appropriate require					
	ppropriate requirements of Subsection F of 19.15.17.13 NMAC				
X Waste Material Sampling Plan - based upon the appropriate re-					
 X Disposal Facility Name and Permit Number (for liquids, drillin X Soil Cover Design - based upon the appropriate requirements of 	g fluids and drill cuttings or in case on-site closure standards ca of Subsection H of 19.15.17.13 NMAC	nnot be achieve	ed)		
X Re-vegetation Plan - based upon the appropriate requirements					
X Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC					

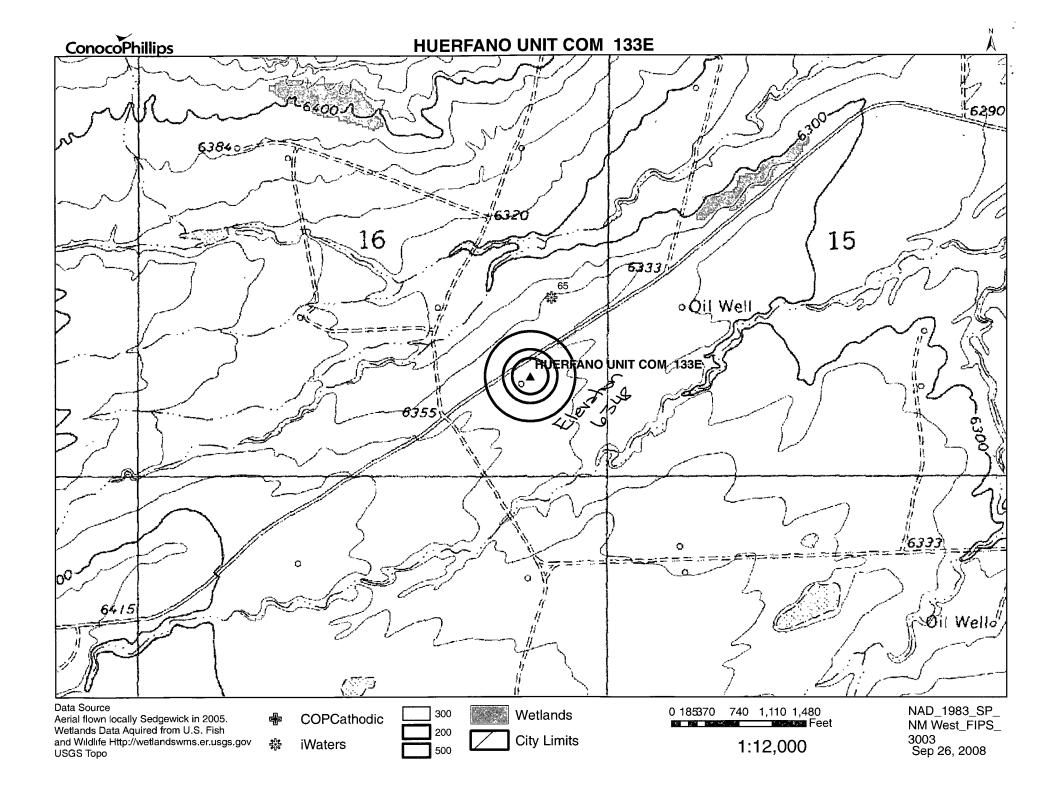
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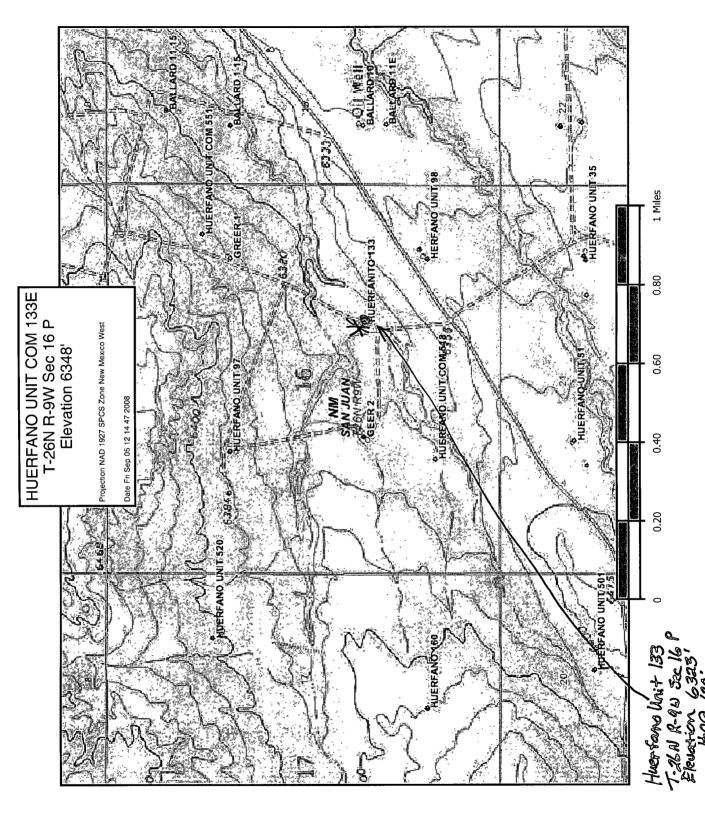
19 Operator Application	on Cartification				
	e information submitted with this app	olication is true, accurate a	and complete to the	best of my knowledge and belief	
Name (Print):	Ethel Tally		Tıtle	Staff Regulatory Technician	
Signature	SHALL TO	0,0	Date:	9-26-08	
e-mail address:	Ethel.Tally@ConocoPh	ullips.com	Telephone:	505-599-4027	
C-man address.	<u> </u>				 -
20					
OCD Approval:	Permit Application (including of	closure plan) [C	osure Plan (only)	OCD Conditions (see attachn	nent)
OCD Representativ	ve Signature:	of the	U	Approval Date:)-14-68
70141 F	nuin spec		OCD D		
Title: <u>E</u>	NULTO/Spec		OCD Pern	nit Number:	
21				,	
	quired within 60 days of closure				• TI
•				ire activities and submitting the closure s. Please do not complete this section	= -
	has been obtained and the closure a			,	
			Closur	e Completion Date:	
22					
Closure Method:					
Waste Excavat	tion and Removal On-site	e Closure Method	Alternative Closure	Method Waste Removal (Close	ed-loop systems only)
If different from	m approved plan, please explain.				
23					
	rding Waste Removal Closure For	Closed-loop Systems Tha	t Utilize Above G	ound Steel Tanks or Haul-off Bins O	only:
	lentify the facility or facilities for wh	here the liquids, drilling fl	luids and drill cutt	ngs were disposed. Use attachment if	more than two facilities
were utilized. Disposal Facility N	ame		Disposal Facility	Permit Number:	
Disposal Facility N				Permit Number:	
• •		activities performed on or		of be used for future service and opeart	ions?
Yes (If yes, ple	ease demonstrate complilane to the it	ems below) No			
Required for impac	ted areas which will not be used for	future service and operation	ons:		
=	ion (Photo Documentation)				
=	g and Cover Installation Application Rates and Seeding Tech	/ nique			
	Application Rates and Seeding Tech	inque	-		
Closure Report	Attachment Checklist: Instruction	one: Each of the following	r items must he att	nched to the closure report. Please inc	licate hv a check mark in
	ocuments are attached.	man Zuen of the following	,	to the crossing reports a reason in	,
Proof of Clos	sure Notice (surface owner and div	vision)			
=	d Notice (required for on-site clos	*			
Plot Plan (for	on-site closures and temporary pi	its)			
Confirmation	Sampling Analytical Results (if a	pplicable)			
=	ial Sampling Analytical Results (11	f applicable)			
= `	ility Name and Permit Number				
=	ng and Cover Installation				
	Application Rates and Seeding T	echnique			
	tion (Photo Documentation) ure Location: Latitude:	,	Longitude:	NAD 19	27 🗍 1983
On-site Closu	ire Location; Latitude:		Longitude:	NAD 19	27 1983
25 Operator Closure (Certification:				
		utted with this closure repo	ort is ture, accurate	and complete to the best of my knowle	dge and belief. I also certify that
	vith all applicable closure requireme	-			- 2
Name (Print).			Title:		
- · · · · · · · · · · · · · · · · · · ·					
Signature:	· · · · · · · · · · · · · · · · · · ·		Date:		
e-mail address:	1		Telephone:		

New Mexico Office of the State Engineer POD Reports and Downloads

Towns	hip: 26N	Range: 09W	Sections: [8	3,9,10,15,1	6,17,20,21	,22		
NAD27	X:	Y:	Zone:	,	Search R	Radius:		
County:		Basin:			Number	; <u></u> ::	Suffix	::
Owner Name: (F	irst)	(La	est)]	○Non-D	omestic	○ Dome	estic
	POD / Surf.	ace Data Report	er Column Rep	Avg Depth to	to Water R	eport	ა. ა.გ.	
	Lu's	Clear Form	iWATERS	Menu .	Help			
	(quarters	WA are 1=NW 2=	TER COLUMN		09/26/20	08	and a great property of the specific property	annan ann gaireannan ann an
202 W	(quarters	are biggest	to smalle	st)	37		Depth	
POD Number SJ 00412		Rng Sec q q 09W 16 4 2	q zone	х	Y	Well 202	Water 65	Colun 13

Record Count: 1





https://148twp.conocophillips.net/servlet/com.esri.esrimap.Esrimap?ServiceName=SanJuan&ClientVersion=4.0&Form=True&En... 9/5/2008

133 - 30-045-05847 98 - 30-045: 05828

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

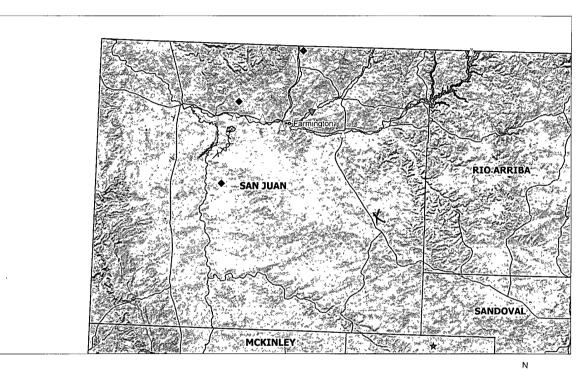
Operator MERIDIAN OIL Location: Unit SE Sec. 16 Twp 26 Rng 9
Name of Well/Wells or Pipeline Serviced <u>HUERFANO UNIT #133, #98</u>
cps 881w
Elevation 6323'Completion Date 6/29/71 Total Depth 500' Land Type* N/A
Casing, Sizes, Types & Depths N/A
If Casing is cemented, show amounts & types used N/A
If Cement or Bentonite Plugs have been placed, show depths & amounts used
N/A
Depths & thickness of water zones with description of water when possible:
Fresh, Clear, Salty, Sulphur, Etc. 120' - 150'
MAY 3 1 1991.
Depths gas encountered: N/A OIL COIN. DIVE
Type & amount of coke breeze used: 9100 lbs. DIST. 3
Depths anodes placed: 405', 395', 385', 375', 365', 235', 225', 185', 175', 165'
Depths vent pipes placed: 405'
Vent pipe perforations: 320'
Remarks: gb #1

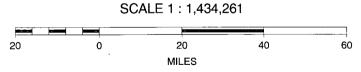
If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

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

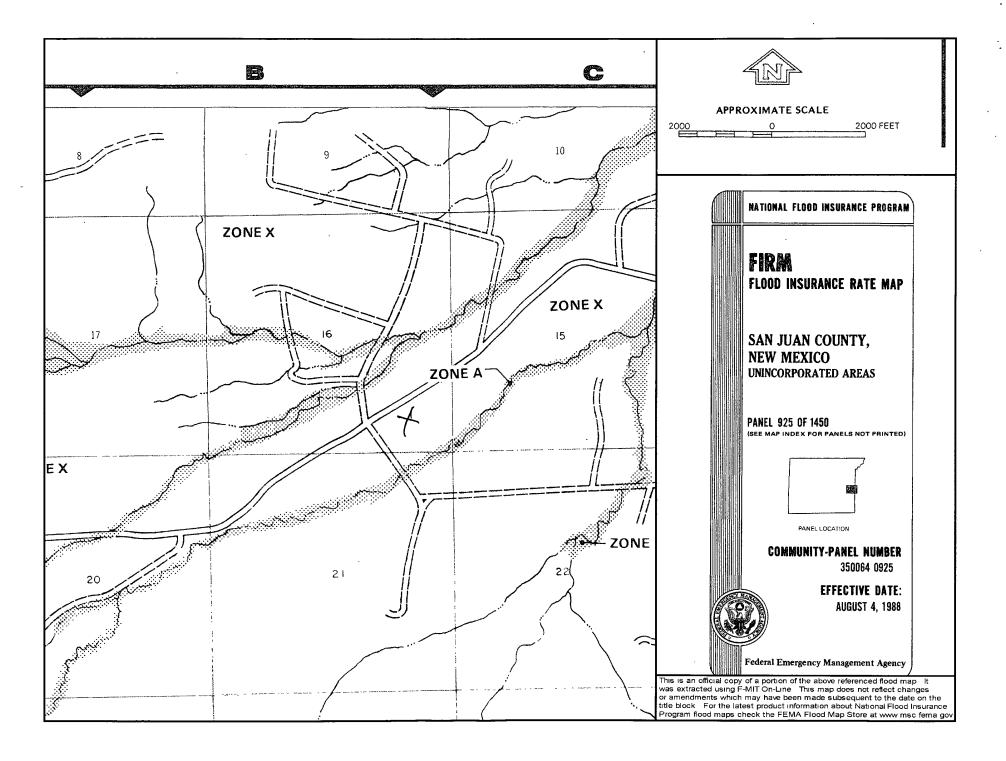
Huerfano Unit COM 133E/Mines, Mills and Quarries Map

Mines, Mills	& Quarries Commodity Groups
Δ	Aggregate & Stone Mines
•	Coal Mines
*	Industrial Minerals Mines
•	Industrial Minerals Mills
	Metal Mines and Mill Concentrate
	Potash Mines & Refineries
. 🖼	Smelters & Refinery Ops.
*	Uranium Mines
•	Uranium Mills
Population	
	Cities - major
Transportati	on
11	Railways









Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Huerfano Unit Com 133E 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 Huerfano Unit 133 with an elevation of 6323' and groundwater depth of 120'. The subject well has an elevation of 6348' which is greater than the Huerfano Unit 133, therefore the groundwater depth is greater than 100'. The iWATERS data point is located in section 26 and its depth is 65' as indicated on the TOPO Map. Using this data point and the cathodic data provided the indication of groundwater depth is greater than 100'. The hydro geologic analysis indicates the groundwater depth and the Nacimiento formation will create a stable area for this new location.

Hydrogeological Report for Huerfano Unit Com 133E

Regional Geological context:

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it commformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone e al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3.500 feet.

Hydraulic Properties:

Reported well yields for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conductive to runoff than retention of precipitation.

References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper

552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.

Levings, G.W., Craigg, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.

Osstrict I 1625 N. French Dr., Hobbs, NM 88240 State of New Mexico Energy. Minerals & Natural Resources Department

District II 1301 W. Grand Avenue, Artesia, NM 88210

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

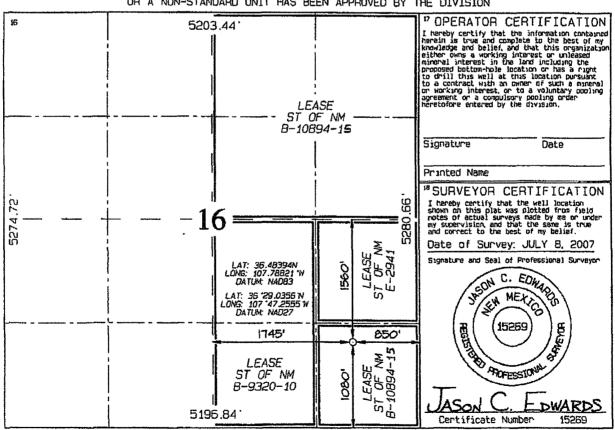
District IV 1220 S. St. Francis Or., Santa Fe, NM 87505 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

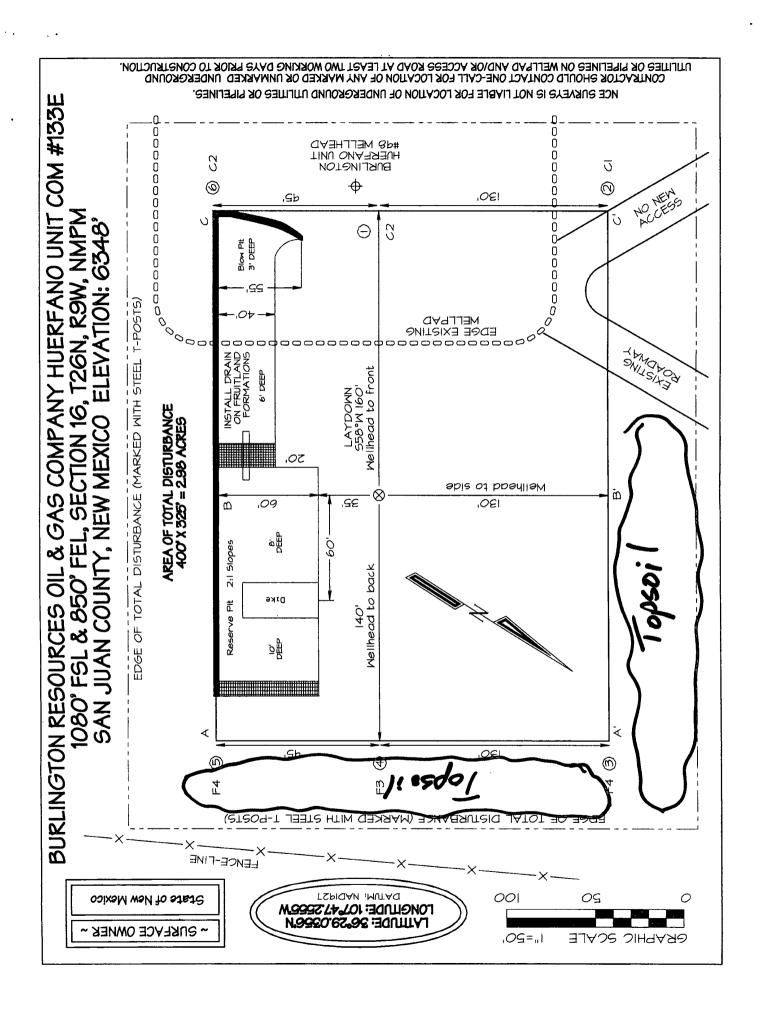
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

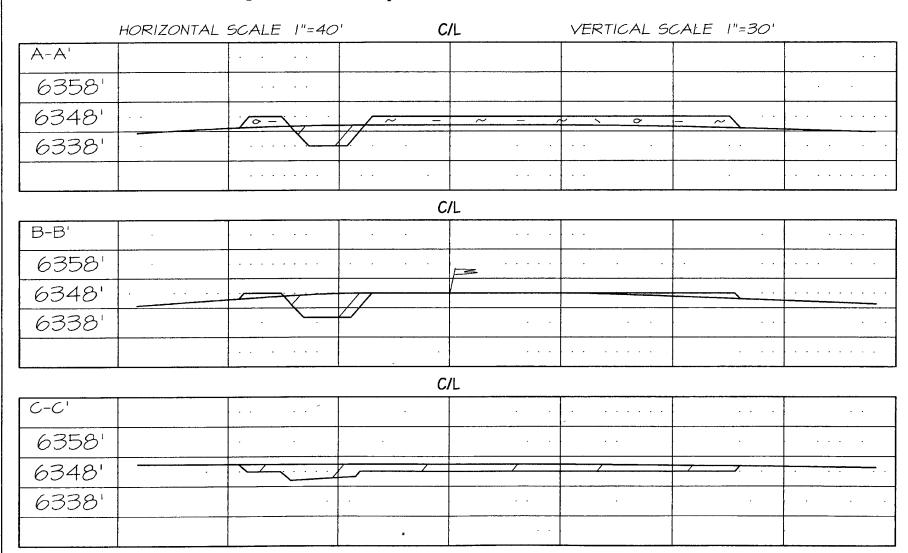
'API Number Pool Co				e Pool Name					
				71599)		BASIN DA	KOTA	
'Property	Code		*Property Name HUERFANO UNIT COM						Well Number 133E
'0GRID 1 14538			The state of the s						*Elevation 6348 *
					10 Surface	Location		······································	
UL or lot no	Section	Township	Range	Lot Ion	Fest from the	North/South line	Feet from the	East/Hest line	County
Ь	16	56N	9W		1080	SOUTH	850 🖈	EAST	SAN JUAN
		11 E	ottom	Hole L	ocation I	f Different	From Surf	ace	
U. or lot no	Section	Taxnship	Range	Let Ion	Feet from the	North/South line	Feet from the	East/West line	County
² Dedicated Acres	32	20.0 Acr	es (E/	2)	Dubint or Infill	M Consolidation Code	¹⁵ Order No.	<u> </u>	

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





BURLINGTON RESOURCES OIL & GAS COMPANY HUERFANO UNIT COM #133E 1080° FSL & 850° FEL, SECTION 16, T26N, R9W, NMPM SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6348°



NCE SURVEYS IS NOT LIABLE FOR LOCATION OF UNDERGROUND UTILITIES OR PIPELINES.

CONTRACTOR SHOULD CONTACT ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED UNDERGROUND UTILITIES OR PIPELINES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION.

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:

- 1. All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division—approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
- 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 as per the approved closure plan using 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 to the Aztec Division office between 72 hours and one week of closure 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.
- 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 a licensed disposal facility.
- 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/ 5 00
		()

- 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 or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (unimpacted) 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.