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

State of New Mexico Energy Minerals and Natural Resources

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

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

Instruct	ions. Plagga gubwit ana	X Closure plan only submitted for an below-grade tank, or proposed alte	rnative method	
	Please be advised that approval	application (Form C-144) per individual of this request does not relieve the operator of liability theorem the operator of its responsibility to comply with	y should operations result in pollution of	surface water, ground water or the
anatan. I	Dunlington Degayrees (il & Gas Company, LP	OGRID#: 1	4538

Operator: Burlington Resources Oil & Gas Company, LP	OGRID#: <u>14538</u>
Address: PO Box 4289, Farmington, NM 87499	
Facility or well name: Huerfanito Unit 29S	ь
API Number: 30-045-34590	OCD Permit Number:
U/L or Qtr/Qtr: F(SENW) Section: 35 Township: 27N	Range: 9W County: San Juan
Center of Proposed Design: Latitude: 36.53440' N	Longitude: 107.76083' W NAD: 1927 X 1983
Surface Owner: X Federal State Private T	Cribal 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 20 mil	X LLDPE HDPE PVC Other
X String-Reinforced	
Liner Seams: X Welded X Factory 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 of notice of in	or Drilling (Applies to activities which require prior approval of a permit or itent)
Drying Pad Above Ground Steel Tanks Haul-off Bins	Other
Lined Unlined Liner type Thicknessmil	Other DUDPE PVD Other
Liner Seams: Welded Factory Other	- REO
Below-grade tank: Subsection I of 19.15.17.11 NMAC	E OIL CO.
Volumebbl Type of fluid:	OIL CONS. DIV. DIST. 3
Tank Construction material:	
Secondary containment with leak detection Visible sidewalls, lin	er, 6-inch lift and automatic overflow shut-off Other
Liner Type: Thicknessmil HDPE PVC	Other
5	
Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted to	the Santa Fe Environmental Bureau office for consideration of approval.

6 Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks) 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, instead 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.	titution or chur	ch)
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		
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.	sideration of ap	proval.
10 Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable		
source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.		
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes	XNo
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - 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.	Yes	XNo
(Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	□NA	•
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applied to permanent pits)	Yes XNA	No
 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 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	X No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes	XNo
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	Yes	XNo
Society; Topographic map Within a 100-year floodplain - FEMA map	Yes	XNo

Form C-144 Oil Conservation Division Page 2 of 5

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 [Instructions: Each of the following items must be attached upon the application of Paragraph (4) of Subsection P. of 10.15.17.0 NIMAG.
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
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
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
Sıting 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
14 P. 161 101 101 101 101 101 101 101 101 101
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 Removal (Closed-loop systems only)
X On-site Closure Method (only for temporary pits and closed-loop systems)
XIn-place Burial On-site Trench
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
15
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan.
Please indicate, by a check mark in the box, that the documents are attached.
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
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 Bookfill and Cover Design Specifications has a prescriptor sequirements of Subsection H of 10.15.17.13 NIMAC
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

Form C-144 Oil Conservation Division Page 3 of 5

16 Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel T Instructions Please identify the facility or facilities for the disposal of liquids, drilling flu	Canks or Haul-off Bins Only: (19.15 17 13.D NMAC)	and the trans
are required	ias and artii cuttings. Use attachment if more than two ja	icumes
Disposal Facility Name:	pisposal Facility Permit #	·
	pisposal Facility Permit #.	
Will any of the proposed closed-loop system operations and associated activities of Yes (If yes, please provide the information No	occur on or in areas that will not be used for future se	ervice 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 Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	on I of 19.15.17 13 NMAC	
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC Instructions: Each suting criteria requires a demonstration of compliance in the closure plan Reccertain siting criteria may require administrative approval from the appropriate district office or if for consideration of approval Justifications and/or demonstrations of equivalency are required.	nay 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: Data obtained	ed from nearby wells	Yes X No
Ground water is between 50 and 100 feet below the bottom of the buried waste		Yes X No
- NM Office of the State Engineer - IWATERS database search, USGS; Data obtaine	d 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 obtaine	d from nearby wells	N/A
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significan (measured from the ordinary high-water mark).	t watercourse or lakebed, sinkhole, or playa lake	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 exi - Visual inspection (certification) of the proposed site; Aerial photo, satellite image	stence at the time of initial application.	Yes X No
	•	Yes X No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than to purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence - NM Office of the State Engineer - iWATERS database; Visual inspection (certification)	ee at the time of the initial application.	
Within incorporated municipal boundaries or within a defined municipal fresh water well pursuant to NMSA 1978, Section 3-27-3, as amended.		Yes X No
 Written confirmation or verification from the municipality; Written approval obtain Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspect 	. ,	Yes X No
Within the area overlying a subsurface mine	(common) of the proposed she	Yes X No
- Written confiramtion or verification or map from the NM EMNRD-Mining and Min	eral Division	
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mine	ral Resources; USGS; NM Geological Society;	Yes X No
Topographic map Within a 100-year floodplain - FEMA map		Yes X No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of by a check mark in the box, that the documents are attached.	the following items must bee attached to the closur	e plan. Please indicate,
X Siting Criteria Compliance Demonstrations - based upon the appropriate re	equirements 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 19	9.15.17.11 NMAC
X Protocols and Procedures - based upon the appropriate requirements of 19		
Confirmation Sampling Plan (if applicable) - based upon the appropriate re		
X Waste Material Sampling Plan - based upon the appropriate requirements of		
X Disposal Facility Name and Permit Number (for liquids, drilling fluids and	_	nnot be achieved)
 Soil Cover Design - based upon the appropriate requirements of Subsectio Re-vegetation Plan - based upon the appropriate requirements of Subsection 		
X Site Reclamation Plan - based upon the appropriate requirements of Subse		

19 Operator Application				,
• •	formation submitted with this application is		•	
Name (Print).	Crystal Tafoya	Title:	Regulatory Technician	
Signature	instal Vali	Date:	9/25/08	
e-mail address	crystal.tafoya@conocophillips/cor	Telephone:	5\$5-326-\$837	
OCD Representative S		Tell	Approval Date:	
Title:	Enviro/spec	OCD Per	nit Number:	
Instructions: Operators as report is required to be su	•	lan prior to implementing any clos e completion of the closure activiti ave been completed	C ure activities and submitting the closure report. The cless. Please do not complete this section of the form until e Completion Date:	
Closure Method: Waste Excavation If different from a	and Removal On-site Closure!	Method Alternative Closur	e Method	only)
Instructions: Please ident were utilized. Disposal Facility Nam- Disposal Facility Nam- Were the closed-loop s	ify the facility or facilities for where the li e: e:	quids, drilling fluids and drill cut Disposal Facilit Disposal Facilit performed on or in areas that will n	round Steel Tanks or Haul-off Bins Only: ings were disposed. Use attachment if more than two y Permit Number y Permit Number: of be used for future service and opeartions?	facilities
Required for impacted Site Reclamation Soil Backfilling as	areas which will not be used for future served. (Photo Documentation) and Cover Installation plication Rates and Seeding Technique			
24 Closure Report Att the box, that the docu		of the following items must be at	ached to the closure report. Please indicate, by a chec	k mark in
	Notice (surface owner and division)			
=	otice (required for on-site closure)			
	-site closures and temporary pits) impling Analytical Results (if applicable)		
=	Sampling Analytical Results (if applicable			
	Name and Permit Number	/		
= '	and Cover Installation			
Re-vegetation A	pplication Rates and Seeding Technique	:		
Site Reclamation	(Photo Documentation)		<u> </u>	
On-site Closure	Location: Latitude:	Longitude:	NAD 1927 19	83
25 Operator Closure Cer I hereby certify that the in		this closure report is ture, accurat	and complete to the best of my knowledge and belief	I also certify that
	all applicable closure requirements and co			• • • • • • • • • • • • • • • • • • • •
Name (Print).		Title:		_
Signature:		Date:		
e-mail address:	,	Telephone:		

New Mexico Office of the State Engineer POD Reports and Downloads

Township:	27N	Range: 09W	Sections:			
NAD27 X:		Y:	Zone:		Search Radius:	
County:		Basin:	· ·		Number:	Suffix:
Owner Name: (First)		. (L	ast) ② All	****	O Non-Domestic	e O Domestic
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	Pai	Clear Form	iWATERS Me	enu .	Help	
· -		are 1=NW 2	ATER COLUMN R	:)		
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New Mexico Office of the State Engineer POD Reports and Downloads

Towns	hip: 26N	Range: 09W	Sections: 1,	2,3				
NAD27	X:,	Y: '	Zone:		Search Ra	dius:		
County:		Basin:			Number:		Suffix	: :
Owner Name: (F	irst)	(L	ast) All	} (⊖ Non-Dó	mestic	· O Dome	stic
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	(quarters		ATER COLUMN I		9/25/200	8	an an ann an	
POD Number SJ 02961	Tws		t to smallest q Zone 3	:) X	Y	Depth Well 1500	Depth Water	Wat∈ Colum

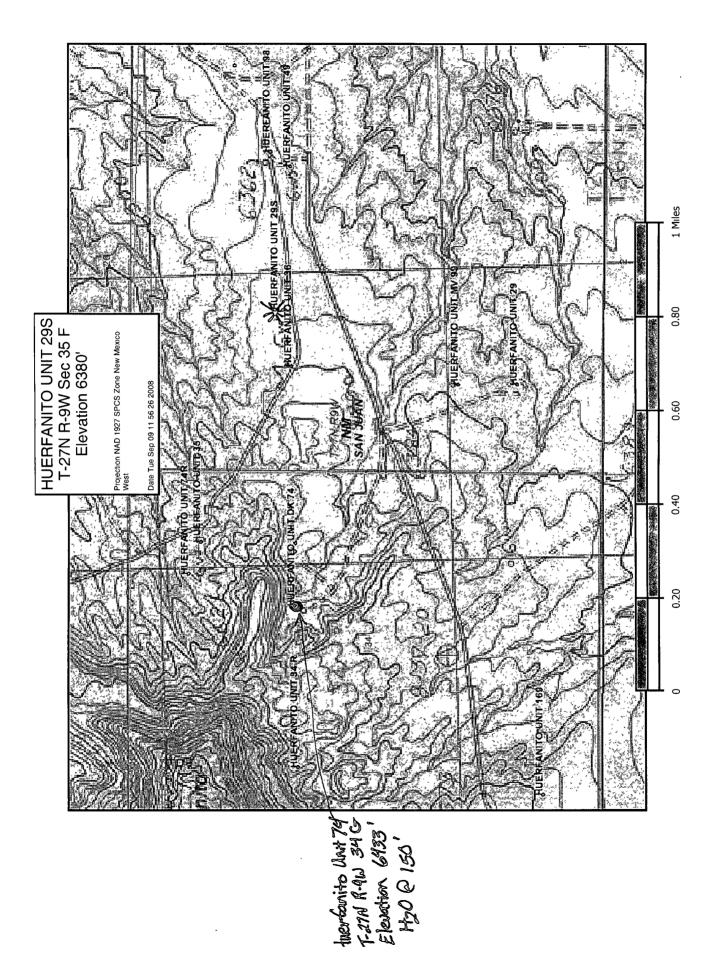
Record Count: 2

SJ 02962

26N 09W 01 3 2 3

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1917 14-30-045-06148 100-30-045-11783 154-30-045-21707

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 H Sec. 34 Twp 27 Rng 9
Name of Well/Wells or Pipeline Serviced HUERFANITO UNIT #74, #100, #154
cps 2158w
Elevation 6433'Completion Date 6/29/88 Total Depth 420' 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
Depths & thickness of water zones with description of water when possible:
Fresh, Clear, Salty, Sulphur, Etc. 150'
Depths gas encountered: N/A
Type & amount of coke breeze used: N/A
Depths anodes placed: 345', 335', 325', 315', 305', 295', 275', 240', 230', 220'
Depths vent pipes placed: 380' DECEIVED
Vent pipe perforations: 280' MAY 31 1991
Remarks: (gb #1)
Oil Cord. Stray
į

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.

NUMBER OF COP LE RECEIVED CISTRIB LITON BANTA FT FILE U.E G E LAND OFFICE TRANSPORTER G 15 PRONATION OFFICE OFFATOR

NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe. New Mexico

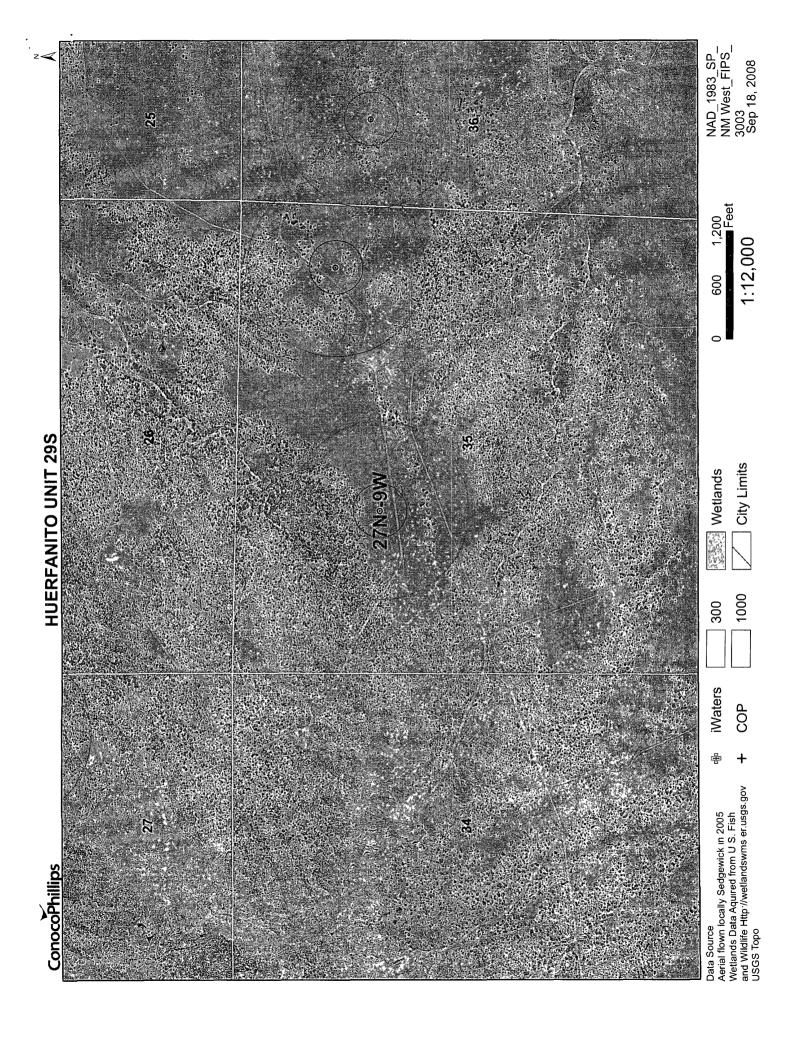
(Form C-191) Revised 7/1/57

REQUEST FOR (OIL) - (GAS) ALLOWARLE

New Well Recompletion

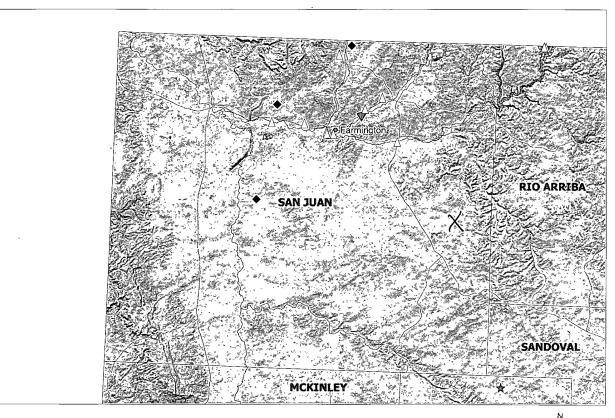
This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletio. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks Ga: must be reported on 15.025 psia at 60° Fahrenheit.

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4 1/2	6	905	990	Acid or Frac	ture Treatmen	t (Give amounts of	materials used, s	uch as acid,	water, oil,	and
				·				<u> </u>		
2 1/1	6 6	593		Fress. 141	3 Press.	1492 Date first oil run to	tanks	-/25	PFILE	
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				Gas Transpor	ter	Peso Matural C	es Company	An in	2	2
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I her	eby ce	rtify tha	t the info	rmation given	above is tru	e and complete to	the best of my kn	owledge.		
pproved.	·····	- 36€			, 19	El Paso	.Natural Gas (Company or	Company Operator)		
c	OIL C	ONSER	VATION	COMMISSIO	ON	By: OR G'NA	L SIGNED E.S	OBERLY		
Oris	Linal	Signed	Fmers	C. Amol		Title Petro	oleum Enginee			
Suc	arriso	r Dist. #	3			Send	Communications . Cherly	regarding w		
						AddressBox	990, Farming	ston, New	Mexico	



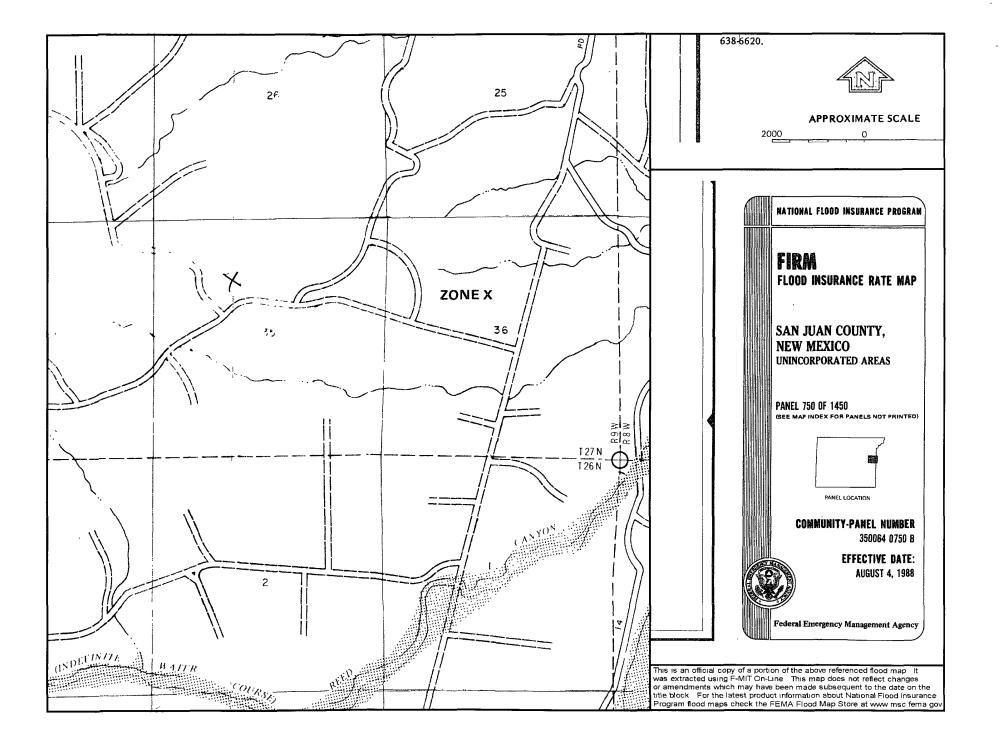
Huerfanito Unit 29S Mines, Mills and Quarries Web Map

Mines, Mills	& Quarries Commodity Groups
Δ	Aggregate & Stone Mines
•	Coal Mines
*	Industrial Minerals Mines
8	Industrial Minerals Mills
Ø	Metal Mines and Mill Concentrate
	Potash Mines & Refineries
	Smelters & Refinery Ops.
*	Uranium Mines
⊕	Uranium Mills
Population	
Ø	Cities - major
Transportati	on
+ , +	Railways
	Interstate Highways
WM W 79 97	Major Roads









Hydrogeological Report for Huerfanito Unit 29S

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.

Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Huerfanito Unit 29S 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 Huerfanito Unit 74 with an elevation of 6433' and groundwater depth of 150'. The subject well has an elevation of 6380' which is greater than the Huerfanito Unit 74, 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 Nacimiento formation will create a stable area for this new location.

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 12

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

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

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

Olstrict II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410

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

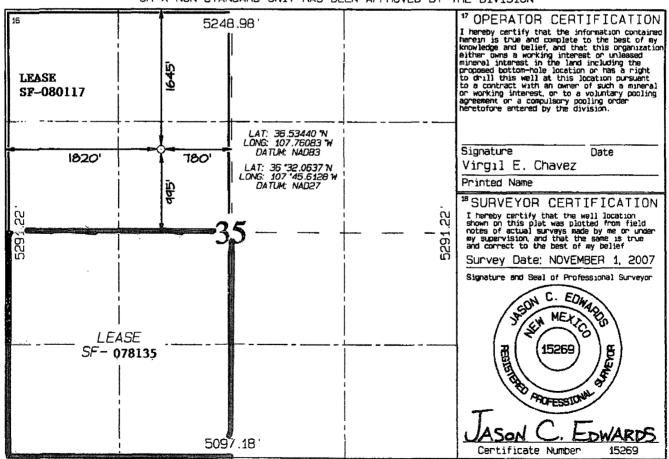
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number Pool Cod				Pool Name						
71629 BASIN FRUITLAND COAL										
*Property	Cade				*Property Name HUERFANITO UNIT				*Well Number 29S	
'OGRID	vio.		·····		*Operator	` Name	**************************************		Elevation	
1453	3		BURLI	NGTON F	ESOURCES OIL & GAS COMPANY, LP				6380 '	
					¹⁰ Sunface	Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
F	35	27N	9₩		1645	NORTH	1820	WEST	SAN JUAN	
		11 B	ottom	Hole L	ocation I	f Different	From Surf	ace		
JL or lot no.	Section	Township	Range	Lat Ion	Feet from the	North/South line	Feet from the	East/West 1xns	County	
					State of the state					
Dedicated Acres 320.0 Acres - (W/2)					¹⁵ Joint or Infill	M Consolidation Code	³⁵ Onder No.			

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, 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. 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.

Tests Method	Limit (mg/Kg)
EPA SW-846 8021B or 8260B	0.2
EPA SW-846 8021B or 8260B	50
EPA SW-846 418.1	2500
EPA SW-846 8015M	500
EPA 300.1	1000/\$00
	EPA SW-846 8021B or 8260B EPA SW-846 8021B or 8260B EPA SW-846 418.1 EPA SW-846 8015M

- 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
Percent PLS
20 percent

Source No. two (better quality)
Purity
80 percent
Germination
63 percent
Percent PLS
50 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.