District I 1625 N French Di , Hobbs, NM 88240

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

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

Form C-144

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

For permanent pits and exceptions submit to the Santa Fe

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	Salita Fe, INIVI 6/303	Environmental Bureau office and provide a copy to the appropriate NMOCD District Office
	osed-Loop System, Below-Grac ternative Method Permit or Clo	_
Type of action: Permi Closu Modii X Closu below	t of a pit, closed-loop system, below-grade to re of a pit, closed-loop system, below-grade fication to an existing permit re plan only submitted for an existing permit r-grade tank, or proposed alternative method	ank, or proposed alternative method tank, or proposed alternative method tted or non-permitted ptt, closed-loop system,
**	does not relieve the operator of liability should operations for of its responsibility to comply with any other applicable	•
Operator: Burlington Resources Oil & Gas Co	ompany, LP	OGRID#: 14538
Address: PO Box 4289, Farmington, NM 87	499	
Facility or well name: FOGELSON 4 100S		
API Number: 30-045-346	OCD Permit Numb	per:
U/L or Qtr/Qtr: A(NE/NE) Section: 4 Center of Proposed Design: Latitude: Surface Owner: X Federal St	Township: 29N Range: 36.75859 °N Longitude: ate Private Tribal Trust or India	11W County: San Juan 107.99158 °W NAD: 1927 X 1983 an Allotment
Temporary X Drilling Workover Permanent Emergency Cavitation X Lined Unlined Liner type: X String-Reinforced Liner Seams X Welded X Factory	P&A Thickness 12 mil X LLDPE Other Volume: 4400	HDPE PVC Other 0 bbl Dimensions L 65' x W 45' x D 10'
Drying Pad Above Ground Steel Ta Lined Unlined Liner type:	new well	o activities which require prior approval of a permit or HDPE PVD Other RECEIVE
Tank Construction material: Secondary containment with leak detection Visible sidewalls and liner Visi	7.11 NMAC The of fluid: Visible sidewalls, liner, 6-inch lift and aut ble sidewalls only HDPE PVC Other	OF OIL CONS. DIV DIST.
5 Alternative Method:		nmental 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, 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.						
Scicen 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 cons (Fencing/BGT Liner) Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	ideration of ap	proval.				
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.						
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes	□No				
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	No				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks)	☐Yes ☐NA	□No				
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image						
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applied to permanent pits) 2. Visual inspection (certification) of the proposed site: Aerial photo: Satellite image.	(Applied to permanent pits)					
- 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.						
- 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 Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site						
Within the area overlying a subsurface mine. - 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 Society, Topographic map	Yes	No				
Within a 100-year floodplain - FEMA map						

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						
Hydrogcologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC						
Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15 17 9						
Siting Criteria Compliance Demonstrations - 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 or Permit						
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15 17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 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 Paiagraph (I) of Subsection B of 19.15 17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19 15.17.11 NMAC Dike Protection and Structural Integrity Design: based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15 17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19 15 17.11 NMAC Nuisance or Hazardous Odors, including H2S, Prevention Plan						
Emergency Response Plan Oil Field Waste Stream Characterization						
Monitoring and Inspection Plan						
Erosion Control Plan						
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC						
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: X Drilling Workover Emergency Cavitation P&A Permanent Pit 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)						
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 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 Ground Steel Tanks or Haul-off Bins Only: (19 15.17 13.D NMAC) Instructions Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two j	facilities					
are required	acumes					
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 s Yes (If yes, please provide the information No	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 requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC						
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC Instructions Each siting criteria requires a demonstration of compliance in the closure plan Recommendations of acceptable source material are provided believertain siting 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 1915 17 10 NMAC for guidance						
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 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 - tWATERS 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 - tWATERS 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	Dv. Vn					
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	Yes X No					
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence at the time of the initial application - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended						
 Written confirmation or verification from the municipality; Written approval obtained from the municipality Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map, Topographic map, Visual inspection (certification) of the proposed site 	Yes X No					
Within the area overlying a subsurface mine.	Yes X No					
- Written confirantion or verification or map from the NM EMNRD-Mining and Mineral Division						
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society;	Yes X No					
Topographic map Within a 100-year floodplain FEMA map	Yes XNo					
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must bee attached to the closury by a check mark in the box, that the documents are attached.	re plan. Please indicate,					
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC						
X Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC						
Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC						
Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of	19.15.17 11 NMAC					
X Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC	,					
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC						
 Waste Material Sampling Flan - based upon the appropriate requirements of subsection For 12.13.17.13 (MAC) Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards or 	annot be achieved)					
X Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	·· ·· · · · · · · · · · · · · · · · ·					
X Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC						
X Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC						

Form C-144 • Oil Conservation Division

19 Operator Application	Certification:			
	formation submitted with this application	is true, accurate and complete to the	ne best of my knowledge and belief	
Name (Print)	Ethel Tally	Title	Staff Regulatory Technician	
Signature.	7 + 0,00 7010,	Date.	9-75-09	
e-mail address:	ethel.tally@conocophillips.com	-/ 	505-599-4027	
c-man address.	g.non.camp o controlograming order.		000 037 1027	
20 OCD Approval:	Permit Application (including closure	plan) Closure Plan (only	OCD Conditions (see attachment)	
OCD Representative S	Signature: Bol 5-	ell	Approval Date: 10/	1/09
Title:	Enviro /spec	OCD Pe	rmit Number:	
Instructions. Operators a report is required to be si		plan prior to implementing any clo he completion of the closure activi have been completed.	AC usure activities and submitting the closure repo uses. Please do not complete this section of the ure Completion Date:	
		Close	Te Completion Date.	
Closure Method: Waste Excavation If different from a	n and Removal On-site Closure approved plan, please explain.	e Method Alternative Closur	re Method Waste Removal (Closed-loo	p systems only)
Instructions: Please iden were utilized. Disposal Facility Nam Disposal Facility Nam Were the closed-loop:	tify the facility or facilities for where the e e: system operations and associated activities	liquids, drilling fluids and drill cu Disposal Facil Disposal Facil s performed on or in areas that will	Ground Steel Tanks or Haul-off Bins Only: ttings were disposed. Use attachment if more ity Permit Number. ity Permit Number: not be used for future service and opeartions?	than two facilities
Yes (If yes, please	e demonstrate complilane to the items belo	ow) No		
Site Reclamation	l areas which will not be used for future se (Photo Documentation)	ervice and operations:		
	nd Cover Installation plication Rates and Seeding Technique			
	pheation Rates and Seeding Technique			
the box, that the docu Proof of Closure Proof of Deed N Plot Plan (for on Confirmation Sa Waste Material Disposal Facility Soil Backfilling Re-vegetation A Site Reclamation	ments are attached. Notice (surface owner and division) lotice (required for on-site closure) n-site closures and temporary pits) ampling Analytical Results (if applicab) Sampling Analytical Results (if applicab) y Name and Permit Number and Cover Installation pplication Rates and Seeding Technique in (Photo Documentation)	le) able) ae	ttached to the closure report. Please indicate,	
On-site Closure	Location: Latitude:	Longitude:	NAD	1983
			te and complete to the best of my knowledge a d closure plan.	nd belief. I also certify that
Signature.		Date:		
e-mail address:		Telephone		



New Mexico Office of the State Engineer Wells with Well Log Information

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

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

(in feet)

Sub POD Number basin	Use C	ounty	Source	q q 6416	l 1 Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File. Date	Depth Well	Depth Water
SJ 01851	DOM	SJ	Shallow	4	4 10	29N	11W	234586	4069572*	06/18/1984	06/20/1984	06/28/1984	125	48

Record Count: 1

PLSS Search:

Section(s): 3, 4, 5, 8, 9, 10 Township: 29N Range: 11W

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer Wells with Well Log Information

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

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

(in feet)

POD Number	Sub basin Use C	County Source	q q q 6416 4 Sec	Tws Rng	X	Start Date Fini	Log File I sh Date Date	Depth Depth Well Water
SJ 03251	DOM	SJ Shallow	4 4 3 32	30N 11W	230879 4072752*	04/08/2003 04/1	1/2003 04/16/2003	150 77

Record Count: 1

PLSS Search:

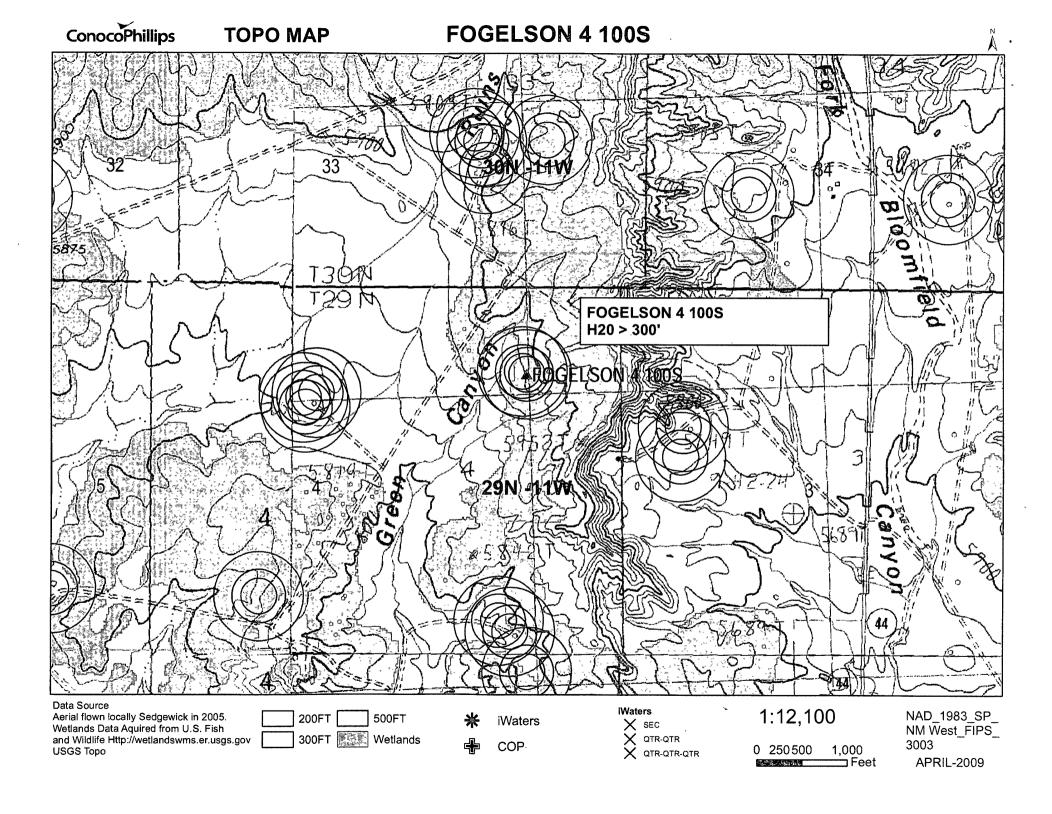
Section(s): 32, 33, 34

Township: 30N

Range: 11W

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



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

DATE: January 26, 2009 COMPANY: Conoco Phillips LOCATION: Fogelson 4 100S LEGALS: S4 T29N R11W

COUNTY: San Juan STATE: NM DRILLER: Gilbert Peck

BIT SIZE: 7 7/8"

CASING SIZE/TYPE: 8" X 20" PVC

DEPTH: 300' VENT PIPE: 300' PERF PIPE: 140' ANODE TYPE: 2" X 60" Duriron

ANODE AMOUNT: 10

LBS COKE BACKFILL: 2,600#

COKE TYPE: Asbury BOULDER DRILLING: None

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS
20	Casing		310		
25	Gray Shale	1.1	315		
30		1.0	320		
35	Sandstone	.9	325		
40		1 · · · 9 · ·	330		
45	O. Dist	.9	335		
50 55	Gray Shale	2.2	340 345		
60		2.4	350		 -
65		2.5	355		
70		2.4	360		
75		2.6	.365		
80		2.7	370	,	
85		2.7	375		
90		2.6	380		
95		2.5	385		
100		2.5	390	·	
105		2.2	395		
110		2.2	400		
115 120		2.3	405 410		
125		2.6	415		
130		2.4	420		
135	·	2.2	425		
140		2.1	430		
145		1.0.	435		·
150	Sandstone	.9	440		
155		.8	445		
160		.9	450		VII.
165		.9	455		
170		.9	460	·	
175	Gray Shale	1.0.	465		
180 185		2.4	470 475		
190		2.9	475		,
195		3.5	485		
200		4.0	490		
205		4.5	495		
210		6.1	500		
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220		4.7			
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245		3.0	 		
250		3.1	 		
255		3.2	 		
260		3.5	 		1
265		3.7	†		
270		4.0	1.		
275		4.5			
280		4.8			
285		4.5			
290		4.54	<u> </u>		
295		2.7		<u></u>	
300		1.9	<u> </u>	***	
305	· · · · · · · · · · · · · · · · · · ·]	1	

2			an ann an	
	ANODE#	DEPTH	NO COKÉ	COKE
i i	1	290	4.5	5,6
	2	280	4.8	7.2
H	3	270	4.0	7.6
	4	260	3.5	8.2
	5	250	3.1	8.6
	6	240	2.9	8.9
	7	230	3.5	9.3
H	8	220	4.7	10.2
	9	210	6.1	10.8
	10	200	4.0	8.2
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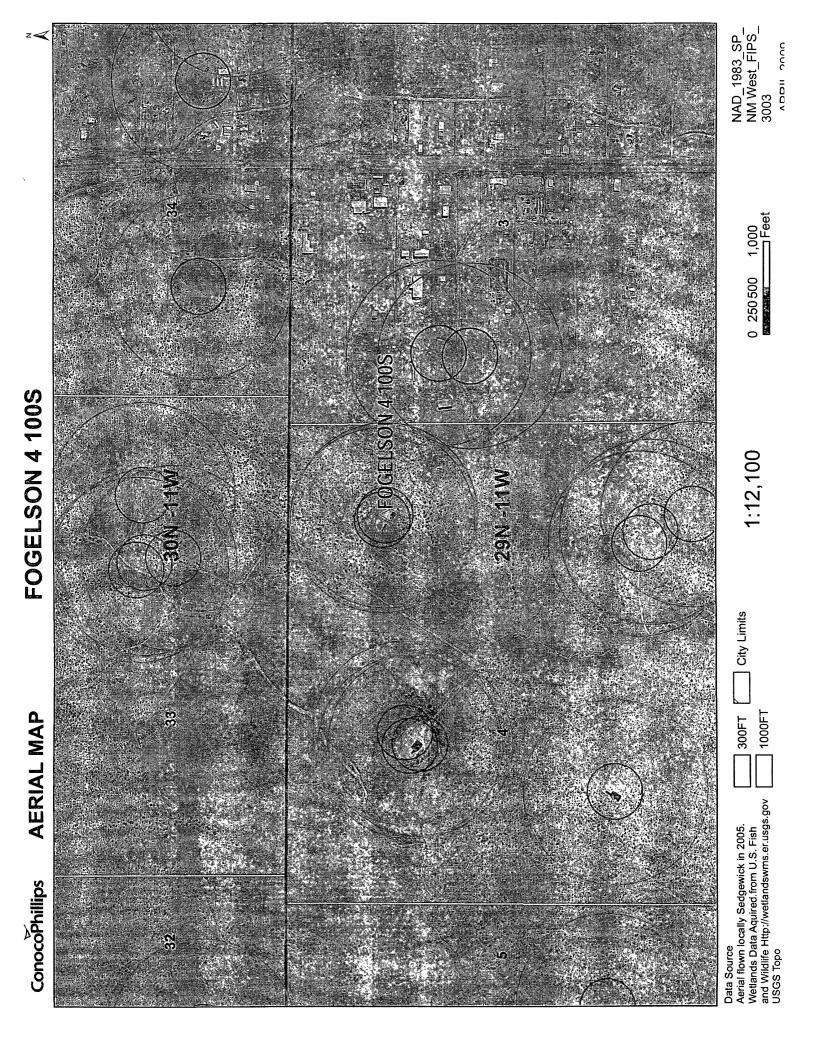
WATER DEPTH: None ISOLATION PLUGS: LOGING VOLTS: 11.7

VOLT SOURCE: AUTO BATTERY

TOTAL AMPS: 22.5

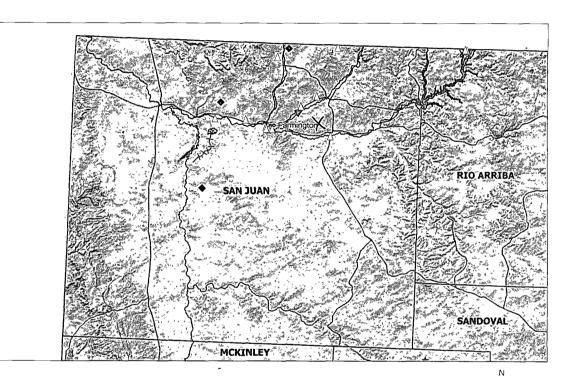
TOTAL GB RESISTANCE: .49

REMARKS:



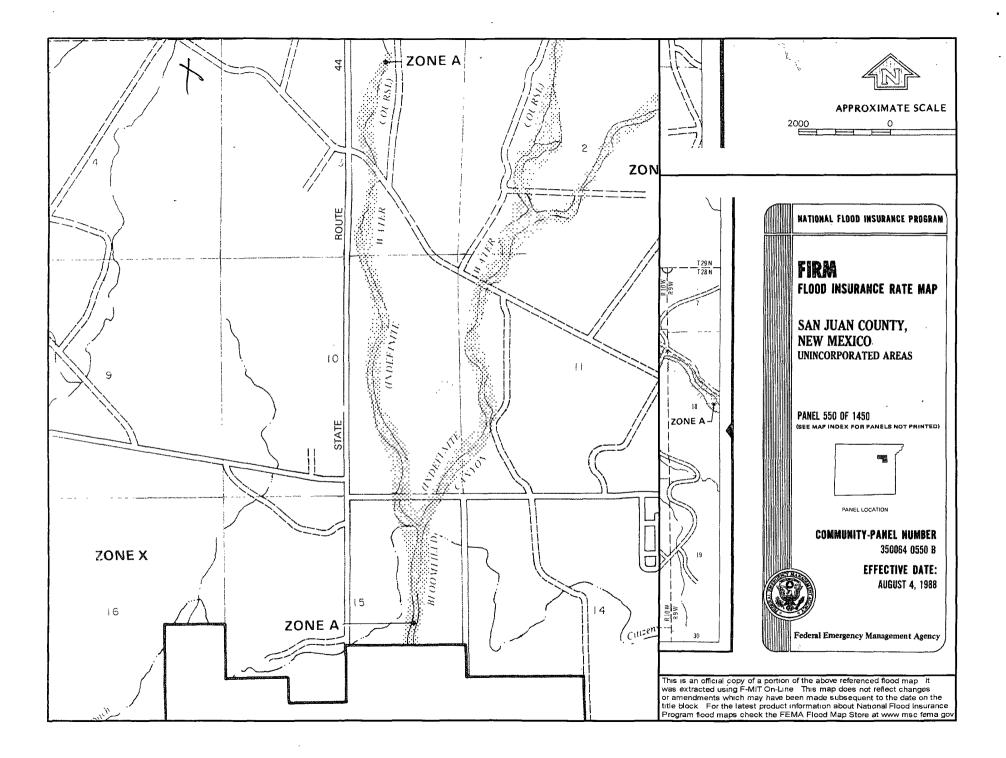
MMQonline Public Version/FOGELSON 4 100S

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				
* 5. 821	Smelters & Refinery Ops.				
*	Uranium Mines				
•	Uranium Mills				
Population					
•	Cities - major				
Transportatio	on .				
l= 1: -l-	Railways				
	• • • • •				









Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Fogelson 4 100S is not located in an unstable area. The location is not over a mine and is not on the side of a hill as indicated on the Mines, Mills and Quarries Map and Topographic Map. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse as indicated on the Topographic Map. The location is not within a 100-year floodplain area as indicated on the FEMA Map. The Cathodic well data provides information on groundwater depth of >300'. There are no iWATERS data points located in the area as indicated on the TOPO Map. The hydro geologic analysis indicates the groundwater depth and the San Jose formation will create a stable area for this new location.

Hydrogeological report for San Jose Formation FOGELSON 4 100S

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.

ConocoPhillips Company 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 ConocoPhillips Company (COPC) locations. This is COPC'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 COPC'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 COPC 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
 - 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 the San Juan County Landfill located on CR 3100.
- 7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

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

- 9. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails COPC 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. COPC 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.