District I

1625 N French Dr., Hobbs, NM 88240

State of New Mexico Energy Minerals and Natural Resources

Form C-144 July 21, 2008

 $1301\ W$ Grand Ave , Artesia, NM $\ 88210$

 $1000\ Rio\ Brazos\ Rd$, Aztec, NM $\ 87410$

District IV

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

Department

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

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 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:	X Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
	Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
,	Modification to an existing permit
3	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

environment Nor does approval relieve the operator of its responsibility to comply with any other applicable	governmental authority's rules, regulations or ordinances.
Operator: ConocoPhillips Company	OGRID#: 217817
Address: PO Box 4289, Farmington, NM 87499	
Facility or well name: San Juan 30-5 Unit 9B	
API Number: 30-039- 3895 OCD Permit Number	er:
U/L or Qtr/Qtr: <u>E(SW/NW)</u> Section: <u>32</u> Township: <u>30N</u> Range:	5W County: Rio Arriba
Center of Proposed Design: Latitude: 36.77156 °N Longitude:	107.385569 °W NAD: 1927 X 1983
Surface Owner: Federal X. State Private Tribal Trust or India	n Allotment
X String-Reinforced	HDPE PVC Other bbl Dimensions L <u>120'</u> x W <u>55'</u> x D <u>12'</u>
Closed-loop System: Subsection H of 19.15.17.11 NMAC Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to notice of intent) Drying Pad Above Ground Steel Tanks Haul-off Bins Other Lined Unlined Liner type: Thickness mil LLDPE I Liner Seams: Welded Factory Other	o activities which require prior approval of a permit or
4	RCVD JAN 12'10
X Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: 120 bbl Type of fluid: Produced Water	OIL CONS. DIV.
Tank Construction material: Metal	DIST. 3
Secondary containment with leak detection X Visible sidewalls, liner, 6-inch lift and auto	omatic overflow shut-off
Visible sidewalls and liner Visible sidewalls only Other	
Liner Type: Thickness 45 mil HDPE PVC X Other 1	LLDPE
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environ	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, instit. 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.	ution or church	ı)
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) X Screen Netting Other Monthly inspections (If netting or screening is not physically feasible)		
Signs: Subsection C of 19.15.17.11 NMAC 12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers X Signed in compliance with 19.15.3.103 NMAC		
Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	deration of app	roval.
Siting Criteria (regarding permitting) 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.		
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes	XNo
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes	XNo
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	XNo
(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. (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	X No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.		
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes	XNo
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes	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 Society; Topographic map	Yes	XNo
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. X Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC X Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 X 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 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
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 Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design: based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H2S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: X Drilling Workover Emergency Cavitation P&A Permanent Pit X Below-grade Tank Closed-loop System Alternative Alternative Proposed Closure Method: X Waste Excavation and Removal (Below-Grade Tank) Waste Removal (Closed-loop systems only) X On-site Closure Method (only for temporary pits and closed-loop systems) X In-place Burial On-site Trench Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. X Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC X Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) X Soil Backfill and Cover Design Specifications - 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 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 Instructions Please identify the facility or facilities for the disposal of liquids, drilling fl	Tanks or Haul-off Bins Only:(19.15.17.13.D NMAC) uds and drill cuttings Use attachment if more than two				
facilities are required.					
	isposal Facility Permit #:				
,	isposal Facility Permit #:				
Will any of the proposed closed-loop system operations and associated activities Yes (If yes, please provide the information No	es occur on or in areas that will nbe used for future s	service and			
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 Subsections.	on I of 19 15 17.13 NMAC	лаć			
17 Siting Criteria (Regarding on-site closure methods only: 19.15.17 10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan Recocertain siting criteria may require administrative approval from the appropriate district office or mosfice for consideration of approval Justifications and/or demonstrations of equivalency are required.	ay be considered an exception which must be submitted to the Sai				
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 obtain	ned from nearby wells	Yes X No			
	1				
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 obtain	ed 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 obtain	ed from nearby wells	∐N/A			
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signification (measured from the ordinary high-water mark).	nt 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 ex - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	ustence at the time of initial application.	Yes X No			
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than purposes, or within 1000 horizontal fee of any other fresh water well or spring, in exister - NM Office of the State Engineer - 1WATERS database; Visual inspection (certifica	nce at the time of the initial application.	Yes X No			
Within incorporated municipal boundaries or within a defined municipal fresh water well pursuant to NMSA 1978, Section 3-27-3, as amended - Written confirmation or verification from the municipality, Written approval obtain		Yes X No			
Within 500 feet of a wetland		Yes X No			
 US Fish and Wildlife Wetland Identification map, Topographic map, Visual inspe- Within the area overlying a subsurface mine. 	stion (certification) of the proposed site	Yes X No			
Written confirmation or verification or map from the NM EMNRD-Mining and Mi	neral Division				
Within an unstable area Engineering measures incorporated into the design; NM Bureau of Geology & Min	neral 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.	of the following items must bee attached to the clos	ure plan. Please indicate,			
X Siting Criteria Compliance Demonstrations - based upon the appropriate	e requirements of 19.15.17.10 NMAC				
X Proof of Surface Owner Notice - based upon the appropriate requirement	nts of Subsection F of 19.15.17.13 NMAC				
Construction/Design Plan of Burial Trench (if applicable) based upon the					
Construction/Design Plan of Temporary Pit (for in place burial of a dry		of 19.15.17.11 NMAC			
X Protocols and Procedures - based upon the appropriate requirements of					
Confirmation Sampling Plan (if applicable) - based upon the appropriat	•	AC			
Waste Material Sampling Plan - based upon the appropriate requiremen					
 X Disposal Facility Name and Permit Number (for liquids, drilling fluids a X Soil Cover Design - based upon the appropriate requirements of Subsection 	tion H of 19.15.17.13 NMAC	s cannot be achieved)			
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 Page 4 of 5

Operator Application Contification
Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Dollie L. Busse / Title: Staff Regulatory Technician
Signature: Date: 1-8-10
e-mail address:
20 OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Approval Date: 2/18/10
Title: Enviro /Spec OCD Permit Number:
21
Closure Report (required within 60 days of closure completion): Subsection K of 19.15 17 13 NMAC Instructions. Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure
report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an
approved closure plan has been obtained and the closure activities have been completed.
Closure Completion Date:
22
Closure Method:
Waste Excavation and Removal On-site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)
If different from approved plan, please explain.
23
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities
were utilized.
Disposal Facility Name: Disposal Facility Permit Number.
Disposal Facility Name Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations? Yes (If yes, please demonstrate compliane to the items below)
Required for impacted areas which will not be used for future service and operations.
Site Reclamation (Photo Documentation)
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
24
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.
Proof of Closure Notice (surface owner and division)
Proof of Deed Notice (required for on-site closure)
Plot Plan (for on-site closures and temporary pits)
Confirmation Sampling Analytical Results (if applicable)
Waste Material Sampling Analytical Results (if applicable)
Disposal Facility Name and Permit Number
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)
On-site Closure Location: Latitude: Longitude: NAD 1927 1983
25
Operator Closure Certification:
I hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. I also certify that
the closure complies with all applicable closure requirements and conditions specified in the approved closure plan
Name (Print): Title:
Signature: Date:
e-mail address: Telephone:



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

No records found.

PLSS Search:

Section(s): 28, 29, 30, 31, **Township:** 30N **Range:** 05W

32, 33

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, or suitability for any particular purpose of the data.



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

No records found.

PLSS Search:

Section(s): 4, 5, 6

Township: 29N

Range: 05W

TOPO MAP SAN JUAN 30-5 UNIT 9B

ConocoPhillips

DATA SHEET FOR DEEP BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO

(SUBMIT 2 COPIES TO OCD AZTEC OFFICE)

PPCO DESIGNATION: FM-259

OPERATOR: PHILLIPS PETROLEUM COMPANY LOCATION: E 32 30 5 FARMINGTON, N.M. 87401 LEASE NUMBER: 650113

(505) 599-3400

NAME OF WELL/S OR PIPELINE SERVED: (1) SJ 30-5 UNIT #9A MV

(2) N/A

30-039-22710

年の7つの

COMPLETION DATE: 11/12/85

ELEVATION:NA TOTAL DEPTH: 500 FT.

LAND: STATE

CASING INFO.; SIZE: NA

IN. TYPE: NA

DEPTH: NA FT. CEMENT USED: NA

IF CEMENT OR BENTONITE PLUGS HAVE BEEN PLACED. SHOW DEPTHS & AMOUNTS:

PLUG DEPTH: NONE PLUG AMOUNT: NONE

WATER INFORMATION:

WATER DEPTH (FT): (1) 360 (2) -0-

WATER INFORMATION: NA

DEPTHS GAS ENCOUNTERED (FT): NA

TYPE AND AMOUNT OF COKE BREEZE USED:

COKE TYPE: METALLURGICAL COKE BREEZE

COKE AMOUNT: 2848 LBS.

DEPTHS ANODES PLACED (FT):

390,400,410,420,430,440,450,460,470,480

DEPTH VENT PIPE PLACED (FT): 500

VENT PIPE PERFORATIONS (FT): TOP 380 BOTTOM 500

REMARKS: -O-

IF ANY OF THE ABOVE DATA IS UNAVAILABLE, PLEASE INDICATE SO. COPIES OF ALL LOGS, INCLUDING DRILLERS LOG, WATER ANALYSIS & 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.

NA-INFORMATION NOT AVAILABLE

FEB21/1992

OIL CON. DIV. DIST. 3

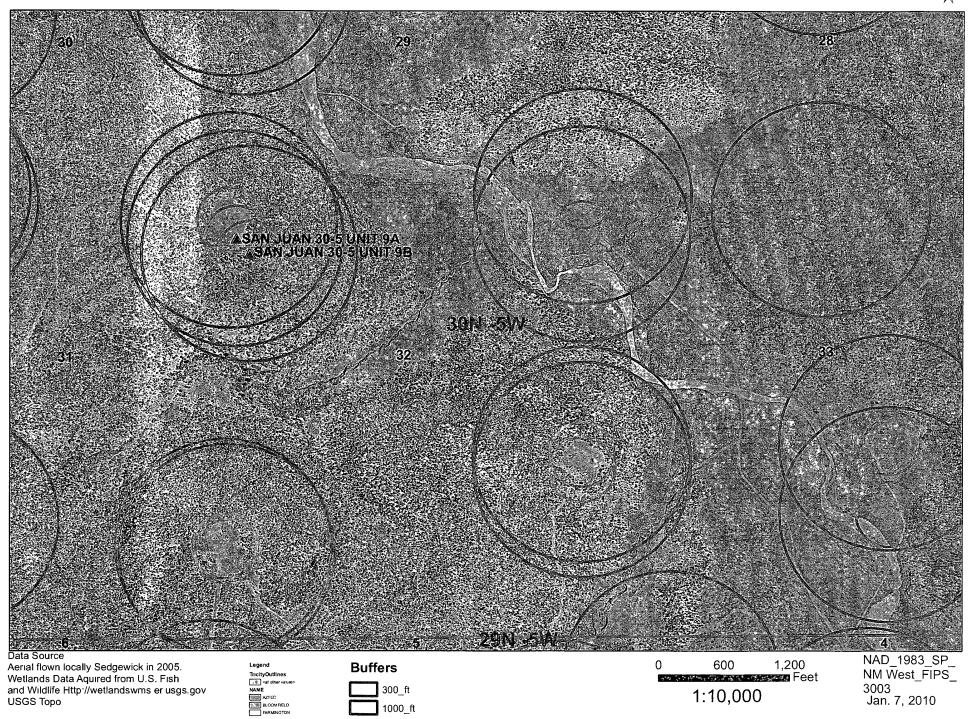
CC: CP FILE--FARMINGTON

HOUSTON

REPRODUCTION OF "OCD" FORM

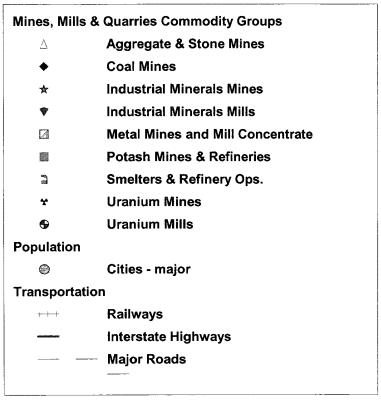
NO. OF CUPIES RECEIVE								Form C-	
DISTRIBUTION		1						Revised	
SANTA FE		<u> </u>		EXICO OIL CO				1 57	Type of Lease
FILE		WE	LL COMPLE	TION OR REC	OMPLETIO	N REPORT	AND LOG	State X	-
U.S.G.S.								1	& Gas Lease No.
LAND OFFICE		<u> </u>						E-347	'-23 *******
OPERATOR		L		API # 30-0	39-22710		i		
Id. TYPE OF WELL						AFIL IA	C.	7. Chit A jre	oment i arre
b. TYPE OF COMPLE	TION	OIL WELL	GAS WELL	X DRY	.,			San Ju	an 30-5 Unit
NEW X WO	FR	SEEPEN	PLUG BACK	DIFF. RESVR.	THER	- H	91	San Ju	ıan 30-5 Unit
North	west P	ipelin	e Corporat	ion	(A	UG7 = 19 CON. CC	M.	9. Weli No.	#9A
3. Address of Cherator P.O.	Box 90	, Farm	ington, Ne	w Mexico 87	7401	DIST. 3			i Pool, or Milecat Mesa Verde
4. Location of Well							/	mm	
UNIT LETTERE	LOCAT	₌₀ 1	540	North	LINE AND	1050	FEST FROM		
VAI - CE 11 CA			PCC PRO	ON THE	TITTE	TITTE		77777777	
THE West LINE OF	sec. 32	~~~	. 30N AGE.	. 5W NMPA				Rio Arri	ba AllIIIIIIII
15. Date Spuaded	16. Date	T.L. Fed	ones .7. Dine 3	Compl. (Ready to .	Prod.) 18. E	evations (UF)	. RKB. S1. C	K. etc./ 19. 3	Dev. Cashinghead
5-19-31	_		8		1	591' GR			
20. lotal Desta			Jek 7.5.	22. If Mustic	le Compl., How	23. Interv	ra., , ≘ota: •i Dy	s, Tocas	, Caple Tools
5907'			70 '					ALL	
24. Producing Interval	si, or this	: 37"0:.0:	. – Tsp. Bottom,	Name				25	. Was Directional Survey Made
Mesa Verde			4'						Yes
26. Type Electric end C IES SNP/COL								27. Wa	s Weil Corea NO
28.		<u> </u>	· CASI	NG RECORD IRes					
CASING SIZE	. WEIGH	TLB. F			LE SIZE		NTING REC	020	AMOUNT PULLED
9-5/8"	1	36#	221		1/4"		5 sx		6 bbls
7"		20 <i>‡</i>	3918		3/4"		5 sx		0 0013
	<u> </u>		93,0		J, ,		<u> </u>		
		· - ·	!						
29.	-	LIN	ER RECORD			3		TUBING RECO	RD
SIZE	TOP		воттом	SACKS DEMENT	SCREEN	SIZE	DE	PTH SET	PACKER SET
4-1/2"	37:	28'	5904	220		2-3,	/8"	5737'	
			<u> </u>		<u></u>				
31. Perforation Heatra	(Interval, s	ize and ni	umber)		32.	ACID, SHOT, I	RACTURE,	CEMENT SQU	EEZE, ETC.
Mesa Verde -	20	27" h	oloc from I	E4671 E0241		FORAL			MATERIAL USED
mesa verde -	20 -	. 37 / ///	ores from t	040/ -0034	5467' -	5834		<u>0 gal flu</u>	
							00,00	0= 20/40	Sanu
							 		
33,				PROD	UCTION				
Date First Fraduction		1103.211	on Mothou (1 lou)	ng, gas litt, pump		type puring		We laterus	(Prod. or Shut-in)
N/A			Flowing					Sh	ut in
Date of Test 8-3-81	Hours Te		2"X.750"	t routh, f of Test Period	ेश — ्ष्या. —	CV 198	- 1	er – Esti.	Gas = Cil Ratio
Flow Tubing Press.	Casin ; :	ternute	Calculated , 4-	Ci Btl.	Gas VI	Sr , W	ater - : 51.	्या र	advity = API (Corr.)
146 psig	394 p		Low nate	-	AOF 2	444			.2
34. Disposition of Gent Vented	Sold, used	for fact,	centen, etc.)				1	ed S. Ham	
35. List of Attachments									
		-							
30. I hereby certify Post	the int re	ation shot	un on both sides	of this form is tri	ie and complete	to the best o	j my knowled	ge and belief.	
,()	_	1.	\mathcal{A} . $=$ $=$		•				
SIGNED (YC	かかん	1	Maice_	TITLE _P	roduction	Clark		DATE 8	<u>-6-91</u>
<u></u>	nna 🗓 .	rece.		· · · · · · · · · · · · · · · · · · ·					

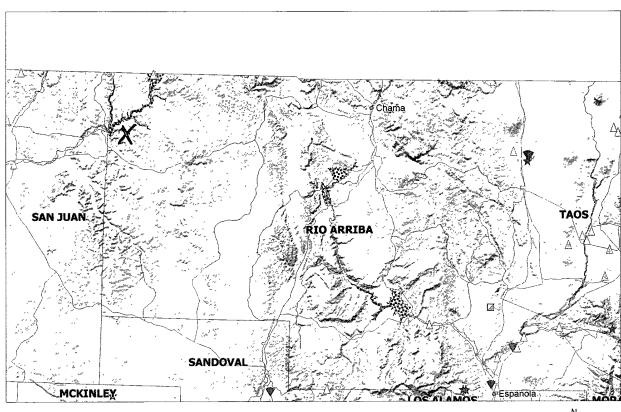




1000_ft

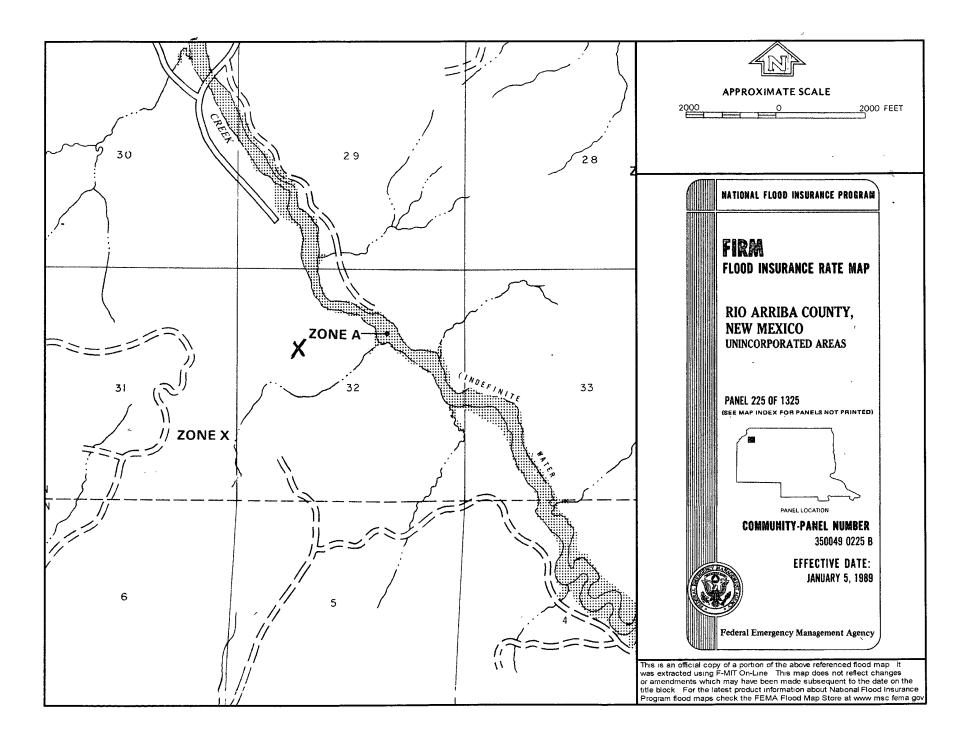
San Juan 30-5 Unit 9B Mines, Mills and Quarries











Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The San Juan 30-5 Unit 9B is not located in an unstable area. The location is not over a mine and is not on the side of a hill as indicated on the Mines, Mills and Quarries Map and Topographic Map. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse as indicated on the Topographic Map. The location is not within a 100-year floodplain area as indicated on the FEMA Map. The Cathodic well data from the San Juan 30-5 Unit 9A has an elevation of 6591' and groundwater depth of 360'. The subject well has an elevation of 6590' which is 1' lesser than the San Juan 30-5 Unit 9A, therefore the groundwater depth is greater than 359'. 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 Juan 30-5 Unit 9B

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.

DISTRICT 1 1625 N. French Dr., Hobbs, N.M. 66240

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 12, 2005

DISTRICT II 1301 West Grand Avenue, Artesia, N.M. 88210 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	*Pool Code	*Pool Name BASIN DAKOTA/BLANCO MESAVERDE		
Property Code	⁸ Proj	perty Name	* Well Number	
	SAN JUAN 3	50 - 5 UNIT	9B	
OGRID No.	⁶ Opar	* Elevation		
	CONOCOPHIL	6590'		

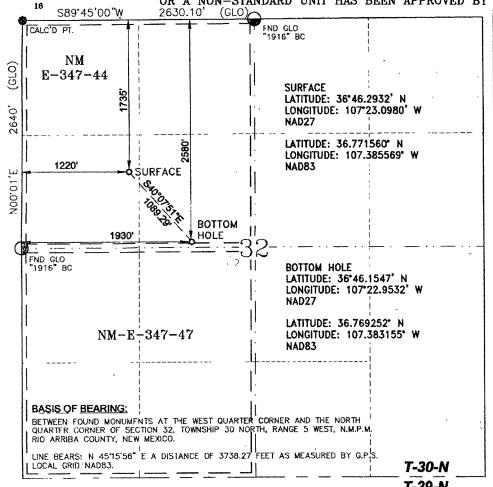
Surface Location

										_
UL or lot no.	Section	Township	Range	lot ldn	Feet from the	North/South line	Feet from the	East/West line	County	-
E	32	30-N	5-W		1735	NORTH	1220	WEST	RIO ARRIBA	-

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	32	30-N	5-W		. 2580	NORTH	1930	WEST	RIO ARRIBA
¹⁸ Dedicated Acre	8		¹⁸ Joint or	Infill	¹⁴ Consolidation C	ode	¹⁸ Order No.	<u> </u>	
DK 320.00	ACRES V	V/2							
MV 320.00	ACRES V	V/2							

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



17 OPERATOR CERTIFICATION I hereby certify that the information contained herein

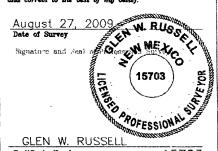
is true and complete to the best of my incomindge and belief, and that this organization either owns owney, and that this organization either owns a working interest or unleaved winered interest in the land including the proposed bottom has location or has a right to drill this well at this location pursued to a contract with an owner of such a minarel or a working interest, or to a wokentary pooling agreement or a compulsory pooling order heretofore entered by the division.

31,	gn	at	ш	re

Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location sh was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.



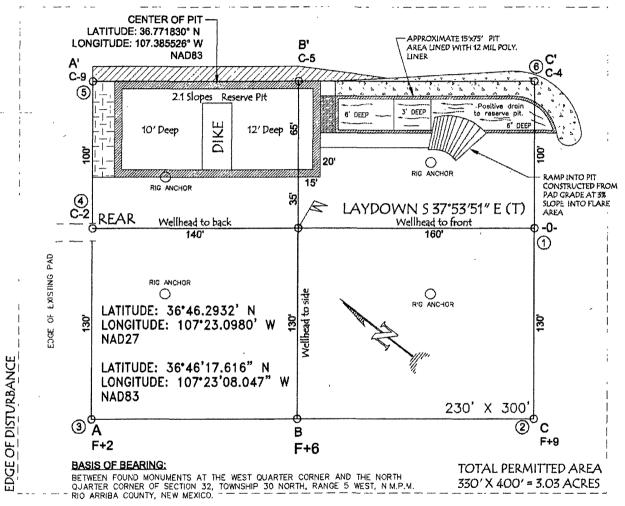
Certificate Number

15703

T-29-N

CONOCOPHILLIPS COMPANY

SAN JUAN 30-5 UNIT #9B, 1735' FNL & 1220' FWL SECTION 32, T-30-N, R-5-W, NMPM, RIO ARRIBA COUNTY, NM GROUND ELEVATION: 6590', DATE: JUNE 29, 2009



LINE BEARS: N 45"5"56" E A DISTANCE OF 3738 27 FEET AS MEASURED BY G P S. LOCAL GRID NAD83.

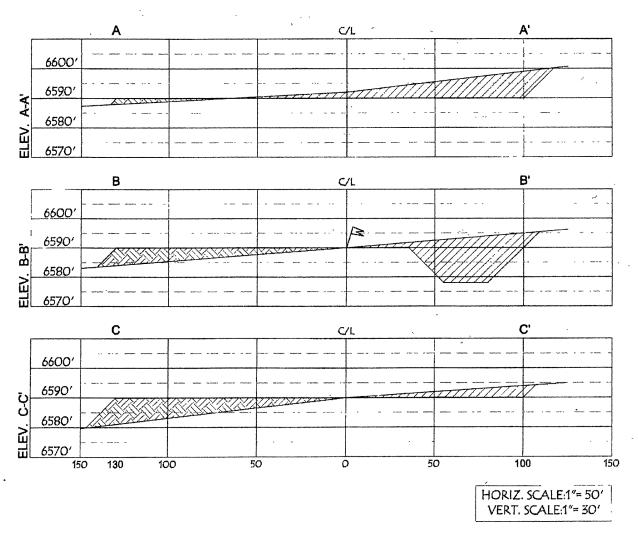
NOTES:

- VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
- 2. RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW 3' WIDE AND 1' ABOVE SHALLOW SIDE).

30' 0 30' 60' Scale: 1" = 60'

CONOCOPHILLIPS COMPANY

SAN JUAN 30-5 UNIT #9B, 1735' FNL & 1220' FWL SECTION 32, T-30-N, R-5-W, NMPM, RIO ARRIBA COUNTY, NM GROUND ELEVATION: 6590', DATE: JUNE 29, 2009



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

ConocoPhillips Company San Juan Basin Pit Design and Construction Plan

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on 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.

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

ConocoPhillips Company San Juan Basin Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on 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.

- COPC will operate and maintain a temporary pit to contain liquids and solids and maintain the integrity of the liner and liner system to prevent contamination of fresh water and protect public health and environment.
- 2. COPC will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., permit # NM-01-005.
- 3. COPC will not discharge or store any hazardous waste in any temporary pit.
- 4. If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then COPC shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
- 5. If a leak develops below the liquid's level, COPC shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. COPC shall notify the Aztec Division office by phone or email within 48 hours of the discovery for leaks less than 25 barrels. COPC shall notify the Aztec Division office as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.
- 6. The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 7. The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 8. COPC shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will stored on-site until closure of pit.
- Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
- 10. COPC will maintain the temporary pit free of miscellaneous solid waste or debris.
- 11. During drilling operations, COPC will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. COPC will file this log with the Aztec Division office upon closure of the pit.
- 12. After drilling operations, COPC will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at COPC's office electronically and will be filed with the Aztec Division office upon closure of the pit.
- 13. COPC shall maintain at least two feet of freeboard for a temporary pit.
- 14. COPC shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
- 15. COPC shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. COPC may request additional time to remove liquids from the Aztec Division office if it is not feasible to remove liquids within 48 hours.

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

- 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
 - 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
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

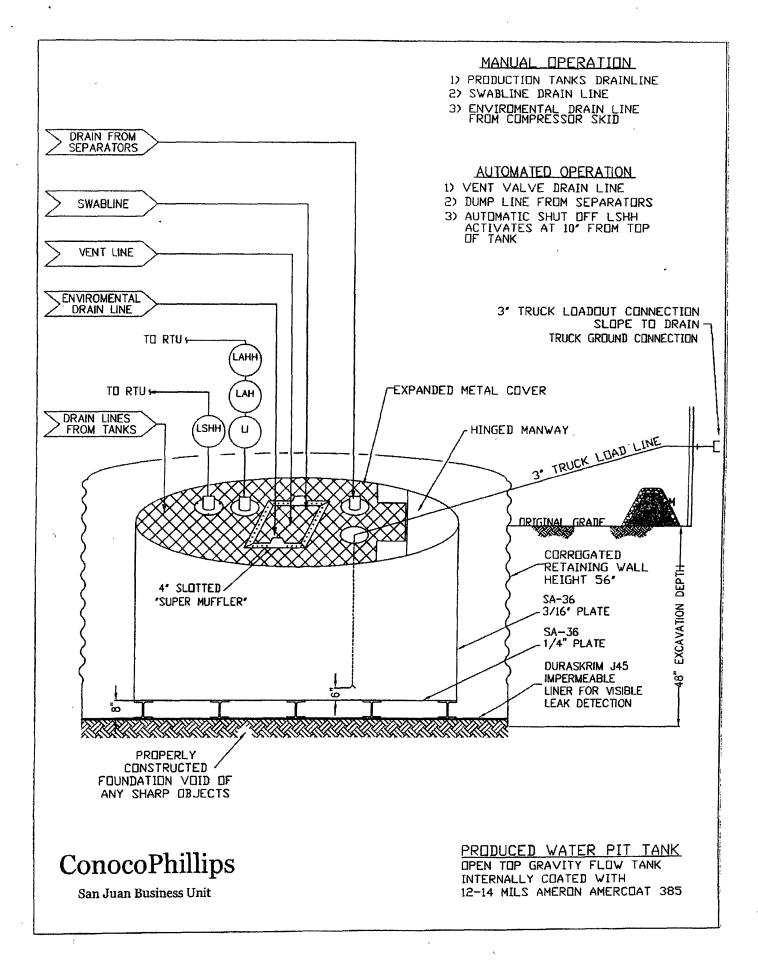
15. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and 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.

ConocoPhillips Company San Juan Basin Below Grade Tank Design and Construction

In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on ConocoPhillips Company (COPC) locations. This is COPC's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does not conform to this plan.

- COPC will design and construct a properly sized and approved BGT which will
 contain liquids and should prevent contamination of fresh water to protect the
 public health and environment.
- 2. COPC signage will comply with 19.15.17.11NMAC. COPC includes Emergency Contact information on all signage.
- 3. COPC has approval to use alternative fencing that provides better protection. COPC constructs fencing around the BGT using 4 foot hog wire fencing topped with two strands of barbed wire, or with a pipe top rail. A six foot chain link fence topped with three strands of barbed wire will be use if the well location is within 1000 feet of permanent residence, school, hospital, institution or church. COPC ensures that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- COPC will construct a screened, expanded metal covering, on the top of the BGT.
- COPC shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight as shown on design drawing and specification sheet.
- The COPC below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom as shown on design drawing.
- 7. COPC shall operate and install the below-grade tank to prevent the collection of surface water run-on. COPC has built in shut off devices that do not allow a below-grade tank to overflow. COPC constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 8. COPC will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.

- 9. COPC has equipped the below-grade tanks with the ability to detect high level in the tank and provide alarm notification and shutdown process streams into the tank. Once high level is detected RTU logic closes the inlet separator sales valve and does not permit vent valve to open. This shutdown of the sales valve and gagging of the vent valves prevents any hydrocarbon process streams from entering the pit tank once a high level is detected. Furthermore, an electronic page is sent to the COPC MSO for that well site and to the designated contract "Water-Hauling" Company indicating a high level and that action must be taken to address this alarm. The environmental drain line from COPC's compressor skid under normal operating conditions is in the open position. The environmental drain line is in place to capture any collected rain water or spilled lubricants from our compressor skids. The swab drain line is a manually operated drain and by normal operating procedures is in the closed position. The tank drain line is also a manually operated drain and during normal operations it is in the closed position.
- 10. The geomembrane liner consists of a 45-mil flexible LLDPE material manufactured by Raven Industries as J45BB. This product is a four layer reinforced laminated containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. The J45BB is reinforced with 1300 denier (minimum) tri-directional scrim reinforcement. It exceeds ASTMD3083 standard by 10%. J45BB has a warranty for 20 years from Raven Industries and is attached. It is typically used in Brine Pond, Oilfield Pit liner and other industrial applications. The manufacture specific sheet is attached and the design attached displays the proper installation of the liner.
- 11. The general specification for design and construction are attached in the COPC document.



RASKRIM®

130,136 & 145

PROPERTIES	TEST METHOD	J3	J30BB J36BB		J45BB			
		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	
Appearance		Black/Black		Black/Black		Black/Black		
Thickness	ASTM D 5199	27 mil	30 mil	32 mil	36 mil	40 mil	45 mil	
Weight Lbs Per MSF (oz/yd²)	ASTM D 5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs (21.74)	168 lbs (24.19)	189 lbs (27.21)	210 lbs (30.24)	
Construction		**Extrusion laminated with encapsulated tri-directional scrim reinforcement						
Ply Adhesion-	ASTM D 413	16 lbs	20 lbs	19 lbs	24 lbs	25 lbs	31 lbs	
1" Tensile Strength	ASTM D 7003	88 lbf MD 63 lbf DD	110 lbf MD 79 lbf DD	90 lbf MD 70 lbf DD	113 lbf MD 87 lbf DD	110 lbf MD 84 lbf DD	138 lbf MD 105 lbf DD	
1; Tensile Elongation @ Break: % (Film Break)	ASTM D 7003	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	
1' Tensile Elongation @ Reak-% (Scrim Break)	ASTM D 7003	20 MD 20 DD	33 MD 33 DD	20 MD 20 DD	30 MD 31DD	20 MD 20 DD	36 MD 36 DD	
Tongue Tear Strength	ASTM D 5884	75 lbf MD 75 lbf DD	97 lbf MD 90 lbf DD	75 lbf MD 75 lbf DD	104 lbf MD 92 lbf DD	100 lbf MD 100 lbf DD	117 lbf MD 118 lbf DD	
Grab Tensie (i.	ASTM D 7004	180 lbf MD 180 lbf DD	218 lbf MD 210 lbf DD	180 lbf MD 180 lbf DD	222 lbf MD 223 lbf DD	220 lbf MD 220 lbf DD	257 lbf MD 258 lbf DD	
Trapezoid/Tear	ASTM D 4533	120 lbf MD 120 lbf DD	146 lbf MD 141 lbf DD	130 lbf MD 130 lbf DD	189 lbf MD 172 lbf DD	160 lbf MD 160 lbf DD	193 lbf MD 191 lbf DD	
* Dimensional Stability	ASTM D 1204	<1	<0.5	<1	<0.5	<1	<0.5	
Puncture Resistance	ASTM D 4833	50 lbf	64 lbf	65 lbf	83 lbf	80 lbf	9 9 lbf	
Maximum Use Temperature		180° F	180° F	180° F	180° F	180° F	· 180° F	
Minimum Use Temperature		-70 ° F	-70° F	-70° F	-70° F	-70° F	-70° F	

MD = Machine Direction

DD = Diagonal Directions



Note: Minimum Roll Averages are set to take into account product variability in addition to testing variability between laboratories.

*Dimensional Stability Maximum Value

**DURA-SKRIM J30BB, J36BB & J45BB are a four layer reinforced laminate containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. DURA-SKRIM J30BB, J36BB & J45BB are reinforced with a 1300 denier (minimum) tri-directional scrim reinforcement.

Note: RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no quarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.

PLANT LOCATION

SALES OFFICE

Sioux Falls, South Dakota P.O. Box 5107 Sloux Falls, SD 57117-5107 (605) 335-0174 (605) 331-0333 FAX

800-635-3456

08/06

RAVEN INDUSTRIES INC. EXPOSED GEOMEMBRANE LIMITED WARRANTY

Reven Industries Inc. warrants Dura-Skrim J30BB, J36BB, and J45BB to be free from manufacturing defects and to be able to withstand normal exposure to sunlight for a period of 20 years from the date of sale for normal use in approved applications in the U.S and Canada, excluding Hawaii. This warranty is effective for products sold and shipped from January 1, 2008 to December 31, 2008. These dates will be updated prior to December 31, 2008.

This Limited Warranty does not include damages or defects in the Raven geomembrane resulting from acts of God, casualty or catastrophe including but not limited to: earthquakes, floods, piercing hail, or tornadoes. The term "normal use" as used herein does not include, among other things improper handling during transportation, unloading, storage or installation, the exposure of Raven geomembranes to harmful chemicals, atypical atmospheric conditions, abuse of Raven geomembranes by machinery, equipment or people; improper site preparation or covering materials, excessive pressures or stresses from any source or improper application or installation. Raven geomembrane material warranty is intended for commercial use only and is not in effect for the consumer as defined in the Magnuson Moss Warranty or any similar federal, state, or local statues. The parties expressly agree that the sale hereunder is for commercial or industrial use only.

Should defects or premature loss of use within the scope of the above Limited Warranty occur, Raven Industries Inc. will, at its option, repair or replace the Raven geomembrane on a pro-rata basis at the then current price in such manner as to charge the Purchaser/User only for that portion of the warranted life which has elapsed since purchase of the material. Raven Industries Inc. will have the right to inspect and determine the cause of any alleged defect in the Raven geomembrane and to take appropriate steps to repair or replace the Raven geomembrane if a defect exists which is covered under this warranty. This Limited Warranty extends only to Raven's geomembrane, and does not extend to the installation service of third parties nor does it extend to materials furnished or installed by others in connection with the intended use of the Raven geomembranes.

Any claim for any alleged breach of this warranty must be made in writing, by certified mail, to the General Manager of Engineered Films Division of Raven Industries Inc. within ten (10) days of becoming aware of the alleged defect. Should the required notice not be given, the defect and all warranties are waived by the Purchaser, and Purchaser shall not have any rights under this warranty. Raven Industries Inc. shall not be obligated to perform repairs or replacements under this warranty unless and until the area to be repaired or replaced is clean, dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or replacement of Raven geomembrane to be free from all water, dirt, sludge, residuals and liquids of any kind. If after inspection it is determined that there is no claim under this Limited Warranty, Purchaser shall reimburse Raven Industries Inc. for its costs associated with the site inspection.

In the event the exclusive remedy provided herein fails in its essential purpose, and in that event only, the Purchaser shall be entitled to a return of the purchase price for so much of the material as Raven Industries Inc. determines to have violated the warranty provided herein. Raven Industries Inc. shall not be liable for direct, indirect, special, consequential or incidental damages resulting from a breach of this warranty including, but not limited to, damages for loss of production, lost profits, personal injury or property damage. Raven Industries Inc. shall not be obligated to reimburse Purchaser for any repairs, replacement, modifications or alterations made by Purchaser unless Raven Industries Inc. specifically authorized, in writing, said repairs, replacements, modifications or alteration in advance of them having been made. Raven Industry's liability under this warranty shall in no event exceed the replacement cost of the material sold to the Purchaser for the particular installation in which it failed.

Raven Industries Inc. neither assumes nor authorizes any person other than the undersigned of Raven Industries Inc. to assume for it any other or additional liability in connection with the Raven geomembrane made on the basis of the Limited Warranty. The Limited Warranty on the Raven geomembrane herein is given in lieu of all other possible material warranties, either expressed or implied, and by accepting delivery of the material; Purchaser waives all other possible warranties, except those specifically given. This Limited Warranty may only be modified by written document mutually executed by Owner and Raven Industries Inc.

Limited Warranty is extended to the purchaser/owner and is non-transferable and non-assignable; i.e., there are no third-party beneficiaries to this warranty.

Purchaser acknowledges by acceptance that the Limited Warranty given herein is accepted in preference to any and other possible materials warranties.

THIS LIMITED WARRANTY SHALL BE GOVERNED BY SOUTH DAKOTA LAW AND VENUE FOR ALL LEGAL PROCEEDINGS IN CONNECTION WITH THIS LIMITED WARRANTY SHALL BE IN MINNEHAHA COUNTY, SOUTH DAKOTA. RAVEN INDUSTRIES INC. MAKES NO WARRANTY OF ANY KIND OTHER THAN THAT GIVEN ABOVE AND HEREBY DISCLAIMS ALL WARRANTIES, BOTH EXPRESSED OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, THIS IS THE ONLY WARRANTY THAT APPLIES TO THE MATERIALS REFERRED TO HEREIN AND RAVEN INDUSTRIES INC. DISCLAIMS ANY LIABILITY FOR ANY WARRANTIES GIVEN BY ANY OTHER PERSON OR ENTITY, EITHER WRITTEN OR ORAL.

RAVEN INDUSTRIES' WARRANTY BECOMES AN OBLIGATION OF RAVEN INDUSTRIES INC. TO PERFORM UNDER THE WARRANTY ONLY UPON RECEIPT OF FINAL PAYMENT AND EXECUTION BY A DULY AUTHORIZED OFFICER OF RAVEN INDUSTRIES INC.