(14-38
For: \$3160-3 (March 2012) UNITED STATES	5	OCD Hobbs	5	FORM OMB N Expires (APPROVED No. 1004-0137 October 31, 2014	
DEPARTMENT OF THE	INTERIOR			5. Lease Serial No. NMLC 0316	70 (A)	
APPLICATION FOR PERMIT TO	DRILL OR	REENTER		6. If Indian, Allotee	or Tribe Name	
				N/A		
la. Type of work: X DRILL REENTH	ER			7 If Unit or CA Agrees	eement, Name and onument Un	it
lb. Type of Well; X Oil Well Gas Well Other	X Sin	gle Zone 🔲 Multi	ple Zone	8. Lease Name and SEMU	Well No.	245
2. Name of Operator ConocoPhillips Company	>	OBBS	OCD	9. API Well No. 30-025- 42	017	
3a. Address 600 N. Dairy Ashford Rd, Office P10-4054 Houston TX 77070 1175	3b. Phone No. (281)20	(include area code))6-5281	5 2014	10. Field and Pool, or Skaggs; Graybu	Exploratory Ka	380
 Location of Well (Report location clearly and in accordance with an At surface 1528' FSL & 2204' FEL; UL J, Sec. 19, ' At proposed prod. zone 1275' FSL & 2587' FWL: UL N 	ty State requireme T20S, R381 N. Sec. 19. '	$E = \frac{1}{205} R_{38E} R_{16}$	ECEIVER	11. Sec., T. R. M. or B UL J, Sec. 19,	llk.and Survey or T20S, R38E	Area
 14. Distance in miles and direction from nearest town or post office* Approximately 10 miles southwest of Hobbs, NM 				12. County or Parish Lea County	13. Si NM	ate
 15. Distance from proposed* 1275' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 	16. No. of ac 641.68	res in lease	17. Spacin 40 acro	g Unit dedicated to this v es	well	-
18. Distance from proposed location* about 600' to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed 4197' T	Depth VD/4296' MD	20. BLM/I ES008	BIA Bond No. on file 5		<u></u>
 Elevations (Show whether DF, KDB, RT, GL, etc.) 3536' GL 	22. Approxim 06/07/2	ate date work will sta 2014	rt*	23. Estimated duration 7 days	n	
·	24. Attacl	iments				
The following, completed in accordance with the requirements of Onshor	e Oil and Gas C)rder No.1, must be at	tached to thi	s form:		
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System I 	Lands, the	 Bond to cover the Item 20 above). Operator certification 	ne operation ation	ns unless covered by an	existing bond on	file (see
SUPO must be filed with the appropriate Forest Service Office).		 Such other site BLM. 	specific info	ormation and/or plans as	may be required	by the
25. Signature SUSSAN B. Maurder	Name (Susar	Printed/Typed) n B. Maunder			Date 1/16/1	4
Senior Regulatory Specialist						
Approved by (Signatus) Steve Caffey	Name (Printed/Typed)			DatAUG -	4 2014
Field MANAGER	Office	CARLSB	AD FIELD	OFFICE	-	·
Application approval does not warrant or certify that the applicant holds conduct operations thereon. Conditions of approval, if any, are attached.	s legal or equita	ble title to those right	s in the subj	ectlease which would er	ntitle the applican	tto 3
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cristates any false, fictitious or fraudulent statements or representations as to	ime for any per o any matter wit	son knowingly and w hin its jurisdiction.	villfully to m	ake to any department or	r agency of the U	Jnited
(Continued on page 2)		/٢		*(Instr	uctions on p	age 2)
Lea County Controlled Water Basin		< l)/	KEIN	/	
	•			00100		

SEE ATTACHED FOR CONDITIONS OF APPROVAL Approval Subject to General Requirements & Special Stipulations Attached

AUG 0 7 2014

Operator Certification

HOBBS OCD

CONOCOPHILLIPS COMPANY

AUG 0 5 2014

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CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application with bond coverage provided by Nationwide Bond ES0085. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Susan B. Maunder

Senior Regulatory Specialist

Date:

Drilling Plan ConocoPhillips Company <u>SEMU;</u> Grayburg

HOBBS OCD

SEMU #245

AUG 0 5 2014

Lea County, New Mexico

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1. Estimated tops of geological markers and estimated depths to water, oil, or gas formations:

· The datum for these depths is RKB (which is 13' above Ground Level).

Formations	Top Depth FT TVD	Top Depths FT MD	Contents
Quaternary	Surface	Surface	Fresh Water
Rustler	1364	1364	Anhydrite
Salado (top of salt)	1457	1457	Salt
Tansill (base of salt)	2539	2540	Gas, Oil and Water
Yates	2654	2656	Gas, Oil and Water
Seven Rivers	2900	2905	Gas, Oil and Water
Queen	3473	3502	Gas, Oil and Water
Penrose	3614	3654	Gas, Oil and Water
Gráyburg	3762	3815	Gas, Oil and Water
San Andres	3997	4075	Gas, Oil and Water
Deepest estimated perforation	3997	4075	Deepest estimated perf. is above Top of San Andres
Total Depth (maximum)	4197	4296	200' below deepest estimated perforation

All of the water bearing formations identified above will be protected by setting of the <u>8-5/8</u> surface casing <u>25' – 70' into the Rustler formation</u> and circulating of cement from casing shoe to surface in accordance with the provisions of Onshore Oil and Gas Order No. 2 and New Mexico Oil Conservation Division Title 19.

The targeted oil and gas bearing formations identified above will be protected by setting of the <u>5-1/2</u>" production casing <u>10' off bottom of TD</u> and circulating of cement from casing shoe to surface in accordance with the provisions of Onshore Oil and Gas Order No. 2 and New Mexico Oil Conservation Division Title 19.

2. Propo	osedica:	sing pro	ogram:	-									
Type –	Hole Size	Interval MD RKB (ft)		OD	Wt	Gr	Conn	MIY	Col	Jt Str	Safety Factors Calculated per ConocoPhillips Corporate Criteria		
Туре	(in)	From	То	(inches)	(lb/ft)	Gi	Colim	(psi)	(psi)	(klbs)	Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
Cond	20	0	40' 85' (30' 75' BGL)	16	0.5" wall	В	Line Pipe	N/A	N/A	N/A	NA	NA	NA
Alt. Cond	20	0	40' – 85' (30' – 75' BGL)	13-3/8	48#	H-40	PE	1730	740	N/A	NA	NA	NA
Surf	12-1/4	0	1380'-1434'	8-5/8	24#	J-55	STC	2950	1370	244	1.38	2.15	3.05
Prod	7-7/8	0	4241' – 4286'	5-1/2	17#	L-80	LTC	7740	629 <u>0</u>	338	3.47	4.89	2.68

The casing will be suitable for H₂S Service. All casing will be new.

The surface and production casing will be set approximately 10' off bottom and we will drill the hole with a 45' range uncertainty for casing set depth to fit the casing string so that the cementing head is positioned at the floor for the cement job.

The production casing will be set 155' to 200' below the deepest estimated perforation to provide rathole for the pumping completion and for the logs to get deep enough to log the interval of interest.

Casing Safety Factors - BLM Criteria:

Туре	Depth	Wt	MIY	Col	Jt Str	Drill Fluid	Burst	Collapse	Tensile-Dry	Tens-Bouy
Surface Casing	1434	24	2950	1370	244000	8.5	4.65	2.16	7.1	8.1
Production Casing	4286	17	7740	6290	338000	10	3.47	2.82	4.64	5.47

Casing Safety Factors – Additional ConocoPhillips Criteria:

ConocoPhillips casing design policy establishes Corporate Minimum Design Factors (see table below) and requires that service life load cases be considered and provided for in the casing design.

ConocoPhillips Corporate Criteria for Minimum Design Factors

	Burst	Collapse	Axial
Casing Design Factors	1.15	1.05	1.4

Production Casing (5-1/2" 17# L-80 LTC)				24 2950	13	70 244000	4329	- 10 10 B.S	1.3	8 2.	15 3.	05				
	1. L	4285		17 7740	62	90 338000	3970	00 10	3.4	7 4.	89 2.	68				
· ·																
Burst - ConocoPhillips Required Load Cases																
The maximum internal (burst) load on the Surface Casing occurs wi The maximum internal (burst) had on the Production Casing occurs	hea the sur during the f	face cas fracture :	sing is to stimulati	sted to 150 on where th) psi (as e maxim	per ELM One	hore Order Worldog pro	2 - 11 Requiri	ements).							
(MAWP) is the pressure that would fit ConocoPhilips Corporate Crit	teria for Mini	mum Fac	ctors.	an rincie B	-		erenang pro			_						
Surface Casing Test Pressure	*-	1500	psi		Pre	dicted Para Pi	essure at T	D (PPTD) =	B.5	5 ppg						
Surface Rated Working Pressure (BOPE Forki SV	.)= N	3000	psi ninn		Predic	ted Frac Gra	ient at Shor	(CSFG) =	19.Z	3]229						
Surface Casing Burst Safety Factor = API Burst Ratin	ig / Maximur	n Fredict	ed Surf	ace Pressur	e (MPSP) OR Maximu	m Allowabk	e Surface Pre	ssure (I	(ASP)						
Production Casing MAWP for the Fracture Stimulation	= API Burst	Rating /	Corpor	ate Minimum	Burst De	sign Factor										
urface Casino Burst Safety Factor																
Case #1. MRSP (MWhyd next sectio	on) =	1434	×	0.052	×	10	≖	746								•
Case #2. MPSP (Field SW @ Bullheadcsro + 200 p	.si) =	1434	x	0.052	x	19,23	-	746	+	200	ź	888				
Case #3. MPSP (Kick Vol @ next section 1) Case #4 (MPSP (PPID - G)	U) = G) =	4286	×	0.052	x x	8.55	-	285,2	-	634 1477	=	-987		•		·, ·
Case #3 & #4 Limited to MPSP (CSFG + 0.2 pp	o)= pg)≓	1434	x	0.052	, x	19,23	+	0.2)=	1449						
MASP (MWnyd + Test Pressur	re) = ,	1434	×	0.052	.X	8.5	+	1500	=	2134						
roduction Casing Burst Safety Factor;	P) =	2950	'	2134	=	1.38				•						
Case #1. MPSP (MWhyd T	i) =	4286	x	0.052	x	1 0	=	2228.72								
Case #4. MPSP (PPTD - G)	G) =	4286	×	0.052	x	8.55	-	428.6	=	1477						
MAWP for the Fracture Stimulation (Corporate Criteri	r)- ia}=	7740	;	1.15] =	5730										
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The maximum collapse load on the Production Casing occurs when a	cementing to	o surfac	e, or 1/3	evacuation	to the d	eepost depth	of exposure	; and		010 [100 0						
therefore, the external pressure profile for the evacuation cases sho	oud be equ	al to the	pore pr	essure of th	e horizo	ns on the cut	ide of the o	asing which	We 835	unced to be	: PPTD.					
Production Casing Collapse Sarety Factor = API Collapse	se Rabing / Fill	N CVBCUZ MAXIMUN	n Predic	led Surface	Pressur	on curing cen or OR Cemen	Disolaceine	urrace ant during Ce	mentina	to Surface						
Cement Displacement Fluid (FW))- 🗀	8.34	ppg		Tap of	Cement =	Cement to S	urface	-							
Surface Cement Lead		13.6	ppg DDa	Pri	id Ceme and Cea	nt Lead =	<u>11.</u>	5 ppg								
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urface Casing Collapse Safety Factor: Full Evacuation Diff Pressur	ne= 1	434	x	0.052	x	8.55	-	638								
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Collapse Safety Facto	ม =	6290	1	1286	=	4.89										•
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Tensial Strength - ConocoPhillips Required Load Ca	1505															
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3. Proposed cementing program:

16" or 13-3/8" Conductor:

Cement to surface with rathole mix, ready mix or Class C Neat cement. (Note: The gravel used in the cement is not to exceed 3/8" diameter) TOC at surface.

8-5/8" Surface Casing Cementing Program:

The intention for the cementing program for the Surface Casing is to:

- Place the Tail Slurry from the casing shoe to 350' above the casing shoe,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

	Slurry	Inter Ft	rvals MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	Class C	Surface	1039' – 1084'	13.6	450	765	+ 2% Extender + 2% CaCl ₂ + 0.125 lb/sx Lost Circulation Control Agent + 0.2% Defoamer	1.70
				i			Excess =200% based on gauge hole volume	
Tail	Class C	1039' – 1084'	1430' 4389 1434	14.8	300	402	1% CaCl2 Excess = 100% based on gauge hole volume	1.34

Displacement: Fresh Water.

Note: In accordance with the Pecos District Conditions of Approval, we will Wait on Cement (WOC) for a period of not less than 18 hrs after placement or until at least 500 psi compressive strength has been reached in both the Lead Slurry and Tail Slurry cements on the Surface Casing, whichever is greater.

5-1/2" Production Casing Cementing Program – Single Stage Cementing Option:

The intention for the cementing program for the Production Casing - Single Stage Cementing Option is to:

- Place the Tail Slurry from the casing shoe to above the top of the Grayburg,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

	Slurry	Inte Ft	rvals MD	Weight ppg	Sx	Voľ Cuft	Additives	Yield ft ³ /sx
Lead	C Gas Tight Slurry	Surface	3000'	11.5	400	1292	Class C 94 lb/sx 6% Extender 10% Gas Migration Control 2% Sodium Metasilicate (dry) 1% Cement Bonding Agent 3% Aluminum Silicate 0.125 lb/sx Cello Flake 3 lb/sx LCM-1	3.23
Tail	Poz/C Gas Tight Slurry	3000'	4241' – 4286'	14.0	320	438	(35:65) Poz:C 33 lb/sx 1% Sodium Metasilicate (dry) 1.5% Fluid Loss Control,	1.37

Displacement: Fresh Water with approximately 250 ppm gluteraldehyde biocide.

5-1/2" Production Casing Cementing Program – Two-Stage Cementing Option (Shallow Flow):

ConocoPhillips Company respectfully requests the options to our cementing program. The intention for the cementing program for the Production Casing – Two-Stage Cementing Option is to:

- Provide a contingency plan for using a Stage Tool and Annulus Casing Packer(s) to isolate shallow saltwater or gas flow if either of these events occurs while drilling the well.
- Place the Stage 1 Cement from the casing shoe to surface.
- Proceed with Stage 2 Cement only if cement returns are contaminated or flow was observed after pumping 1st stage.

Spacer: 20 bbls Fresh Water

Stage	1 - Slurry	Intervals Ft MD		Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	C Gas Tight Slurry	Surface	3000'	. 11.5	400	1292	Class C 94 lb/sx 6% Extender 10% Gas Migration Control 2% Sodium Metasilicate (dry) 1% Cement Bonding Agent 3% Aluminum Silicate 0.125 lb/sx Cello Flake 3 lb/sx LCM-1	3.23
Tail	Poz/C Gas Tight Slurry	3000'	4241' 4286'	14.0	320	438	(35:65) Poz:C 33 lb/sx 1% Sodium Metasilicate (dry) 1.5% Fluid Loss Control,	1.37

1st stage displacement: FW followed by Weighted Spacer

Spacer: Remaining Weighted Spacer in cementing lines from the 1st stage displacement

Sta	age 2 - Slurry	Intervals Ft M	D	Weight ppg	Sx	· Vol · Cuft	Additives	Yield ft ³ /sx
Tail	Class C	Surface	Stage Tool ~1450'	14.8	300	402	1% CaCl2 Excess = 100% based on gauge hole volume	1.34

2nd stage displacement: Fresh Water

<u>5-1/2" Production Casing Cementing Program – Two-Stage Cementing Option (Lower Zone Losses or Waterflow):</u>

ConocoPhillips Company respectfully requests the options to our cementing program. The intention for the cementing program for the Production Casing – Two-Stage Cementing Option is to:

- Provide a contingency plan for using a Stage Tool and Annulus Casing Packer(s) to isolate losses or waterflow if either of these events occurs while drilling the well.
- Place the Stage 1 Cement from the casing shoe to the stage tool,
- Bring Stage 2 Cement from the stage tool to surface.

Spacer: 20 bbls Fresh Water

Sta	ge 1 – Slurry	Inter Ft I	vals MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	· Poz/C Gas Tight Slurry	Stage Tool ~2900'	4241' – 4286'	14.0	320	438	(35:65) Poz:C 33 lb/sx 1% Sodium Metasilicate (dry) 1.5% Fluid Loss Control,	1.37

1st stage displacement: FW followed by Brine

Spacer: 20 bbls Fresh Water

Stag	je 2 - Slurry	Inter Ft I	∿als MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	C Gas Tight Slurry	Surface	Stage Tool ~2900'	11.5	400	1292	Class C 94 lb/sx 6% Extender 10% Gas Migration Control 2% Sodium Metasilicate (dry) 1% Cement Bonding Agent 3% Aluminum Silicate 0.125 lb/sx Cello Flake 3 lb/sx LCM-1	3.23

Displacement: Fresh Water

Proposal for Option to Adjust Production Casing Cement Volumes:

The production casing cement volumes for the proposed single stage and two-stage option presented above are estimates based on gauge hole. We will adjust these volumes based on the caliper log data for each well and our -trends for amount of cement returns to surface. Also, if no caliper log is available for any particular well, we would propose an option to possibly increase the production casing cement volume to account for any uncertainty in regard to the hole volume.

4. Pressure Control Equipment:

A <u>11" 3M</u> system will be installed, used, maintained, and tested accordingly as described in Onshore Oil and Gas Order No. 2.

Our BOP equipment will be:

- o Rotating Head
- o Annular BOP, 11" 3M
- o Blind Ram, 11" 3M
- o Pipe Ram, 11" 3M

After nippling up, and every 30 days thereafter or whenever any seal subject to test pressure is broken followed by related repairs, blowout preventors will be pressure tested. BOP will be inspected and operated at least daily to insure good working order. All pressure and operating tests will be done by an independent service company and recorded on the daily drilling reports. BOP will be tested using a test plug to isolate BOP stack from casing. BOP test will include a low pressure test from 250 to 300 psi for a minimum of 10 minutes or until requirements of test are met, whichever is longer. Ram type preventers and associated equipment will be tested to the approved stack working pressure of 3000 psi isolated by test plug. Annular type preventers will be tested to 50 percent of rated working pressure, and therefore will be tested to 1500 psi. Pressure will be held for at least 10 minutes or until provisions of test are met, whichever is longer. Valve on casing head below test plug will be open during testing of BOP stack. BOP will comply with all provisions of Onshore Oil and Gas Order No. 2 as specified. See Attached BOPE Schematic. A variance is respectfully requested to allow for the use of flexible hose. The variance request is included as a separate enclosure with attachments.

5. Proposed Mud System:

DEPTH	TYPE	Density ppg	FV sec/qt	API Fluid Loss cc/30 min	рН .	Vol bbl
0 – Surface Casing Point	Fresh Water or Fresh Water Native Mud in Steel Pits	8.5 - 9.0	28 – 40	N.C.	N.C.	150 – 300
Surface Casing Point to TD	Brine (Saturated NaCl ₂) in Steel Pits	[•] 10	29	N.C.	10 – 11	300 – 1000
Conversion to Mud at TD	Brine Based Mud (NaCl ₂) in Steel Pits	10	33 – 40	5 – 10	10 – 11	0 – 1000

The mud systems that are proposed for use are as follows:

Gas detection equipment and pit level flow monitoring equipment will be on location. A flow paddle will be installed in the flow line to monitor relative amount of mud flowing in the non-pressurized return line. Mud probes will be installed in the individual tanks to monitor pit volumes of the drilling fluid with a pit volume totalizer. Gas detecting equipment and H2S monitor alarm will be installed in the mud return system and will be monitored. A mud gas separator will be installed and operable before drilling out from the Surface Casing. The gases shall be piped into the flare system. Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14.

In the event that the well is flowing from a waterflow, then we would discharge excess drilling fluids from the steel mud pits through a fas-line into steel frac tanks at an offset location for containment. Depending on the rate of waterflow, excess fluids will be hauled to an approved disposal facility, or if in suitable condition, may be reused on the next well.

No reserve pit will be built.

Proposal for Option to Not Mud Up at TD:

FW, Brine, and Mud volume presented above are estimates based on gauge 12-1/4" or 7-7/8" holes. We will adjust these volume based on hole conditions. We do not plan to keep any weighting material at the wellsite. Also, we propose an option to not mud up leaving only brine in the hole if we have good hole stability.

(Date: 1/9/2014)

6. Logging, Coring, and Testing Program:

- a. No drill stem tests will be done
- b. Remote gas monitoring planned for the production hole section (optional).
- c. No whole cores are planned
- d. The open hole electrical logging program is planned to be as follows:
 - Total Depth to 1700' MD: Spectral Gamma Ray, PE, Resistivity (laterologs), Bulk Density, and Sonic
 - Total Depth to surface Casing Shoe: Caliper
 - Total Depth to surface, Total Gamma Ray and Neutron
 - Total Depth to 2350' MD ; Mud Log (optional)
 - Total Depth to 2350' MD ; Dielectric Scanner (optional)
 - Formation pressure data (XPT) on electric line if needed (optional)
 - Rotary Sidewall Cores on electric line if needed (optional)
 - FMI (Formation MicroImager) if needed (optional)
 - UBI (Ultrasonic Borehole Imager) if needed (optional)
- e. Cement Bond Log (optional).

7. Abnormal Pressures and Temperatures:

- No abnormal pressures are expected to be encountered.
- Loss of circulation is a possibility in the horizons below the Top of Grayburg. We expect that normal Loss of Circulation Material will be successful in healing any such loss of circulation events.



The bottom hole pressure is expected to be 7.8 ppg gradient.

- The expected Bottom Hole Temperature is 100 degrees F:
- The estimated H₂S concentrations and ROE calculations for the gas in the zones to be penetrated are presented in the table below for the various producing horizons in this area:

FORMATION / ZONE	H2S (PPM)	Gas Rate (MCFD)	ROE 100 PPM	ROE 500 PPM
Seven Rivers	6	50 - 100 MCFD	0 .	0
Grayburg / San Andres	18360	20 - 50 MCFD	95	43

ConocoPhillips will comply with the provisions of Oil and Gas Order # 6, Hydrogen Sulfide Operations. Also, ConocoPhillips will provide an H2S Contingency Plan (please see copy attached) and will keep this plan updated and posted at the wellsite during the drilling operation.

8. Anticipated starting date and duration of operations:

Well pad and road constructions will begin as soon as all agency approvals are obtained. Anticipated date to drill these wells is mid-2014 after receiving approval of the APD.

Attachments:

- Attachment # 1 Two-stage Cementing Schematic
- Attachment # 2...... BOP and Choke Manifold Schematic 3M System
- Attachment # 3..... Diagram of Choke Manifold Equipment

Contact Information:

Proposed 9 January 2014 by: Steven Herrin Drilling Engineer, ConocoPhillips Company Phone (281) 206-5115 Cell (432) 209-7558 SEMU #245

(Date: 1/9/2014)







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Attachment # 3



ltem Description

- Manual Adjustable Choke, 2-1/16", 3M 1
- 2 Remote Controlled Hydraulically Operated Adjustable Choke, 2-1/16", 3M
- 3 Gate Valve, 2-1/16" 5M
- 4 Gate Valve, 2-1/16" 5M
- Gate Valve, 2-1/16" 5M 5
- 6 Gate Valve, 2-1/16" 5M
- 7 Gate Valve, 3-1/8" 3M
- 8 Gate Valve, 2-1/16" 5M
- 9 Gate Valve, 2-1/16" 5M
- 10 Gate Valve, 2-1/16" 5M
- 11 Gate Valve, 3-1/8" 3M 12
- Gate Valve, 2-1/16" 5M
- 13 Pressure Gauge
- 14 2" hammer union tie-in point for BOP Tester

We will test each valve to 3000 psi from the upstream side.

Submitted by: Steven Herrin Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company Date: 3-January-2014

ConocoPhillips MCBU

Buckeye SEMU SEMU 245

SEMU 245

Plan: Plan Design

Standard Planning Report - Geographic

06 December, 2013

Planning Report - Geographic

Datábase: Company: Project: Site: Well: Wellbore:	EDM Cer ConocoF Buckeye SEMU SÈMU 24 SEMU 24	ntral Planning hillips MCBU 45			Local Co TVD Refe MD Refe North Re Survey C	-ordinate Refe erence: ence: ference: alculation Me	rence: thod:	Well SEMU 24 RKB @ 3549.0 RKB @ 3549.0 Grid Minimum Curv	15 Dusft (PD 822) Dusft (PD 822) ature	
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Map System: Geo Datum:	US State P NAD 1927 (lane 1927 (Exa NADCON COI	ict soli NUS)	ution)	System Da	itum:	ŗ	/lean Sea Level		
Map Zone:	New Mexico	5 East 3001					ι	Jsing geodetic s	cale factor	
Site	SEMU, Ne	w Mexico, Ea	st						· · ·	
Site Position: From: Position Uncertainty	Lat/Lor	וק 3.5 u	I sft	Northing: Easting: Slot Radius:	574 839	9,762.30 usft 8 "	Latitude: Longitude: Grid Conve	gence:		32° 34' 29.280 N 103° 13' 49.440 W 0.59 °
Well	SEMU 245	, Deviated We	11	-						
Well Position	+N/-S +E/-W	0.0 .0.0	usft usft	Northing: Easting:		567,667.63 853,538.02	3 usft La 2 usft Lo	ititude: ongitude:		32° 33' 19.400 N 103° 11' 9.352 W
Position Uncertainty		0.0	usft	Wellhead Eleva	ation:		Gi	ound Level:		3,536.0 usft
Wellbore	SEMU 24	5					· , • · · ·			
Magnetics	, Model	Name	S	ample Date	Declina (°)	ition	Dip	Angle (°)	Field Str (n1	rength ')
	E	GGM2013		12/6/2013		7.23		60.49		48,599
Design	Plan Desig	iù					·····			
Audit Notes:	1	99 ()		Phase:	PROTOTYPE	Tie	On Denth		0.0	
Vertical Section:		Dep	th Fro (usf	m (TVD)	+N/-S (usft)	+E	/-W sft)	Di	rection (°)	
hard days hard hard			0.0)	0.0		.0	2	42.97	
Plan Sections				,		· · ·	······································			
Measured Depth Inclin (usft) ('	ation Az ²)	V zimuth l (°)	ertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00		0.0 0.0	0.0	0.00	0.00	0.00	0.00	
2,137.9 3,815.4	0.00 25.16	0.00 242.97	2,13 3,76	7.9 0.0 2.0 -164.7	0.0 -322.9	0.00 1.50	0.00	0.00 0.00	0.00 242.97	
4,296.0	25.16	242.97	4,19	7.0 -257.6	-504.9	0.00	0.00	• 0.00	0.00	

Planning Report - Geographic

Construction of the second division of				
Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SEMU 245	
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3549.0usft (PD 822)	
Project:	Buckeye	MD Reference:	RKB @ 3549.0usft (PD 822)	
Site:	SEMU	North Reference:	Grid	
Well:	SEMU 245	Survey Calculation Method:	Minimum Curvature	
Wellbore:	SEMU 245			
Design:	Plan Design			

Planned Survey

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Mea D	asured epth usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
								050 500 00		1008 141 0 050 14
	0.0	0.00	0.00	0.0 85.0	0.0	. 0.0	567 667 63	853,538.02	32° 33' 19.400 N	103° 11' 9,352 W
	Conduct	0.00							32 33 19.400 N	103 11 9,552 77
	100.0	0.00	0.00	100.0			567 667 63	853 538 02	32° 33' 19 400 N	103° 11' 9 352 W
	200.0	0.00	0.00	200.0	. 0.0	0.0	567 667 63	853 538 02	32° 33' 19 400 N	103° 11' 9 352 W
	300.0	0.00	0.00	300.0	0.0	0.0	567,667,63	853.538.02	32° 33' 19,400 N	103° 11' 9.352 W
	400.0	0.00	0.00	400.0	0.0	0.0	567,667.63	853,538,02	32° 33' 19,400 N	103° 11' 9.352 W
	500.0	0.00	0.00	500.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	600.0	0.00	0.00	600.0	0.0	0.0	567,667.63 ·	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	700.0	0.00	0.00	700.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	800.0	0.00	0.00	800.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	900.0	0.00	0.00	900.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19,400 N	103° 11' 9.352 W
	1,000.0	0.00	0.00	1,000.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19,400 N	103° 11' 9.352 W
	1,100.0	0.00	0.00	1,100.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,200.0	0.00	0.00	1,200.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,300.0	0.00	0.00	1,300.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,364.0	0.00	0.00	1,364.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
ļ. F	Rustler									
	1,400.0	. 0.00	0.00	1,400.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,434.0	0.00	0.00	1,434.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,457.0	0.00	0.00	1,457.0	0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	Salado					·				
	1,500.0	0.00	0.00	1,500.0	. 0.0	0.0	567,667.63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	1,600.0	0.00	0.00	1,600.0	0.0	0.0	567,667.63	853,538.02	32° 33° 19.400 N	103° 11° 9.352 W
:	1,700.0	0.00	0.00	1,700.0	0.0	0.0	507,007.03	853,538.02	32° 33° 19.400 N	103° 11' 9.352 W
	1,800.0	0.00	0.00	1,000.0	0.0	0.0	567 667 63	003,030.UZ	32 33 19.400 N	103 11 9.352 W
	2,000,0	0.00	0.00	2 000 0	0.0	0.0	567 667 63	853,538.02	32° 33' 19.400 N	103° 11' 9.352 W
	2,000.0	0.00	0.00	2,000.0	· 0.0	0.0	567 667 63	853 538 02	32° 33' 19,400 N	103° 11' 9 352 W
	2,100.0	0.00	0.00	2,100.0	0.0	0.0	567 667 63	853 538 02	32° 33' 19 400 N	103° 11' 9 352 W
	2,107.0	0.00	242.97	2,707.0	-0.2	-0.4	567 667 40	853 537 57	32° 33' 19 398 N	103° 11' 9 357 W
	2,200.0	2.43	242.97	2,300.0	-1.6	-3.1	567,666,06	853,534,96	32° 33' 19.385 N	103° 11' 9.388 W
	2,400.0	3.93	242.97	2,399.8	-4.1	-8.0	567,663.54	853,530.02	32° 33' 19.361 N	103° 11' 9.446 W
	2,500.0	5.43	242.97	2,499.5	-7.8	-15.3	567,659.83	853,522.74	32° 33' 19.325 N	103° 11' 9.531 W
:	2,539.7	6.03	242.97	2,539.0	-9.6	-18.8	567,658.03	853,519.21	32° 33' 19.307 N	103° 11' 9.573 W
T ·	ansill	•			· · · · · · ·	-			· ·· · ·· ·· ···	
	2,600.0	6.93	242.97	2,598.9	-12.7	-24.9	567,654.94	853,513.15	32° 33' 19.278 N	103° 11' 9.644 W
:	2,655.6	7.77	242.97	2,654.0	-15.9	-31.2	567,651.71	853,506.82	32° 33' 19.246 N	103° 11' 9.718 W
Y	rates									
:	2,700.0	8.43	242.97	2,698.0	-18.8	-36.8	567,648.87	853,501.25	32° 33' 19.219 N	103° 11' 9.784 W
	2,800.0	9.93	242.97	2,796.7	-26.0	-51.0	567,641.62	853,487.03	32° 33' 19.149 N	103° 11' 9.951 W
2	2,900.0	11.43	242.97	2,895.0	-34.4	-67.5	567,633.19	853,470.52	32° 33' 19.067 N	103° 11' 10.144 W
	2,905.1	11.51	242.97	2,900.0	-34.9	-68.4	567,632.73	853,469.61	32° 33' 19.062 N	103° 11' 10.155 W
L S	Seven Riv	rers								
	3,000.0	12.93	242.97	2,992.7	44.0	-86.3	567,623.61	853,451.72	32° 33' 18.974 N	103° 11' 10.365 W
:	3,100.0	14.43	242.97	3,089.9	-54.8	-107.4	567,612.86	853,430.65	32° 33' 18.870 N	103° 11' 10.613 W
3	3,200.0	15.93	242.97	3,186.4	-00.7	-130.7	567,600.96	853,407.32	32° 33' 18.755 N	103° 11' 10.887 W
2	3,300.0	17.43	242.97	3,282.2	-/9./	-156.3	507,587.92	853,381,75	32 33 18.628 N	103 11 11.187 W
:	3,400.0	18.93	242.97	3,3/1.2	-93,9	-104.1	501,5/3,/4	003,353.96	32° 33° 18,491 N	103° 11° 11.514 W
	3,500.0	20.43	242.91	3,471.3	-109.2	-214.1	567 559 15	000,020.90 853 323 40	J∠ JJ 10.343 N 32° 33' 18 340 N	103 11 11.000 W
· · ·	3,501.8	20.40	242.91	3,4/3.0	-109,0	-214.0	507,550.15	000,020,40	JZ JJ 10.340 N	
<u>l </u>	ueen 3,600.0	21.93	242.97	3,564.6	-125.6	-246.2	567,542.02	853,291.77	32° 33' 18.184 N	103° 11' 12.244 Ŵ

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Planning Report - Geographic

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Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SEMU 245	
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3549.0usft (PD 822)	
Project:	Buckeye	MD Reference:	RKB @ 3549.0usft (PD 822)	
Site:	SEMU	North Reference:	Grid	
Well:	SEMU 245	Survey Calculation Method:	Minimum Curvature	
Wellbore:	SEMU 245		· ·	
Design:	Plan Design			

Planned Survey

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Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
3,653.5	22.73	242.97	3,614.0	-134.8	-264.3	567,532.79	853,273.67	32° 33' 18.094 N	103° 11' 12.457 W
Penrose					·- ·· ·	· · ·	· · · · · · · ·		• • • • • • •
3,700.0	23.43	242.97	3,656.8	-143.1	-280.6	567,524.49	853,257.42	32° 33' 18.014 N	103° 11' 12.648 W
3,800.0	24.93	242.97	3,748.0	-161.7	-317.1	567,505.88	853,220.93	32° 33' 17.834 N	103° 11' 13.076 W
3,815.4	25.16	242.97	3,762.0	-1 64.7	-322.9	567,502.92	853,215.12	32° 33' 17.805 N	103° 11' 13.144 W
Grayburg						· • • • • •		· · · · · · · · · · · · · · · · · · ·	·
3,900.0	25.16	242.97	3,838.6	-181.0	-354,9	567,486.57	853,183.07	32° 33' 17.647 N	103° 11' 13.521 W
4,000.0	25.16	242.97	3,929.1	-200.4	-392.8	567,467.25	853,145.19	32° 33' 17.460 N	103° 11' 13.966 W
4,075.0	25.16	242.97	3,997.0	-214.9	-421.2	567,452.75	853,116.77	32° 33' 17.319 N	103° 11' 14.300 W
San Andr	es						na contrata e na		
4,100.0	25.16	242.97	4,019.6	-219.7	-430.7	567,447.93	853,107.32	32° 33' 17.273 N	103° 11' 14.411 W
4,200.0	25.16	242.97	4,110.1	-239.0	-468.6	567,428.61	853,069.44	32° 33' 17.086 N	103° 11' 14.856 W
4,286.0	25.16	242.97	4,187.9	-255.6	-501.1	567,412.00	853,036,86	32° 33' 16.925 N	103° 11' 15.238 W
Productio	on		· · · · · · · · · ·				· · · · · · · · · · · · · · ·		,
4,296.0	25.16	242.97	4,197.0	-257.6	-504.9	567,410.06	853,033.07	32° 33' 16.906 N	103° 11' 15.283 W

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
			0 700 0						

SEMU 245 (Target) 0.00 0.00 3,762.0 -209.6 -411.0 567,457.98 853,127.02 32° 33' 17.370 N 103° 11' 14.179 W - plan misses target center by 89.5usft at 3857.5usft MD (3800.1 TVD, -172.8 N, -338.8 E) - Circle (radius 100.0)

Casing Points				· •			
,	Measured Depth (usft)	Vertical Depth (usft)		Name	Casing Diameter (")	Hole Diameter ('')	
	85.0	85.0	Conductor		16	20	
	1,434.0	1,434.0	Surface		8-5/8	12-1/4	
	4,286.0	4,187.9	Production		5-1/2	7-7/8	

Formations

Measured Depth	Vertical Depth		Dip	Dip Direction
(usft)	(usft)	Name	Lithology (°)	(°) ·
1,364.0	1,364.0	Rustler	0.00	
1,457.0	1,457.0	. Salado	0.00	
2,539.7	2,539.0	Tansill	0.00	· · ·
2,655.6	2,654.0	Yates	0.00	
2,905.1	2,900.0	Seven Rivers	. 0.00	
3,501.8	3,473.0	Queen	0.00	
3,653.5	3,614.0	Penrose	0.00	
3,815.4	3,762.0	Grayburg	0.00	
4,075.0	3,997.0	San Andres	0.00	

Planning Report - Geographic

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SEMU 245
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3549.0usft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 3549.0usft (PD 822)
Site:	SEMU	North Reference:	Grid
Well:	SEMU 245	Survey Calculation Method:	Minimum Curvature
Wellbore:	SEMU 245		
Design:	Plan Design		



Proposed Directional Well Plan



Request for Variance

ConocoPhillips Company

Lease Number: NMLC031670 (A) Well: SEMU #245 Location: Sec. 19, T20S, R38E Date: 1/9/2014

Request:

ConocoPhillips Company respectfully requests a variance to install a flexible choke line instead of a straight choke line prescribed in the Onshore Order No. 2, III.A.2.b Minimum standards and enforcement provisions for choke manifold equipment. This request is made under the provision of Onshore Order No. 2, IV Variances from Minimum Standard. The rig to be used to drill this well is equipped with a flexible choke line if the requested variance is approved and determined that the proposed alternative meets the objectives of the applicable minimum standards.

Justifications:

The applicability of the flexible choke line will reduce the number of target tees required to make up from the choke valve to the choke manifold. This configuration will facilitate ease of rig up and BOPE Testing.

Attachments:

- Attachment # 1 Specification from Manufacturer
- Attachment # 2 Mill & Test Certification from Manufacturer

Contact Information:

Program prepared by: Steven Herrin Drilling Engineer, ConocoPhillips Company Phone: (281) 206-5115 Cell: (432) 209-7558 Date: 2 January 2014

Attachment # 1

Reliance Eliminator Choke & Kill

This hose can be used as a choke hose which connects the BOP stack to the bleed-off manifold or a kill hose which connects the mud stand pipe to the BOP kill valve.

The Reliance Eliminator Choke & Kill hose contains a specially bonded compounded cover that replaces rubber covered Asbestos, Fibreglass and other fire retardant materials which are prone to damage. This high cut and gouge resistant cover overcomes costly repairs and downtime associated with older designs.

The Reliance Eliminator Choke & Kill hose has been verified by an independent engineer to meet and exceed EUB Directive 36 (700°C for 5 minutes).

Nom.	. ID		Non	n OD 🐪	Wei	ght	Min Be	nd Radius	Max	WP
in.	mm.	iŋ		mm	lb/ft	kg/m	in,	mm.	psi	Mpa
3	76.2	5.1	1 .	129.79	14.5	21.46	48	1219.2	5000	34.4
3-1/2	88.9	5.7	9	147.06	20.14	29.80	54	1371.6	5000	34.4
	ر میں اور	್ಷಿಕ್ ಕ್ರೋಕ್ಷಿಕ್								
viz yn V					•				•	
Fittings				Flanges	•	Han	nmer Un	lons	Othe	r
Fittings RC4X5055		R35	- 3-1	Flanges	Pl Type 6B	Han All Un	nmer Un ion Configu	i lons urations LP	Othe Threaded C	r onnecti
Fittings RC4X5055 RC3X5055		R35 R31	- 3-1. - 3-1.	Flanges /8 5000# AI /8 3000# AI	의 Type 6B 의 Type 6B	Han All Un	nmer Un ion Configu	lions urations LP	Othe Threaded C Grayloo	r onnect
Fittings RC4X5055 RC3X5055 RC4X5575		R35 R31	- 3-1. - 3-1.	Flanges /8 5000# AT /8 3000# AT	의 Type 6B 의 Type 6B	Han All Un	nmer Un ion Configu	l ions urations LP	Othe Threaded C Grayloo Custom E	r onnect :k :nds

Attachment # 2

Closed Loop System Design, Operating and Maintenance, and Closure Plan

ConocoPhillips Company Well: SEMU #245 Location: Sec. 19, T20S, R38E Date: 1/9/2014

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

 We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we build an earth pit above ground level, nor will we dispose of or bury any waste on location.

All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in hauloff bins or in frac tanks as needed. The intent is as follows:

- We propose to use the rigs' steel pits for containing and maintaining the drilling fluids.
- We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
- We propose that any excess water that may need to be stored on location will be stored in tanks.

The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and/or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

R-360 Inc. 4507 West Carlsbad Hwy, Hobbs, NM 88240, P.O. Box 388; Hobbs, New Mexico 88241 Toll Free Phone: 877.505.4274, Local Phone Number: 432.638.4076

The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

The Permit Number for R-360 is NM-01-0006.

A photograph showing the type of haul-off bins that will be used is attached.

- 3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.
- 4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd; Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: Section 3, T19S R37E)
 - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

Steven Herrin Drilling Engineer, ConocoPhillips Company Phone (281) 206-5115 Cell (432) 209-7558

SPECIFICATIONS

FLOOR: 3/16" PL one piece CROSS MEMBER: 3 x 4.1 channel 16" on center.

WALLS= 3/16" PL solid welded with tubing top, insi de liner hooks

DOOR: 3/16" PL with tubing frame FRONT 3/16 PL slant (ormed PICK U P: Standard cable with 2" x 6" x 1/4" rails, gu sset at each crossmember WHEELS: 10 DIA x 9 long with rease fittings DOOR LEATCH: 3 Independent ratchet binders with chains, vertical second latch CASKETIS: Extrudeol rubber seal with metal. nelalmens

WELDES All welds continuous except sub structur e crossmembers

FINISH: Coated Inside and out with direct to metal, rust inhibiting actylic enamel color coat HYDROTESTING: Full capacity static test DIMENSIONS: 22-11' long (21-8' inside). 99" wide (88" inside), see drawing for height OPTIONS: Steel grit blassand special paint Amplinell, Heil and Dine pickup

ROOF: 3/16" PL roof panels with tubing and

channel support frame LIDS: (2) 68' × 90" metal rolling lids spring loaded, self raising

ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings OPENING: (2) 60" x 82" openings

with 8" divider centered on container

LATCHI(2) Independent ratchet binders with chains peclid

GASKEIIS' Extruded rubbe seal with metal retainers

Heavy Duty Split Metal Rolling Lid

CONT.	A	В
20 YD	41	53
25 YD	53	65
30 YD	65	77

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Location Schematic and Rig Layout for Closed Loop System (PICTURE NOT TO SCALE)

NOTE: There are two muster areas depending on the prevailing wind direction, generally south in this area. The muster area that is furthest upwind/ crosswind will be the designated area for briefing and assessing the situation. In the event a full evacuation is deemed necessary, all personnel will exit the location via the access road. If the main access road is blocked off, they will exit via a secondary road (if available) or walk off route in the upwind/crosswind direction.

Reviewed by: Steven Herrin Drilling Engineer, ConocoPhillips Company Date: updated January 2014