HOBBS OCD Form 3160-3 (March 30 2) 2 0 2013		OCD Hobbs			ATS-1 APPROVED 0. 1004-0137 ctober 31, 2014	3-1)(
UNITED STATES RECEIVED DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR			5. Lease Serial No. NM LC 029405B		
APPLICATION FOR PERMIT TO		REENTER		6. If Indian, Allotee N/A	or Tribe Nam	e
la. Type of work: DRILL REENT	ER			7 If Unit or CA Agree N/A	ement, Name a	and No.
lb. Type of Well: 🔽 Oil Well 🔲 Gas Well 🛄 Other	√ Sin	gle Zone 🔲 Multip	ole Zone	8. Lease Name and W Ruby Federal #37	Vell No.	865 3
2. Name of Operator ConocoPhillips Company	2178	317>		9. API Well No. 30-025- 4/40	17	
3a. Address P.O. Box 51810	1	(include area code)		10. Field and Pool, or E	· /	
Midland, Texas 79710-1810	432-688-69		· – <u>—</u>	Maljamar; Yeso We		4400
4. Location of Well (Report location clearly and in accordance with an At surface UL B, Sec. 17, T17S, R32E; 550' FNL and 16	•	ents.*)		11. Sec., T. R. M. or Bl Sec. 17, T17S, R32	•	or Area
At proposed prod. zone UL B, Bec. 17, T175, R32E, 300 TNE and 10 At proposed prod. zone UL B, Bec. 17, T175, R32E; 1003'		3' FF1		0000. 17, 1170, 102	L-	
 14. Distance in miles and direction from nearest town or post office* Approximately 3 miles south of Maljamar, New Mexico 			<u></u>	12. County or Parish Lea County	13. NM	State A
 Distance from proposed* About 333' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 	16. No. of ac 1601.9	eres in lease	17. Spacin 40 acres	g Unit dedicated to this w	ell	
 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 	19. Proposed	Depth	ES-008	BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4037' GL		nate date work will star		23. Estimated duration9 days		
· · · · · · · · · · · · · · · · · · ·	24. Attac	hments				
The following, completed in accordance with the requirements of Onsho	re Oil and Gas (Order No.1, must be a	tached to th	is form:		
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 	Lands, the	Item 20 above). 5. Operator certific 6. Such other site	ation	ns unless covered by an e ormation and/or plans as a		·
25. Signatur Susan Bi Maunder		BLM. (Printed/Typed) B. Maunder		1	Date 8/8	1/13
Title Senior Regulatory Specialist	·· I <u>-</u>	·····		· · ·	<u>-</u> -	4
Approved by (Signature)	Name	(Printed/Typed)		1	^D ₩OV 1	5 2013
Title FIELD MANAGER	Office	ĊAR	LSBAD F	IELD OFFICE		
Application approval does not warrant or certify that the applicant hole conduct operations thereon. Conditions of approval, if any, are attached.	ls legal or equit	able title to those righ		ject lease which would en PPROVAL FOF		
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a c States any false, fictitious or fraudulent statements or representations as	rime for any pe to any matter w	rson knowingly and v thin its jurisdiction.				
(Continued on page 2)		1/		*(Instr	uctions on	page 2)
Roswell Controlled Water Basin		Kt 1/22	2/13 A	pproval Subject to & Special Stip	General R ulations A	lequiremei ttached

CONDITIONS OF			AL
NOV	26	2013	Sur

Drilling Plan ConocoPhillips Company <u>Maljamar; Yeso (west)</u>

Ruby Federal #37

Lea County, New Mexico

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	791	791	Anhydrite
Salado (top of salt)	977	977	Salt
Tansill (base of salt)	1987	1987	Gas, Oil and Water
Yates	2175	2175	Gas, Oil and Water
Seven Rivers	2451	2452	Gas, Oil and Water
Queen	3089	3093	Gas, Oil and Water
Grayburg	3506	3512 [.]	Gas, Oil and Water
San Andres	3873	3881	Gas, Oil and Water
Glorieta	5365	5380	Gas, Oil and Water
Paddock	5466	5481	Gas, Oil and Water
Blinebry	5802	5819	Gas, Oil and Water
Tubb	6822	6843	Gas, Oil and Water
Deepest estimated perforation	6822	6843	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	7022	7043	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. Proposed casing program:

2ec	CON											
Hole Size	M	Interval D RKB (ft)	OD	Wt	Cr	Com	МІҮ	Col	Jt Str		lated per Co	nocoPhillips
(in)	From	То	(inches)	(lb/ft)	G	Com	(psi)	(psi)	(klbs)	Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
20	0	40' – 85' (30' – 75' BGL)	16	0.5" wall	B	Line Pipe	N/A	N/A	N/A	NA	NA	NA
20	0	40' – 85' (30' – 75' BGL)	13-3/8	48#	H-40	PE	1730	740	N/A	NA	NA	NA
12-1/4	0	-816- <u>861'</u>	8-5/8	24#	J-55	STC	2950	1370	244	1.57 ,	3.58	3.59
7-7/8	0	6988' – 7033'	5-1/2	17#	L-80	LTC	7740	6290	338	2.12	2.51	1.98
	Size (in) 20 20 12-1/4	Hole Size M (in) From 20 0 20 0 12-1/4 0	Hole Size Interval MD RKB (ft) (in) From To 20 0 40' - 85' (30' - 75' BGL) 20 0 40' - 85' (30' - 75' BGL) 20 0 40' - 85' (30' - 75' BGL) 12-1/4 0	Hole Size Interval MD RKB (ft) OD (in) From To (inches) 20 0 $40' - 85'$ ($30' - 75'$ BGL) 16 20 0 $40' - 85'$ ($30' - 75'$ BGL) 13-3/8 20 0 $-816^{-} - 85'$ ($30' - 75'$ BGL) 13-3/8 12-1/4 0 $-816^{-} - 851'_{-}$ 8-5/8	Hole Size Interval MD RKB (ft) OD Wt (in) From To (inches) (lb/ft) 20 0 $40' - 85'$ ($30' - 75'$ BGL) 16 $0.5"$ wall 20 0 $40' - 85'$ ($30' - 75'$ BGL) 13-3/8 48# 12-1/4 0 $-816^{2} - 861'_{2m}$ 8-5/8 24#	Hole Size Interval MD RKB (ft) OD Wt Gr (in) From To (inches) (lb/ft) Gr 20 0 $40' - 85'$ ($30' - 75'$ BGL) 16 $0.5"$ wall B 20 0 $40' - 85'$ ($30' - 75'$ BGL) 13-3/8 48# H-40 12-1/4 0 $-846^{-} - 861'_{-m}$ 8-5/8 24# J-55	Hole Size Interval MD RKB (ft) OD Wt Gr Conn (in) From To (inches) (lb/ft) Conn 20 0 $40' - 85'$ ($30' - 75'$ BGL) 16 $0.5''$ wall B Line Pipe 20 0 $40' - 85'$ ($30' - 75'$ BGL) 13-3/8 48# H-40 PE 12-1/4 0 $-846' - 861'_{-1}$ 8-5/8 24# J-55 STC	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Hole SizeInterval MD RKB (ft)ODWtGrConnMIYColJt StrSafety Fac Calculated per Concorporate

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	861	24	2950	1370	244000	8.5	7.75	3.60	11.8	13.6
Production Casing	7033	17	7740	6290	338000	10	2.12	1.72	2.83	3.34

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 Cr	iteria for Minimum Design Factors	
	Burst	Collapse	Axial
Casing Design Factors	1.15	1.05	1.4

Surface Casing (8-5/8" 24# J-55 STC)	861		5 35000 4 2950		0 244080	<u>43296</u> 38100		1.5	-	· 8 3.5					
Production Casing (5-1/2" 17# L-80 LTC)	7033		7 7740		338000	39700									
Burst ConocoPhillips Required Load Cases															
The maximum internal (curst) load on the Surface Casing occurs when the	e surface cas	ing is te	sted to 1500	psi (as	per BLM Onsi	iore Order 2	2 - II. Require	ements).							
¹ The maximum Internal (burst) load on the Production Casing occurs during (IJAVVP) is the pressure that would fit ConocoPhilips Corporate Criteria for			on where the	e ກອງເກເ	im atowable n	vorking pre	ssure								
Surface Casing Test Pressure =	1500			Prec	licted Pore Pro	ssure at TL) (PPTD) =	8.5	5 699						
Surface Rated Working Pressure (BOPE) =	3000	çsi			ed Frac Grad				3 660						
Field SW = Surface Casing Burst Safety Factor = APi Burst Rating / Nat	10 imum Departiet		an Brannur		10D* Hawimu		Suctaon Dra		1400						
Production Casing NAWP for the Fracture Stimulation = API						I AN I BUIC	Surface Pre		in ary						
Surface Casing Burst Safety Factor:															
Case #1. MPSP (MWhyd next section) =	861	x	0.052	x	10	=	448								
Case #2. MPSP (Field SW @ Bullhead _{CSFB} + 200 psi) = Case #3. MPSP (Kick Vol @ next section TD) =	861 7033	x x	0.052 0.052	x x	19.23 8.55	•	448 617.2	+	200 381	=	613 2129				
Case #3. INFSF (Rick Vill @ next section TD) = Case #4. MPSP (PPTD - GG) =	7033	x	0.052	x	8.55		703.3	=	2424	-	2129				
Case #3 & #4 Limited to MPSP (CSFG + 0.2 ppg) =	861	x	0.052	х (+	0.2) =	870						
MASP (MWhyd + Test Pressure) = Burst Safety Factor (Max, MPSP or MASP) =	661 2950	x /	0.052 1881	× =	8.5 1.57	+	1500	=	1881						
Production Casing Burst Safety Factor:	2550	,	1001	-	1.57										
Case #1. MPSP (MWhyd TD) =	7033	х	0.052	х	10	=	3657.16								
Case #1. MPSP (PPTD - GG) = Burst Safety Factor (Max. MPSP) =	7033 7740	× /	0.052 3657	× =	8.55 2.12	-	703.3	=	2424						
MAWP for the Fracture Stimulation (Corporate Criteria) =	7740	÷,	1.15] =	6730										
				•											
Collapse – ConocoPhillips Required Load Cases															
The maximum collapse load on the Surface Casing occurs when cementin	g to surface,	1/3 evac	cuation to the	e next ca	sing setting d	epth, or dea	epest depth o	of expos	sure (fulle:	acuation).					
The maximum collapse load on the Production Casing occurs when comen	ting to surface	e, or 1/3	evacuation	to the d	eepest depth	of exposure	; and								
therefore, the external pressure profile for the evacuation cases should b Surface Casing Collapse Safety Factor = API Collapse Ratio								we ass	umed to b	PPTD.					
Production Casing Collapse Safety Factor = API Collapse Rain	-			•	-	-		menting	to Surface						
Cement Displacement Fluid (FW) =	8.34					Cement to S		-							
Surface Cement Lead = Surface Cement Tail =	13.6 14.8	PPG FPG			ni Lead = vent Tail =		B ppg 4 ppg								
Top of Surface Tail Cement =	300				Cement =	520									
Surface Casing Collapse Safety Factor: Full Evacuation Diff Pressure =	861	x	0.052	x	8.55	=	383								
Cementing Diff Lift Pressure =	[(561		0.052	x	13.6) + (300	x	0.052	x	[.] 14.8) -	373	} = 254
Collapse Safety Factor =	1370	1	363	Ξ	3.58								•		•
Production Casing Collapse Safety Factor: 1/3 Evacuation Diff Pressure =	11	7033		0.052		8.55	, , ,	7022	,	3		0.063		0.24)) - - -
Cementing Diff Lift Pressure =	[([(1833		0.052	x x	11.8) - () + (7033 5200	×	0.052	x x	0.052 16.4).)] = 211] = 250
Collapse Safety Factor =	6290	1					1 . 1					10.1	,	2020	1 200
			2509	=	2.51										
			2509	=	2.51										
<u>Tensial Strength – ConocoPhillips Required Load Cases</u>			2509	=	2.51										
The maximum axial (lension) load occurs if casing were to get stuck and p		to get it	unsluck,												
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe	Yield Strengt	to get it h Rating	unsluck, / Corporate	1.linimum	ı Axisi Design	Factor									
The maximum axial (lension) load occurs if casing were to get stuck and p	Yield Strengtl ngth Rating / C	to get it h Rating Corporat	unstuck, / Corporate te Minimum A	Minimum Ixial Des	ı Axial Design Ign Factor	Factor									
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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 300' above the casing shoe,
- Bring the Lead Slurry to surface

Spacer: 20 bbls Fresh Water

	Slurry	Inter Ft I	vals ND	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	Class C	Surface	516' – 561'	13.6	300	510	2% Extender 2% CaCl ₂ 0.125 lb/sx LCM if needed 0.2% Defoamer Excess =75% based on gauge hole volume	1.70
Tail	Class C	516' 561'	816' – 861'	14.8	200	268	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:

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

- Place the Tail Slurry from the casing shoe to a point approximately 200' above the top of the Paddock,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

	Slurry	Inter Ft I		Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	50:50 Poz/C	Surface	5200'	11.8	700	1820	10% Bentonite 5% Salt 0.2%-0.4% Fluid loss additive 0.125 lb/sx LCM if needed Excess = 220% or more if needed based on gauge hole volume	2.6
Tail	Class H	5200'	6988' – 7033'	16.4	400	428	 0.2% Fluid loss additive 0.3% Dispersant 0.15% Retarder 0.2% Antifoam Excess = 100% or more if needed based on gauge hole volume 	1.07

Displacement: Fresh Water with approximately 250 ppm gluteraldehyde biocide.

Proposal for Option to Adjust Production Casing Cement Volumes:

The production casing cement volume presented above are estimates based on gauge 7-7/8" 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 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:

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

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.	120 – 160
Surface Casing Point to TD	Brine (Saturated NaCl ₂) in Steel Pits	10	29	N.C.	10 – 11	500 - 1000
Conversion to Mud at TD	Brine Based Mud (NaCl ₂) in Steel Pits	10	33 – 40	5 – 10	10 – 11	0 – 750

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.

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 2500': Resistivity, Density, and Gamma Ray
 - Total Depth to surface Casing Shoe: Caliper
 - Total Depth to surface, Gamma Ray and Neutron
 - Formation pressure data (XPT) on electric line if needed (optional)
 - Rotary Sidewall Cores on electric line if needed (optional)
 - BHC or Dipole Sonic if needed (optional)
 - Spectral Gamma Ray if needed (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 8.55 ppg gradient.
 - The expected Bottom Hole Temperature is 115 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
Grayburg / San Andres (from MCA)	14000	38	59	27
Yeso Group	400	433	34	15

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 this well as early as 2014 after receiving approval of the APD.

Attachments:

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

Contact Information:

Proposed 8 August 2013 by: James Chen Drilling Engineer, ConocoPhillips Company Phone (832) 486-2184 Cell (832) 768-1647

ConocoPhillips MCBU

Buckeye Ruby Federal Ruby Federal 37

Original Hole

Plan: Slant Plan

Standard Planning Report - Geographic

05 August, 2013

Planning Report - Geographic

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Planning Report - Geographic

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600.0	0.00	0.00	600.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
700.0	0.00	0.00	700.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
791.0	0.00	0.00	791.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
	0.00	0.00	101.0	0.0	0.0		000,000.11	02 00 20.02011	100 17 0.100 11	
Rustler 800.0	0.00	0.00	800.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
						669,843.22	668,399.47	32° 50' 25.020 N 32° 50' 25.020 N		
861.0	0.00	0.00	861.0	0.0	0.0	669,643.22	666,399.47	32°50 25.020 N	103° 47' 6.160 W	
Surface								·		
900.0	0.00	0.00	900.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
977.0	0.00	0.00	977.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
Salaido										
1,000.0	0.00	0.00	1,000.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	669,843.22	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
1,987.0	0:00	0.00	1,987.0	0.0	0.0	669,843.22	668,399.47	- 32° 50' 25.020 N	103° 47' 6.160 W	
	0.00	0.00	1,007.0	0.0	0.0	000,040.22	000,000.47	52 00 20.020 N	100 47 0.100 **	
Tansill	0.00	470.05	2,000.0	0.0		669,843.20	000 000 47		4008 4710 400 14	
2,000.0	0.20	176.25		0.0	0.0	,	668,399.47	32° 50' 25.020 N	103° 47' 6.160 W	
2,100.0	1.70	176.25	2,100.0	-1.7	0.1	669,841.56	668,399.58	32° 50' 25.003 N	103° 47' 6.159 W	
2,175.1	2.82	176.25	2,175.0	-4.6	0.3	669,838.61	668,399.77	32° 50' 24.974 N	103° 47' 6.157 W	
Yates										
2,200.0	3.20	176.25	2,199.9	-5.9	0.4	669,837.30	668,399.86	32° 50' 24.961 N	103° 47' 6.156 W	
2,300.0	4.70	176.25	2,299.6	-12.8	0.8	669,830.44	668,400.31	32° 50' 24.893 N	103° 47' 6.151 W	
2,357.3	5.55	176.25	2,356.7	-17.9	1.2	669,825.33	668,400.64	32° 50' 24.843 N	103° 47' 6.147 W	
2,400.0	5.55	176.25	2,399.2	-22.0	1.4	669,821.20	668,400.91	32° 50' 24.802 N	103° 47' 6.144 W	
2,452.0	5.55	176.25	2,451.0	-27.0	1.8	669,816.18	668,401.24	32° 50' 24.752 N	103° 47' 6.141 W	
Seven Ri	ivers						+		•	
2,500.0	5.55	176.25	2,498.8	-31.7	2.1	669,811.55	668,401.54	32° 50' 24.706 N	103° 47' 6.138 W	
2,600.0	5.55	176.25	2,598.3	-41.3	2.7	669,801.89	668,402.18	32° 50' 24.611 N	103° 47' 6.131 W	
2,700.0	5.55	176.25	2,697.8	-51.0	3.3	669,792.23	668,402.81	32° 50' 24.515 N	103° 47' 6.124 W	
2,800.0	5.55	176.25	2,797.3	-60.7	4.0	669,782.57	668,403.44	32° 50' 24.420 N	103° 47' 6.117 W	
2,900.0	5.55	176.25	2,896.9	-70.3	4.6	669,772.92	668,404.07	32° 50' 24.324 N	103° 47' 6,110 W	
3,000.0	5.55	176.25	2,996.4	-80.0	5.2	669,763.26	668,404.71	32° 50' 24.228 N	103° 47' 6.103 W	
3,093.0	5.55	176.25	3,089.0	-89.0	5.8	669,754.27	668,405.30	32° 50' 24.140 N	103° 47' 6.097 W	
Queen			2,000.0							
	E E F	176 05	3 005 0	90 C	F 0	660 762 60	669 405 34	30° 50' 04 400 M	1029 471 0 007 14	
3,100.0	5.55	176.25	3,095.9	-89.6	5.9	669,753.60	668,405.34	32° 50' 24.133 N	103° 47' 6.097 W	
3,200.0	5.55	176.25	3,195.5	-99.3	6.5	669,743.94	668,405.97	32° 50' 24.037 N	103° 47' 6.090 W	
3,300.0	5.55	176.25	3,295.0	-108.9	7.1	669,734.29	668,406.61	32° 50' 23.942 N	103° 47' 6.083 W	
3,400.0	5.55	176.25	3,394.5	-118.6	7.8	669,724.63	668,407.24	32° 50' 23.846 N	103° 47' 6.076 W	
3,500.0	5.55	176.25	3,494.1	-128.3	8.4	669,714.97	668,407.87	32° 50' 23.750 N	103° 47' 6.069 W	

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COMPASS 5000.1 Build 61

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Planning Report - Geographic

Database:	EDM (Central Plann	ing	· · · ·	Local Co	-ordinate Referenc	e: Well R	uby Federal 37	
Company:		oPhillips MC	•		TVD Refe			4050.0usft (PD 822)	
roject:	Bucke			•	MD Refer			4050.0usft (PD 822)	
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	nation	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
2 540 0		470.05	2 500 0	420.4		660 712 91	CC9 407 0E	20° EO' 02 720 N	1029 4710 000
3,512.0	5.55	176.25	3,506.0	-129.4	8.5	669,713.81	668,407.95	32° 50' 23.739 N	103° 47' 6.069
Grayburg									
3,600.0	5.55	176.25	3,593.6	-137.9	9.0	669,705.31	668,408.50	32° 50' 23.655 N	103° 47' 6.062
3,700.0	5.55	176.25	3,693.1	-147.6	9.7	669,695.65	668,409.14	32° 50' 23.559 N	103° 47' 6.056
3,800.0	5.55	176.25	3,792.6	-157.2	10.3	669,686.00	668,409.77	32° 50' 23.464 N	103° 47' 6.049
3,880.7	5.55	176.25	3,873.0	-165.0	10.8	669,678.20	668,410.28	32° 50' 23.387 N	103° 47' 6.043
	0.00	110.20	0,010.0	10010	1010	000,070,0120	000,110.20	02 00 200000 00	
San Andres	e	, <u> </u>					000 4/0 /0		1000 1710 110
3,900.0	5.55	176.25	3,892.2	-166.9	10.9	669,676.34	668,410.40	32° 50' 23.368 N	103° 47' 6.042
4,000.0	5.55	176.25	3,991.7	-176.6	11.6	669,666.68	668,411.03	32° 50' 23.273 N	103° 47' 6.035
4,100.0	5.55	176.25	4,091.2	-186.2	12.2	669,657.02	668,411.67	32° 50' 23.177 N	103° 47' 6.028
4,200.0	5.55	176.25	4,190.8	-195.9	12.8	669,647.37	668,412.30	32° 50' 23.081 N	103° 47' 6.022
4,300.0	5.55	176.25	4,290.3	-205.5	13.5	669,637.71	668,412.93	32° 50' 22.986 N	103° 47' 6.015
4,400.0	5.55	176.25	4,389.8	-215.2	14.1	669,628.05	668,413.57	32° 50' 22.890 N	103° 47' 6.008
4,500.0			4,489.4	-224.8	14.7	669,618.39	668,414.20	32° 50' 22.795 N	103° 47' 6.001
	5.55	176.25							
4,600.0	5.55	176.25	4,588.9	-234.5	15.4	669,608.73	668,414.83	32° 50' 22.699 N	103° 47' 5.994
4,700.0	5:55	176.25	4,688.4	-244.2	16.0	669,599.08	668,415.46	32° 50' 22.603 N	103° 47' 5.987
4,800.0	5.55	176.25	4,788.0	-253.8	16.6	669,589.42	668,416.10	32° 50' 22.508 N	103° 47' 5.981
4,900.0	5.55	176.25	4,887.5	-263.5	17.3	669,579.76	668,416.73	32° 50' 22.412 N	103° 47' 5.974
5,000.0	5.55	176.25	4,987.0	-273.1	17.9	669,570.10	668,417.36	32° 50' 22.317 N	103° 47' 5.967
5,100.0	5.55	176.25	5,086.5	-282.8	18.5	669,560.45	668,417.99	32° 50' 22.221 N	103° 47' 5.960
5,200.0	5.55	176.25	5,186.1	-292.5	19.2	669,550.79	668,418.63	32° 50' 22.125 N	103° 47' 5.953
5,300.0	5.55	176.25	5,285.6	-302.1	19.8	669,541.13	668,419.26	32° 50' 22.030 N	103° 47' 5.946
5,379.8	5.55	176.25	5,365.0	-309.8	20.3	669,533.43	668,419.76	32° 50' 21.954 N	103° 47' 5.941
Glorieta								,	
5,400.0	5.55	176.25	5,385.1	-311.8	20.4	669,531.47	668,419.89	32° 50' 21.934 N	103° 47' 5.940
5,481.2	5.55	176.25	5,466.0	-319.6	20.9	669,523.63	668,420.41	32° 50' 21.857 N	103° 47' 5.934
		110.20	0,10010				,		
Paddock									
5,500.0	5.55	176.25	5,484.7	-321.4	21.1	669,521.82	668,420.52	32° 50' 21.839 N	103° 47' 5.933
5,600.0	5.55	176.25	5;584.2	-331.1	21.7	669,512.16	668,421.16	32° 50' 21.743 N	103° 47' 5.926
5,700.0	5.55	176.25	5,683.7	-340.7	22.3	669,502.50	668,421.79	32° 50' 21.647 N	103° 47' 5.919
5,800.0	5.55	176.25	5,783.3	-350.4	23.0	669,492.84	668,422.42	32° 50' 21.552 N	103° 47' 5.912
5,818.8	5.55	176.25	5,802.0	-352.2	23.1	669,491.02	668,422.54	32° 50' 21.534 N	103° 47' 5.911
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	5 ==	170.05	5 000 0	360.4	03 G	660 493 19	668 400 06	309 501 04 AEG N	1039 471 5 005
5,900.0	5.55	176.25	5,882.8	-360.1	23.6	669,483.18	668,423.06	32° 50' 21.456 N	103° 47' 5.905
6,000.0	5.55	176.25	5,982.3	-369.7	24.2	669,473.53	668,423.69	32° 50' 21.361 N	103° 47' 5.899
6,100.0	5.55	176.25	6,081.8	-379.4	24.9	669,463.87	668,424.32	32° 50' 21.265 N	103° 47' 5.892
6,200.0	5.55	176.25	6,181.4	-389.0	25.5	669,454.21	668,424.95	32° 50' 21.169 N	103° 47' 5.885
6,300.0	5.55	176.25	6,280.9	-398.7	26.1	669,444.55	668,425.59	32° 50' 21.074 N	103° 47' 5.878
6,400.0	5.55	176.25	6,380.4	-408.4	26.8	669,434.90	668,426.22	32° 50' 20.978 N	103° 47' 5.871
6,500.0	5.55	176.25	6,480.0	-418.0	27.4	669,425.24	668,426.85	32° 50' 20.883 N	103° 47' 5.864
6,600.0	5.55	176.25	6,579.5	-427.7	28.0	669,415.58	668,427.48	32° 50' 20.787 N	103° 47' 5.858
6,673.1				-434.7	28.5	669,408.52	668,427.95	32° 50' 20.717 N	103° 47' 5.853
	5.55	176.25	6,652.3						
6,700.0	5.15	176.25	6,679.0	-437.2	28.6	669,406.02	668,428.11	32° 50' 20.692 N	103° 47' 5.851
6,800.0	3.65	176.25	6,778.7	-444.9	29.1	669,398.36	668,428.61	32° 50' 20.617 N	103° 47' 5.845
6,843.3	3.00	176.25	6,822.0	-447.4	29.3	669,395.85	668,428.78	32° 50' 20.592 N	103° 47' 5.844
Tubb									i .
6,900.0	2.15	176 25	6,878.6	-449.9	29.5	669,393.31	668,428.94	32° 50' 20.567 N	103° 47' 5.842
		176.25							
7,000.0	0.65	176.25	6,978.6	-452.4	29.6	669,390.87	668,429.10	32° 50' 20.542 N	103° 47' 5.840
7,033.0	0.16	176.25	7,011.6	-452.6	29.7	669,390.64	668,429.12	32° 50' 20.540 N	103° 47' 5.840
Production			•			100 A.			
7,043.4	0.00	0.00	7,022.0	-452.6	29.7	669,390.62	668,429.12	32° 50' 20.540 N	103° 47' 5.840
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COMPASS 5000.1 Build 61

Planning Report - Geographic

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le Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
	,	-452.6 5478.8 TVD, -	29.2 320.9 N, 21.0	669,390.66 E)	668,428.68	32° 50' 20.540 N	103° 47' 5.845 W
0.00 0.00	0 7,022.0	-452.6	29.7	669,390.62	668,429.12	32° 50' 20.540 N	103° 47' 5.840 W
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Vertical Depth (usft)		· · ·	Name		Dia	meter Diameter	2
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861.	0 Surface					8-5/8 12-1/	/4
7,011.	6 Production					5-1/2 7-7	/8
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	·	•	*			· · · · · · · · · · · · · · · · · · ·	
(usft)		Name	•	Litholog	IV .		
791.0	Rustler	**	teda a ananti, antipitar e an -			n sinananan anan ning ing ka	
-							
	Grayburg	•	•	· •		0.00	
	San Andres					0.00	
3.873.0							
						0.00	
5,365.0	Glorieta					0.00 0.00	
5,365.0 5,466.0	Glorieta Paddock					0.00	
5,365.0 5,466.0 5,802.0	Glorieta						·
	(°) 0.00 0.00 132.6usft at 5 0.00 0.00 Vertical Depth (usft) 80. 861. 7,011. Vertical Depth (usft) 791.0 977.0 1,987.0 2,175.0 2,451.0 3,089.0	hillips MCBU leral leral 37 iolé 1 ple Dip Dir. TVD (°) (usft) 0.00 0.00 5,466.0 132.6usft at 5494.1usft MD (5 0.00 0.00 7,022.0 Vertical Depth (usft) 80.0 Conductor 861.0 Surface 7,011.6 Production Vertical Depth (usft) 791.0 Rustler 977.0 Salaldo 1,987.0 Tansill 2,175.0 Yates 2,451.0 Seven Rivers 3,089.0 Queen	hillips MCBU leral ieral 37 iolé 1 ple Dip Dir. TVD +N/-S (°) (usft) (usft) 0.00 0.00 5,466.0 -452.6 132.6usft at 5494.1usft MD (5478.8 TVD, - 0.00 0.00 7,022.0 -452.6 Vertical Depth (usft) 80.0 Conductor 861.0 Surface 7,011.6 Production Vertical Depth (usft) Name 791.0 Rustler 977.0 Salaldo 1,987.0 Tansill 2,175.0 Yates 2,451.0 Seven Rivers 3,089.0 Queen	hillips MCBU TVD Refere ieral 37 Survey Cali iolé 1 ple Dip Dir. TVD (*) (usft) (usft) (00 0.00 5,466.0 -452.6 29.2 132.6usft at 5494.1usft MD (5478.8 TVD, -320.9 N, 21.0 0.00 0.00 7,022.0 -452.6 29.7 Vertical Depth (usft) Namé 80.0 Conductor 861.0 Surface 7,011.6 Production Namé Vertical Depth (usft) JDepth (usft) Namé 80.0 Conductor 861.0 Surface 7,011.6 Production Vertical Depth (usft) JDepth (usft) Name 791.0 Rustler 977.0 977.0 Salaldo 1,987.0 1,987.0 Tansill 2,175.0 2,451.0 Seven Rivers 3,089.0	Vertical Vertical Depth (usft) (usft) (usft) Vertical Depth (usft) Name Vertical Depth (usft) Litholog 7 North Reference: Survey Calculation Method:	hillips MCBU TVD Reference: RKB @ - ieral 37 MD Reference: RKB @ - ieral 37 Survey Calculation Method: Minimum iole 1 Survey Calculation Method: Minimum jle Dip Dir. TVD +N/-S. +E/-W North Reference: Grid jle Dip Dir. TVD +N/-S. +E/-W Northing. Easting jle Useft) (usft) (usft) (usft) (usft) (usft) 0.00 0.00 5,466.0 -452.6 29.2 669,390.66 668,428.68 132.6usft at 5494.1usft MD (5478.8 TVD, -320.9 N, 21.0 E) Dia Dia Dia 0.00 0.00 7,022.0 -452.6 29.7 669,390.62 668,429.12 Vertical Dia Dia Dia Dia Dia 0.00 Conductor 861.0 Surface 7,011.6 Production Vertical Dia Dia Dia Dia Dia Useft Name Lithology Totology Totology	Vertical Casing Hole Vertical 0.00 7,022.0 -452.6 29.7 669,390.62 668,428.68 32* 50' 20.540 N 100 0.00 5,466.0 -452.6 29.7 669,390.62 668,428.68 32* 50' 20.540 N 132.6usft Nome (usft) (usft) Latitude 0.00 0.00 7,022.0 -452.6 29.7 669,390.62 668,428.68 32* 50' 20.540 N 132.6usft at 5494.1usft MD (5478.8 TVD, -320.9 N, 21.0 E) 0.00 7,022.0 -452.6 29.7 669,390.62 668,429.12 32* 50' 20.540 N 132.6usft at 5494.1usft MD (5478.8 TVD, -320.9 N, 21.0 E) Diameter. Diameter. Diameter. Diameter. 0.00 0.00 7,022.0 -452.6 29.7 669,390.62 668,429.12 32* 50' 20.540 N 12.10 Namé ["] ["] ["] ["] ["] ["] 9.00 Conductor 16 2 [] [] [] [] [] [] []

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Proposed Directional Well Plan



Request for Variance

ConocoPhillips Company

Lease Number: NM LC 029405B Well: Ruby Federal #37 Location: Sec. 17, T17S, R32E Date: 7/25/2013

<u>Request:</u>

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: James Chen Drilling Engineer, ConocoPhillips Company Phone (832) 486-2184 Cell (832) 768-1647 Date: 26 September 2012



Attachment # 2



- 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: James Chen Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company Date: 21-March-2013

Attachment # 1 ance . USA. Ltd. **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 OD We				nd Radiu	is Max	Max WP	
in.		in.	mm	lb/ft	kg/m	in.	mm.		Mpa	
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RC4X5055	5	6	1/8 5000# AF	PI Type 6B				LP Threaded C	onnect sk	
RC4X5055 RC3X5055	5	6	1/8 5000# AF	PI Type 6B				LP Threaded C Graylor	onnect sk	

Attachment # 2

