-		,		ATS-14-1	28
Sant 3160-3 March 2012)	20			OMB No. 1004- Expires October 3	0137 1, 2014
UNITED STAT DEPARTMENT OF THE BUREAU OF LAND MA	ES INTERIOR NAGEMENT)CD	5. Lease Serial No. NMLC 029405B	
APPLICATION FOR PERMIT TO	D DRILL OF	REENTER	5 2014	6. If Indian, Allotee or Tril N/A	be Name
la. Type of work: XDRILL REEN	TER	FEB	- 60	7 If Unit or CA Agreement, N/A	Name and No.
lb. Type of Well: X Oil Well Gas Well Other	X Si	ngle Zone 🔲 Multip	EIVED ole Zone	8. Lease Name and Well No Ruby Federal	27 27
2. Name of Operator	-17817	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		9. API Well No.	652
^{3a.} Address 600 N. Dairy Ashford Rd., Off P10-4-4054	3b. Phone No (281)2	(include area code) 06-5281		10. Field and Pool, or Explora Maljamar; Yeso Wes	tory 449
4. Location of Well (Report location clearly and in accordance with At surface 1480' FNL and 2380' FEL; UL G, Sec.	any State requirem	ents.*) 32E		11. Sec., T. R. M. or Blk.and Sec. 17, T17S, R32E	Survey or Area
At proposed prod. zone 2425' FNL and 2230' FWL; C 4. Distance in miles and direction from nearest town or post office* Approximately 3 miles south of Maliamar. New	Mexico	/, 11/S, R32E	 ,	12. County or Parish Lea County	13. State NM
5. Distance from proposed* About location to nearest 215' at TD (Also to nearest drig, unit line, if any)	16. No. of a 1601. 7	cres in lease	17. Spacin 40	g Unit dedicated to this well	1
8. Distance from proposed location* 130' to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed 7030' 7	1Depth TVD/7176' MD	20. BLM/ ES008	BIA Bond No. on file 5	
 Elevations (Show whether DF, KDB, RT, GL, etc.) 4011' GL 	22. Approxim 03/07/	nate date work will star 2014	t*	23. Estimated duration 8 days	
	24. Attac	hments		<u> </u>	
 he following, completed in accordance with the requirements of Onsl 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). 	nore Oil and Gas m Lands, the	 Order No.1, must be at 4. Bond to cover the later 20 above). 5. Operator certification 6. Such other site the BLM. 	tached to thing operation ation specific info	is form: ns unless covered by an existing prmation and/or plans as may be	g bond on file (see e required by the
5. Signature Sulan B. Maunder itle	Name Susa	(Printed/Typed) n B. Maunder		Date	29/13
Senior Regulatory Specialist	Nome	(Printed/Turned)		Data	
MARCONCLUSION OF COMEND & CAFFEY		(I Think I specif		FEB	- 4 2014
FIELD MANAGER	UINCe	CARLSBAD	FIELD OI	FFICE	
pplication approval does not warrant or certify that the applicant ho nduct operations thereon. onditions of approval, if any, are attached.	lds legal or equit	able title to those right	s in the subj A	ject lease which would entitle the PPROVAL FOR T	e applicant to
tle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a ates any false, fictitious or fraudulent statements or representations a	crime for any pe s to any matter w	rson knowingly and w ithin its jurisdiction.	illfully to m	ake to any department or agenc	y of the United
(Continued on page 2)		Va-	Ros	*(Instruction well Controlled W	ater Basin
		N-1-	1 11/		

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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Approval Subject to General Requirements & Special Stipulations Attached

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FEB 1 0 2014

Drilling Plan ConocoPhillips Company Maljamar; Grayburg-San Andres, Yeso (west)

Ruby Federal #27

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	760	760	Anhydrite
Salado (top of salt)	938	938	Salt
Grayburg	3487	1960	Gas, Oil and Water
San Andres	3851	3523	Gas, Oil and Water
Glorieta	5340	3905	Gas, Oil and Water
Paddock	5424	5459	Gas, Oil and Water
Blinebry	6165	5545	Gas, Oil and Water
Tubb	6780	6297	Gas, Oil and Water
Deepest estimated perforation	6780	6297	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	7030	7176	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:

5º	Hole Size	м	Interval ID RKB (ft)	OD	Wt	Gr	Conn	MIY	Col	Jt Str	Calcu	Safety Fa lated per Cc Corporate 0	ctors nocoPhillips Criteria
Type	(in)	From	То	(inches)	(lb/ft)	G	Conin	(psi)	(psi)	(klbs)	Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
Cond	20	0	40' - 85' (30' - 75' BGL)	16	0.5" wali	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	785 - 838 879	8-5/8	24#	J-55	STC	2950	1370	244	1.58	3.71	3.62
Prod	7-7/8	0	7121' – 7166'	5-1/2	17#	L-80	LTC	7740	6290	338	2.08	2.48	1.96

The casing will be suitable for H_2S 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	830	24	2950	1370	244000	8.5	8.04	3.73	12.2	14.1
Production Casing	7166	17	7.740	6290	338000	10	2.08	1.69	2.77	3.27

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

	o officient in po o ofportato off	teria ier minimum Deergint detere	
	Burst	Collapse	Axial
Casing Design Factors	1.15	1.05	1.4

$\begin{aligned} & \text{Production Calling (s, ref 2 + 10 + 10 + 10) } \underline{1 + 10} + \frac{1}{100} +$	(Type Conductor Surface Casino (8-5/5" 24# J-55 STC)	Depth W 85 830	t NIY 65 3500 24 295	Col 20 -	Jt Str	Pipe Yie 4329	1d MW	Burs		Tên		÷		
$ \frac{1}{1000} = \frac{1}{1000} (1 + 0) =$	Production Casing (5-1/2" 17# L-80 LTC)	7166	17 774	6290	338000	3970	0 1	0 2.0	8 2.	48 1.9	<u>36</u>	•	•	
The calculated length (best) built is before the constraints of the field of the constraints of the constra	Burst - ConocoPhillips Required Load Cases The modmum Internal (burst) load on the Surface Casing occurs wit	in the surface casing	is tested to 150	00 psi (as pr	er BLN Oa	shore Order	2 - IL Requir	ementš).				· . ·		•
$ \begin{array}{l} $	The maximum internal (burst) load on the Production Casing occurs o	uring the fracture attim	wintion where i	ihe maximum	i allowable	e working pro	asuro				-			·
$ \begin{array}{c} Intro Short Sh$	(MAWP) is the pressure that would fit ConocoPhEps Corporate Crite Surface Casino Test Pressure	a for Minimum Factors 1500 psi	si, i .	Predic	ted Pore F	ressure at T		85	5					
Internet to the specific difference in the specific	Surface Rated Working Pressure (BOPE)	- <u>3000</u> psi		Predicted	d Frac Gra	dicit at Sho	(CSFG) =	19.2	3 bbð					
Index the link link link link link link link link	Field SW	= <u>10</u> pp	9		· · · ·								•	
Surdex Could plant 2 hard Francis Count 2. MPB/ (Paid SW difference) = 0.00 × 0.00 × 10.21 - 0.22 - 0.20 = 0.00 Count 2 hard 2 hard plant 2 hard 2	Surface Chaing burst Safety Factor = API Burst Rating Production Casing MAXIP for the Fracture Stimulation :	/ Naximum Predicted S API Burst Rating / Cer	Surface Pressu rporate Minimun	ıre (MPSP) 'C n Bürst Desi;	gin Factor	um Alowach	e Svrface Pr	easure (i	liasp)					
Constant American Constant of the service of the s	Surface Cosing Burst Safety Factor: Case #1 MPSP (MWbwt next safetio	u) = 830	× 0.052		. 10	-	475							
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Case 71 & 6 (Laboration 12, Case 12, Section 12, Case 12, Section	Case #3. MPSP (Kick Vol.@ next section TT)= 7166	× 0.052	: x,	8,55	•	633,6	-	367	÷.	2786			
MAP PROV_PLATE: EXE EXE EXE EXE EXE EXE EXE Production Casing Board Safety Factor EXE 15.8 10.8 2.25.0 11.05.7 15.5 Production Casing Board Safety Factor EXE 10.8 2.25.8 10.8 2.25.8 MANP for for frame: Board Safety Factor (Max. MFS) = 7.76.0 7.16.5 2.05.8 7.16.5 2.06.8 Calington Cases (Law Safety Factor (Max. MFS) = 7.76.0 7.17.0 7.17.8 2.06.8 7.16.5 2.06.8 Calington Cases (Law Safety Factor (Max. MFS) = 7.76.0 7.17.0 7.27.8 2.06.8 7.16.5 2.06.8 Calington Cases (Law Safety Factor Case) Exector Cases (Law Safety Factor And Case) 10.77.0 7.17.0 7.07.0 10.17.8 Data Safety Factor (Max. MFS) = 7.77.0 7.00.7 17.0 7.07.0 10.00.0 10.00.0 10.00.0 Safety Factor (Max. MFS) = 7.77.0 7.00.7 17.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0 10.00.0	Case #3 & #4 Limited to MPSP (CPFD - GC)= .7166 N=	x 0.052	: X	8.55	-	716.6		2469			· · ·	·	
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stuto fang Calego Safety Gard - Art Case Art Case - Mark Case - Art Case - A	The maximum collapse load on the Production Casing occurs when o	menting to surface, of	r 1/3 evacuation	n to the deep	pest depth	of exposure	; and							
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Miximum Advorde Pites Ling Lunci Langi - Lunchimum Advorde A statt Land Miximum Advorde Vorgel Lange - Specific Langi - Lunchimum Advorde A statt Land Tentil Statty Factor - AF Pite Viett OV AP Leik Langi (197 Pite) Laku Land Rading / Banyani (Vi of Sting + Vietmin Overgut Requized) Big Lin Land Candon Do Sergut Requized - Big Lin Land Candon Do Yang Leik Langi (2000) Ex Big Lin Langi (2000) Ex Big Lin Langi (2000) Ex Big Lin Langi (2000) Ex Max. Allowable Avaid Load (Pay Yield) = Max. Allowable Avaid Load (Pay Yield) = Max. Allowable Avaid Load (1999 Yield) = Max. Allowable Avaid L	Maximum Allowable Axts Load for Joint - API Joint	Strength Rating / Corp	arate Malmum	Axial Design	Factor		÷.,			۰.		. •		
Taxisan Astronate Original Largin = Maximan Advorate Hook Land = Busyand With Ellis Bitigo Taisal Safety Factor = Affe by Sire View AF Alek Stereding View Bitigo (Basisandi Viel Bitigo + Hintomin Derefisal Required) Into many Deregisal Required = $\frac{1}{20000}$ bas Surface Cesting Tensiel Strength Safety Factor; Sir View = 19520 x 0.070 = 17335, Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 272143 Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 174265 Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 174265 Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 174265 Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 174265 Max. Allowable Avail Load (Dain) = 244000 / $\frac{1}{1.00}$ = 263571 Tensial Safety Factor = 244000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Fipe Yind) = 337000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Fipe Yind) = 337000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Fipe Yind) = 325000 - $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Fipe Yind) = 325000 - $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 25500 - $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 25500 - $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 25500 - $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 30000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 30000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 30000 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 300000 / $\frac{1}{1.00}$ = 20157 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = 30000 / $\frac{1}{1.00}$ = 20157 / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load (Join) = $\frac{1}{1.00}$ / $\frac{1}{1.00}$ = 241429 Max. Allowable Avail Load Casas = (Join) = 1.96 Comparation Simbath factors as a soling that a solication the taxing head and the cindicitir with a support of spale or hadrong high or the Af Avail Po Viet Reduc J Viet	Maximum Allowable Hook Load (Linded to 75% of F	ig Max Load) = Maxim	um Alowable A	Axial Load										1.1
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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	vals MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	Class C	Surface	485' – 530'	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	485' – 530'	785' – 830'	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	vals MD	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'	7121' – 7166'	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.

Ruby Federal #27

(Date: 10/28/2013)

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

ConocoPhillips MCBU

Buckeye Ruby Federal Ruby Federal 27

Ruby Federal 27

Plan: Slant Plan

Standard Planning Report - Geographic

30 September, 2013

Planning Report - Geographic

Database: Company: Project: Site: Well: Wellbore: Design: Project Map System: Geo Datum: Map Zone:	EDM Cc Conoco Buckey Ruby Fu Ruby Fu Slant Pl Euckeye US State I NAD 1927 New Mexi	entral Plannir Phillips MCB e ederal ederal 27 ederal 27 an <u>Lea County</u> Plane 1927 (I U (NADCON C co East 3001	9 U , <u>NM</u> Exact solution) CONUS)		Local Co- TVD Refer MD Refer North Ref Survey Ca System Da	ordinate Refei rence: erence: alculation Meti	rence:	Well Ruby Fede RKB @ 4024.0u RKB @ 4024.0u Grid Minimum Curva	ral 27 Isft (PD 822) Isft (PD 822) ture	
Site	Ruby Fe	deral, New M	exico, Southea	st		······				+
Site Position: From: Position Uncertain	Lat/Lo	ong 3.	Northi Eastin 5 usft Slot Ra	ng: g: adius:	666 666	,097.48 usft ,763.63 usft 8 "	Latitude: Longitude: Grid Converg	ence:		32° 49' 48.040 N 103° 47' 25.559 W 0.29 °
Well	Ruby Fed	teral 27, Devi	ated Well							
Well Position	+N/-S +E/-W	(0.0 usft No 0.0 usft Ea	rthing: sting:		668,910.92 667,714.91	usft Lati usft Lon	tude: gitude:		32° 50' 15.830 N 103° 47' 14.240 W
Position Uncertaint	У	(0.0 usft We	llhead Elevatic	on:		Gro	und Level:		4,011.0 usft
Wellbore Magnetics	Ruby Fe	ederal 27 el Name	Sample	Date	- Declina (°)	tion	Dip A (°	ngle)	Field (Strength (nT)
		BGGM2012		8/6/2013	n	7.57		60.60		48,715
Design	Slant Pla	n								
Version: Vertical Section:	1	Ē	Phase Pepth From (TV (usft) 0.0	: PF D)	ROTOTYPE +N/-S (usft) 0.0	Tie +E (u:	On Depth: /-W sft) .0	Dire 21	0.0 ection (°) 4.82	
Version: Vertical Section:	1	Ē	Phase Pepth From (TV (usft) 0.0	: PF D)	ROTOTYPE +N/-S (usft) 0.0	Tie +E (u 0	On Depth: /W sft) .0	Dira 21	0.0 ection (°), 4.82	
Version: Vertical Section: Plan Sections. Measured Depth Inc (usft)	lination (°)	Azimuth (°)	Phase Pepth From (TV (usft) 0.0 Vertical Depth (usft)	: PF D) +N/-S (usft)	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft)	Tie +E (u: 0 Dogleg Rate (°/100usft)	On Depth: /-W sft) .0 Build Rate (°/100usft)	Dira 21 Turn Rate (°/100usft)	0.0 ection (°) 4.82 TFO (°)	Target

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Planning Report - Geographic

Planned Survey				
Design:	Slant Plan			
Wellbore:	Ruby Federal 27			
Well:	Ruby Federal 27	Survey Calculation Method:	Minimum Curvature	,
Site:	Ruby Federal	North Reference:	Grid	
Project:	Buckeye	MD Reference:	RKB @ 4024.0usft (PD 822)	2
Company:	ConocoPhillips MCBU	TVD Reference:	, RKB @ 4024.0usft (PD 822)	1
Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 27	

, **x** , **x**

	Depth (usff)	Inclination	Azimuth	Vertical Depth (usft):	+N/-S	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latituda	Longitudo
·	(usit)			(usit):	(usir)	(usit)			Lautuue	Longitude
	0.0	0.00	0.00	0.0	0.0	0.0	668,910.92	667,714.91	32° 50' 15.830 N	103° 47' 14.240 W
	85.0	0.00	0.00	85.0	0.0	0.0	668,910.92	667,714.91	32° 50' 15.830 N	103° 47′ 14.240 W
	Conduct	or								
	100.0	0.00	0.00	100.0	0.0	0.0	668,910.92	667,714.91	32° 50' 15.830 N	103° 47' 14.240 W
	200.0	0.00	0.00	200.0	0.0	0.0	668,910.92	667,714.91	32° 50' 15.830 N	103° 47' 14.240 W
	300.0	0.00	0.00	300.0	0.0	0.0	668,910.92	667,714.91	32° 50' 15.830 N	103° 47' 14.240 W
	400.0	0.00	0.00	400.0	0,0	0.0	668,910.92	667,714.91	32° 50° 15,830 N	103° 47° 14.240 W
	500.0	0.00	0.00	500.0	0.0	0.0	668,910.92	667,714.91	32 30 13.830 N	103° 47° 14.240 W
	700.0	0.00	0.00	700.0	0.0	0.0	668 010 02	667 714.91	32 30 13.030 N	103 47 14.240 W
	700.0	0.00	0.00	700.0	0.0	0.0	668 010 02	667 714.91	32 30 13.030 N	103° 47° 14.240 W
	760.0	0.00	0.00	760.0	0.0	0.0	000,910.92	007,714.91	32 50 15.630 N	103 47 14.240 00
	Rustler	0.00	0.00	860.0	0.0	0.0	668.040.00	007 744 04	208 EOL 4E 200 N	1008 471 44 040 144
	800.0	0.00	0.00	800.0	0.0	0.0	668,010.92	667 714.91	32 50 15.630 N	103 47 14.240 W
	830.0	0.00	0.00	630.0	0.0	0.0	000,910.92	007,714.91	32 30 15.630 N	103 47 14.240 00
	Surface	0.00	0.00	000.0	0.0	0.0	668 040 00	007 744 04	008 EDI 4E 000 N	4008 47 44 040 14
	900.0	0.00	0.00	900.0	0.0	0.0	668,910.92	667 714.91	32° 50° 15.830 N	103° 47° 14,240 W
	938.0	0.00	0.00	938.0	0.0	0.0	668,910.92	667,714.91	32° 50° 15,830 N	103 47 14.240 99
	Salado	0.00	0.00	4 000 0			000 040 00	007 744 04	008 501 45 000 N	
	1,000.0	0.00	0.00	1,000.0	0.0	0.0	668,910.92	667 714.91	32 50 15.830 N	103° 47° 14.240 W
	1,100.0	0.00	0.00	1,100.0	0.0	0.0	668,910.92	667,714.91	32 30 15.830 N	103° 47° 14.240 VV
	1,200.0	0.00	0.00	1,200.0	0.0	0.0	669 010 02	667 714.91	32 30 13.030 N	103 47 14.240 VV
	1,300.0	0.00	0.00	1,300.0	0.0	0.0	668 010.92	667,714.91	32 30 13.030 N	103 47 14.240 VV
	1,400.0	0.00	0.00	1,400.0	0.0	0.0	668 010 02	667 714 01	32 50 15.650 N	103 47 14.240 4
	1,500.0	0.00	0.00	1,500.0	0.0	0.0	669 010 02	667,714.91	32 30 13.030 N	103 47 14.240 VV
	1,000.0	0.00	0.00	1,000.0	0.0	0.0	668 010 02	667 714.91	32 50 15.030 N	103 47 14.240 W
	1,700.0	0.00	0.00	1,700.0	0.0	0.0	668 010 02	667 714 01	32° 50' 15 830 N	103° 47' 14.240 W
	1 000.0	0.00	0.00	1,000.0	0.0	0.0	668 910 92	667 714 91	32° 50' 15 830 N	103° 47' 14.240 W
	1,000.0	0.00	0.00	1,500.0	0.0	0.0	668 910 92	667 714 91	32° 50' 15,830 N	103° 47' 14.240 W
	Tancill	0.00	0.00	1,000.0	0.0	0.0	000,010.02	001,711.01	02 00 10.00011	100 47 14.240 00
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	2,000.0	2 10	214.02	2,000.0	-2.1	-1.5	668 908 82	667 713 44	32° 50' 15 809 N	103° 47' 14 257 W
	2,100.0	3 60	214.82	2,100.0	-6.2	-4.3	668 904 74	667 710 61	32° 50' 15 769 N	103° 47' 14.291 W/
	2,200.0	5.10	214.82	2,299.6	-12.4	-8.6	668.898.51	667,706,27	32° 50' 15 708 N	103° 47' 14 342 W
	2.400.0	6.60	214.82	2,399.0	-20.8	-14.5	668,890,14	667,700,46	32° 50' 15.625 N	103° 47' 14.411 W
	2.500.0	8.10	214.82	2,498.2	-31.3	-21.8	668.879.64	667.693.15	32° 50' 15.522 N	103° 47' 14,497 W
	2,600.0	9.60	214.82	2,597.0	-43.9	-30.5	668,867.01	667,684.37	32° 50' 15.397 N	103° 47' 14.601 W
	2,700.0	11.10	214.82	2,695.4	-58.7	-40.8	668,852.26	667,674.11	32° 50' 15.252 N	103° 47' 14.722 W
	2,800.0	12.60	214.82	2,793.2	-75.5	-52.5	668,835.41	667,662.38	32° 50' 15.085 N	103° 47' 14.860 W
	2,900.0	14.10	214.82	2,890.5	-94.5	-65.7	668,816.45	667,649.20	32° 50' 14.899 N	103° 47' 15.016 W
	3,000.0	15.60	214.82	2,987.2	-115.5	-80.3	668,795.42	667,634.57	32° 50' 14.691 N	103° 47' 15.189 W
	3,100.0	17.10	214.82	3,083.2	-138.6	-96.4	668,772.31	667,618.49	32° 50' 14.463 N	103° 47' 15.378 W
	3,121.5	17.42	214.82	3,103.7	-143.9	-100.1	668,767.06	667,614.85	32° 50' 14.412 N	103° 47' 15.421 W
	3,200.0	17.42	214.82	3,178.6	-163.2	-113.5	668,747.78	667,601.43	32° 50' 14.221 N	103° 47' 15.580 W
	3,300.0	17.42	214.82	3,274.0	-187.7	-130.6	668,723.20	667,584.33	32° 50' 13.979 N	103° 47' 15.782 W
	3,400.0	17.42	214.82	3,369.4	-212.3	-147.7	668,698.62	667,567.24	32° 50' 13.737 N	103° 47' 15.984 W
	3,500.0	17.42	214.82	3,464.8	-236.9	-164.8	668,674.04	667,550.14	32° 50' 13.494 N	103° 47' 16.185 W
	3,523.2	17.42	214.82	3,487.0	-242.6	-168.8	668,668.32	667,546.17	32° 50' 13.438 N	103° 47' 16.232 W
	Grayburg									
	3,600.0	17.42	214.82	3,560.2	-261.5	-181.9	668,649.46	667,533.04	32° 50' 13.252 N	103° 47' 16.387 W
	3,700.0	17.42	214.82	3,655.6	-286.1	-199.0	668,624.88	667,515.95	32° 50' 13.010 N	103° 47' 16.589 W
	3,800.0	17.42	214.82	3,751.1	-310.6	-216.1	668,600.30	667,498.85	32° 50' 12.767 N	103° 47' 16.791 W
	3,900.0	17.42	214.82	3,846.5	-335.2	-233.2	668,575.72	667,481.75	32° 50' 12.525 N	103° 47' 16.993 W

Planning Report - Geographic

1	يستجاف الافتان المارين الماد المتعط بساليين	and and a second s	د به است این از است به مهم و به می این به این از معنوب می ازد. این از مارین است است است میشونی ماری میشود است.	· · · · · · · · · · · · · · · · · · ·
Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 27	
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 4024.0usft (PD 822)	i
Project:	Buckeye	MD Reference:	RKB @ 4024.0usft (PD 822)	
Site:	Ruby Federal	North Reference:	Grid	1.
Well:	Ruby Federal 27	Survey Calculation Method:	Minimum Curvature	
Wellbore:	' Ruby Federal 27		i	
Design:	Slant Plan	i	·	

Planned Survey

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Planned Survey		-						• •••••	
Measured Depth	Inclination	Azimúth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
3,904.8	17.42	214.82	3,851.0	-336.4	-234.0	668,574.55	667,480.94	32° 50' 12.514 N	103° 47' 17.003 W
San And	res								
4,000.0	17.42	214.82	3,941.9	-359.8	-250.3	668,551.14	667,464.66	32° 50' 12.283 N	103° 47' 17.195 W
4,100.0	17.42	214.82	4,037.3	-384.4	-267.4	668,526.56	667,447.56	32° 50' 12.040 N	103° 47' 17.397 W
4,200.0	17.42	214.82	4,132.7	-409.0	-284.5	668,501.98	667,430.46	32° 50' 11.798 N	103° 47' 17.599 W
4,300.0	17.42	214.82	4,228.1	-433.5	-301.6	668,477.40	667,413.37	32° 50' 11,556 N	103° 47' 17.800 W
4,400.0	17.42	214,82	4,323.5	-458.1	-318.7	668,452.82	667,396.27	32° 50' 11.313 N	103° 47' 18.002 W
4,500.0	17.42	214.82	4,418.9	-482.7	-335.8	668,428.24	667,379.18	32° 50' 11.071 N	103° 47' 18.204 W
4,600.0	17.42	214.82	4,514.3	-507.3	-352.9	668,403.66	667,362.08	32° 50' 10.829 N	103° 47' 18.406 W
4,700.0	17.42	214.82	4,609.8	-531.9	-369.9	668,379.08	667,344.98	32° 50' 10.586 N	103° 47' 18.608 W
4,800.0	17.42	214.82	4,705.2	-556.5	-387.0	668,354.50	667,327.89	32° 50' 10.344 N	103° 47' 18.810 W
4,900.0	17.42	214.82	4,800.6	-581.0	-404.1	668,329.92	667,310.79	32° 50' 10.102 N	103° 47' 19.012 W
5,000.0	17.42	214.82	4,896.0	-605.6	-421.2	668,305.34	667,293.69	32° 50' 9.859 N	103° 47' 19.213 W
5,049.9	17.42	214.82	4,943.6	-617.9	-429.8	668,293.09	667,285.17	32° 50' 9.739 N	103° 47' 19.314 W
5,100.0	16.67	214.82	4,991.5	-629.9	-438.2	668,281.02	667,276.78	32° 50' 9.620 N	103° 47' 19.413 W
5,200.0	15.17	214.82	5,087.7	-652.5	-453.8	668,258.51	667,261.11	32° 50' 9.398 N	103° 47' 19.598 W
5,300.0	13.67	214.82	5,184.5	-672.9	-468.0	668,238.06	667,246.89	32° 50' 9.196 N	103° 47' 19.766 W
5,400.0	12.17	214.82	5,282.0	-691.3	-480.8	668,219.71	667,234.13	32° 50' 9.015 N	103° 47' 19.917 W
5,459.3	11.28	214.82	5,340.0	-701.1	-487.7	668,209.82	667,227.25	32° 50' 8.918 N	103° 47' 19.998 W
Glorieta									
5,500.0	10.67	214.82	5,380.0	-707.5	-492.1	668,203.45	667,222.82	32° 50' 8.855 N	103° 47' 20.050 W
5,544.7	10.00	214.82	5,424.0	- 714.1	-496.7	668,196.86	667,218.24	32° 50' 8.790 N	103° 47' 20.104 W
Paddock									
5,600.0	10.00	214.82	5,478.4	-722.0	-502.2	668,188.99	667,212.76	32° 50' 8.712 N	103° 47' 20.169 W
5,700.0	10.00	214.82	5,576.9	-736.2	-512.1	668,174.73	667,202.84	32° 50' 8.572 N	103° 47' 20.286 W
5,800.0	10.00	214.82	5,675.4	-750.5	-522.0	668,160.48	667,192.93	32° 50' 8.431 N	103° 47' 20.403 W
5,900.0	10.00	214.82	5,773.9	-764.7	-531.9	668,146.22	667,183.01	32° 50' 8.290 N	103° 47' 20.520 W
6,000.0	10.00	214.82	5,872.4	-779.0	-541.8	668,131.97	667,173.10	32° 50' 8.150 N	103° 47' 20.637 W
6,100.0	10.00	214.82	5,970.8	-793.3	-551.8	668,117.71	667,163.18	32° 50' 8.009 N	103° 47' 20.754 W
6,200.0	10.00	214.82	6,069.3	-807.5	-561.7	668,103.46	667,153.27	32° 50' 7.869 N	103° 47' 20.871 W
6,297.2	10.00	214.82	6,165.0	-821.4	-571.3	668,089.61	667,143.63	32° 50' 7.732 N	103° 47' 20.985 W
Blinebry									
6,300.0	10.00	214.82	6,167.8	-821.8	-571.6	668,089.20	667,143.35	32° 50' 7.728 N	103° 47' 20.988 W
6,400.0	10.00	214.82	6,266.3	-836.0	-581.5	668,074.95	667,133.44	32° 50' 7.588 N	103° 47' 21.106 W
6,500.0	10.00	214.82	6,364.8	-850.3	-591.4	668,060.69	667,123.52	32° 50' 7.447 N	103° 47' 21.223 W
6,600.0	10.00	214.82	6,463.2	-864.5	-601.3	668,046.44	667,113.61	32° 50' 7,307 N	103° 47' 21.340 W
6,700.0	10.00	214.82	6,561.7	-878.8	-611.3	668,032.19	667,103.69	32° 50' 7.166 N	103° 47' 21.457 W
6,800.0	10.00	214.82	6,660.2	-893.0	-621.2	668,017.93	667,093.78	32° 50' 7.026 N	103° 47' 21.574 W
6,900.0	10.00	214.82	6,758.7	-907.3	-631.1	668,003.68	667,083.86	32° 50' 6.885 N	103° 47' 21.691 W
6,921.6	10.00	214.82	6,780.0	-910.4	-633.2	668,000.59	667,081.72	32° 50' 6.855 N	103° 47' 21.716 W
Tubb									
7,000.0	10.00	214.82	6,857.2	-921.6	-641.0	667,989.42	667,073.95	32° 50' 6.744 N	103° 47' 21.808 W
7,100.0	10.00	214.82	6,955.6	-935.8	-650.9	667,975.17	667,064.03	32° 50' 6.604 N	103° 47' 21.925 W
7,166.0	10.00	214.82	7,020.6	-945.2	-657.5	667,965.76	667,057.49	32° 50' 6.511 N	103° 47' 22.002 W
Productio	n								
7,175.5	10.00	214.82	7,030.0	-946.6	-658.4	667,964.40	667,056.55	32° 50' 6.498 N	103° 47' 22.013 W

Planning Report - Geographic

Database: ED/N Central Planning Company: Local Co-ordinate Reference:: Well Ruby Federal 27 Project: Buckeye MD Reference:: RK @ 4024.0usf (PD 822) Site: Ruby Federal X MD Reference:: RK @ 4024.0usf (PD 822) Well: Ruby Federal 27 Survey Calculation Method: Minimum Curveture Wellscore: RUby Federal 27 Survey Calculation Method: Minimum Curveture Target Name hit/miss target Dip Angle Dip Dir. TVD +N/-S - hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - bit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - bit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - bit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - corder (radius 150.0) 0.00 0.01 5.42.0 -59.7 7.16.0	حصيفية العبيا	<u>,</u>	·	•• -•	• • •	**	· · ·		· ·	••••• ••••••	e e e e e e e e e e e e e e e e e e e
Company: ConcodPhillips MCBU TVD Reference: RKB @ 4024 duaft (PD 822) Site: Ruby Federal 27 North Reference: Grid @ 4024 duaft (PD 822) Well: Ruby Federal 27 Survey Catculation Method: Minimum Curvature Wells: Ruby Federal 27 Survey Catculation Method: Minimum Curvature Design Targets	Database:	EDM Cen	tral Planning			Local Co-or	dinate Reference:	Well Ru	iby Federal	27	
Project: Buckeye MD Reference: RKB @ A024 0.usft (PD 822) Site: Ruby Federal 27 Survey Calculation Method: Minimum Curvature Well: Ruby Federal 27 Survey Calculation Method: Minimum Curvature Design: Start Plan North Reference: Grid Design: Start Plan Image: Calculation Method: Minimum Curvature Design: Start Plan Image: Calculation Method: Minimum Curvature Design: Start Plan Image: Calculation Method: Minimum Curvature Design: Start Plan Image: Calculation Method: Minimum Curvature Longitude Start Plan Image: Calculation Method: Minimum Curvature Longitude Longitude Start Plan Image: Calculation Start Plan Start Plan Start Plan Longitude Longitude Casing Points Image: Calculation Start Plan Start Plan Start Plan Longitude	Company:	' ConocoPi	hillips MCBU		TVD Refere	nce:	RKB @ 4024.0usft (PD 822)				
Meta: Ruby Federal Z Survey Calculation Method: Minimum Curvature Well: Ruby Federal Z7 Survey Calculation Method: Minimum Curvature Design: Slant Plan Sint Plan Latitude Longitude Design: Slant Plan Latitude Longitude Longitude Design: Slant Plan Latitude Longitude Longitude - hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W North Reference: Gaing - hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W North Reference: Latitude Longitude - hit/miss target benter by 141. Lust at 5569 Sust MD (5448.5 TVD, -717.6 N, -499.2 E) - Crice (refulue 150.0) 32* 50* 7.830 N 103* 47* 21.0 - Graing (refulue 150.0) Biso Biso Site Diameter Diameter UsetN Casing Hole Diameter Diameter Diameter 10x1 tust 5569 Conductor 5-1/2 7-7/8 Dip Formations Sitet	Project: Buckeye Site: Ruby Federal Well: Ruby Federal 27					MD Referen	ce:	RKB @	4024.0usft	(PD 822)	
Wells: Ruby Federal 27 Survey Calculation Method: Minimum Curvature Velibore: Ruby Federal 27 Siant Plan Image: Siant Plan						North Refer	ence:	Grid			
Mellore: Ruby Federal 27 Design: Silent Plan Design: Silent Plan Targets Target Name Northing Easting -hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting -hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting -hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting -hit/miss target 0.00 0.01 5,424.0 +831.7 -578.5 668,079.23 667,138.45 32° 50' 7.630 N 103° 47' 21.0 - clare insest arget cancer by 141.1 ust at 5569.6 ust MD (5448.5 TVD, -717.6 N, -499.2 E) -Circle (radius 150.0) 103° 47' 21.0 Casing Points Messured Vertical Mame Casing Hole Diameter						Survey Calo	ulation Method:	Minimu	m Curvature	Э	
Design : Slant Plan Design Targets - hit/miss target Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting - Shape (*) (*) (usft) (usft) (usft) (usft) Latitude Longitude Shape (*) (*) (usft) (usft) (usft) (usft) Latitude Longitude Plan misses target center by 141.1 usft at 5569.6 usft MD (5448.5 TVD, -717.6 N, -499.2 E) - Cricle (radius 150.0) 103* 47* 21.0 Casing Points Depth Depth Diameter Diameter Diameter 0 103* 47* 21.0 85.0 85.0 Conductor 16 20	Wellbore: Ruby Federal 27				}						
Design Targets Target Name Dip Angle Dip Dir. TVD +N/-S +E/-W Northing Easting Latitude Longitude -Shape (*)	Design: Slant Plan							.	. • • • • • • • • • • • • • • • • • • •		
Target Name - Shape Dip Angle (*) Dip Dir. (*) TVD (*) +H/-S (usft) tel/-W (usft) Northing (usft) Easting (usft) Latitude Longitude Ruby Federal 27 (Plat Bl - plan misses target conter by 141. Lusft at 5599. Busft MD (5448. 5 TVD, -717.8 N, -499.2 E) - Circle (radius 150.0) 0.01 5,424.0 -831.7 -578.5 668,079.23 667,136.45 32* 50* 7.830 N 103* 47' 21.0 - plan misses target conter by 141. Lusft at 5599. Busft MD (5448.5 TVD, -717.8 N, -499.2 E) - Casing Hole 103* 47' 21.0 - Circle (radius 150.0) 0.01 5,424.0 -831.7 Name C 7 Casing Points Vertical Depth Depth Depth Dip Diameter Diameter Diameter 0 0 103* 47' 21.0 80.0 85.0 Conductor Name (') ''	Design Targets	· · · ·					· · · · · · · ·				·····
Burge (r) (ush) 103* 47' 21.0 0 Casing Points Casing Hole Diameter <	Target Name - hit/miss targ	get Dip Ang	le Dip Dir.	TVD	+N/-S	+E/-W /usft)	Northing	Easting			
Ruby Federal 27 (Plat Bl 0.00 0.01 5,424.0 -831.7 -578.5 666,079.23 667,136.45 32* 50' 7.630 N 103* 47' 21.0 - plan misses target center by 141.1usft at 5569.8usft MD (5448.5 TVD, -717.6 N, -499.2 E) - Casing Hole Diameter				(usit)		(dair)	(uait)		Lati	tude	Longitude
Measured Uestin (usft) Vertical Depth (usft) Name Casing Diameter (") Hole Diameter (") 85,0 85.0 Conductor 16 20 830.0 830.0 Surface 8-5/8 12-1/4 7,166.0 7,020.6 Production 5-1/2 7-7/8 Formations Measured Depth Vertical Depth Dip Direction Dip (") Dip (") Dip (") 760.0 760.0 Rustler 0.00	Ruby Federal 27 - plan misse - Circle (radi	(Plat Bl C s target center by us 150.0)).00 0.01 141.1usft at 55	5,424.0 669.6usft MD (5	-831.7 5448.5 TVD,	-578.5 -717.6 N, -499	668,079.23 .2 E)	667,136.45	32° (50' 7.630 N	103° 47' 21.070 W
Measured Depth (usft) Vertical Depth (usft) Vertical Depth (usft) Name Casing Diameter (") Hole Diameter (") 85.0 85.0 Conductor 16 20 830.0 830.0 Surface 8-5/8 12-1/4 7,166.0 7,020.6 Production 5-1/2 7-7/8 Formations Vertical Depth (usft) Vertical Depth Vertical Depth Vertical Depth Vertical Depth Vertical Depth Production Dip Dip 760.0 760.0 Rustler 0.00 0.00 0.00 (*) <td>Casing Points</td> <td>•• •.</td> <td></td> <td></td> <td></td> <td></td> <td>······································</td> <td></td> <td></td> <td></td> <td></td>	Casing Points	•• •.					······································				
85.0 85.0 Conductor 16 20 830.0 830.0 Surface 8-5/8 12-1/4 7,166.0 7,020.6 Production 5-1/2 7-7/8 Measured Vertical Depth Depth (usft) Name Lithology Dip Direction 760.0 760.0 Rustler 0.00 <t< td=""><td></td><td>Measured Depth (usft)</td><td>Vertical Depth (usft)</td><td></td><td></td><td>Name</td><td>,</td><td>C Di</td><td>Casing iameter ('')</td><td>Hole Diameter ('')</td><td></td></t<>		Measured Depth (usft)	Vertical Depth (usft)			Name	,	C Di	Casing iameter ('')	Hole Diameter ('')	
830.0 830.0 Surface 8-5/8 12-1/4 7,166.0 7,020.6 Production 5-1/2 7-7/8 Formations Name Lithology Dip Direction 1000 760.0 760.0 Rustler 0.00 938.0 938.0 Salado 0.00 1,960.0 1,960.0 Tansill 0.00 3,523.2 3,487.0 Grayburg 0.00 3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		85,0	85.0	Conductor					16	2	0
7,166.0 7,020.6 Production 5-1/2 7-7/8 Formations Measured Vertical Dip Dip 0.00 0		830.0	830.0) Surface					8-5/8	12-1/	4
Formations Measured Depth Vertical Depth Dip Depth Depth (usft) (usft) Name Lithology (°) (°) 760.0 760.0 Rustler 0.00 0.00 (°) <		7,166.0	7,020.6	6 Production					5-1/2	7-7/	8
Measured Depth (usft)Vertical DepthDip Direction $(usft)$ $(usft)$ NameLithology(°) 760.0 760.0 Rustler 0.00 760.0 760.0 Rustler 0.00 938.0 938.0 Salado 0.00 $1,960.0$ $1,960.0$ Tansill 0.00 $3,523.2$ $3,487.0$ Grayburg 0.00 $3,904.8$ $3,851.0$ San Andres 0.00 $5,459.3$ $5,340.0$ Glorieta 0.00 $5,544.7$ $5,424.0$ Paddock 0.00 $6,297.2$ $6,165.0$ Blinebry 0.00	Formations	· · · ·							.		
Depth (usft) Depth (usft) Depth (usft) Depth (usft) Dip Dip (") Direction 760.0 760.0 Rustler 0.00 <	×	Measured	Vertical							Dip	
(usft) (usft) Name Lithology (°) (°) 760.0 760.0 Rustler 0.00		Depth	Depth						Dip	Direction	
760.0 760.0 Rustler 0.00 938.0 938.0 Salado 0.00 1,960.0 1,960.0 Tansill 0.00 3,523.2 3,487.0 Grayburg 0.00 3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		(usft)	(usft)		Name		Litholog	IV	(°)	(°)	
938.0 938.0 Salado 0.00 1,960.0 1,960.0 Tansill 0.00 3,523.2 3,487.0 Grayburg 0.00 3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		760.0	760.0	Rustler		*.			0.00		
1,960.0 1,960.0 Tansill 0.00 3,523.2 3,487.0 Grayburg 0.00 3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		938.0	938.0	Salado					0.00		
3,523.2 3,487.0 Grayburg 0.00 3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		1,960.0	1,960.0	Tansill					0.00		
3,904.8 3,851.0 San Andres 0.00 5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00 0.001 0.001 0.001 0.001		3,523.2	3,487.0	Grayburg					0.00		
5,459.3 5,340.0 Glorieta 0.00 5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		3,904.8	3,851.0	San Andres					0.00		
5,544.7 5,424.0 Paddock 0.00 6,297.2 6,165.0 Blinebry 0.00		5,459.3	5,340.0	Glorieta					0.00		
6,297.2 6,165.0 Blinebry 0.00		5,544.7	5,424,0	Paddock					0.00		
		6,297.2	6,165.0	Blinebry					0.00		
600 (100 (100 (100 (100 (100 (100 (100 (6 921 6	6 780 0	Tubb					0.00		

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Proposed Directional Well Plan

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Ruby Federal #27

(Date: 10/28/2013)

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- 4 Gate Valve, 2-1/16" 5M
- 5 Gate Valve, 2-1/16" 5M
- 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
- Gate Valve, 2-1/16" 5M 10
- 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

(Date: 10/28/2013)

Request for Variance

ConocoPhillips Company

Lease Number: NM LC 029405B Well: Ruby Federal #27 Location: Sec. 17, T17S, R32E Date: 10/29/2013

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

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).

Nor	Non	I OD	Weight		Min Bend Rad		ius Max W		
in.	mm.	iņ.	mm	lb/ft	kg/m	ln.	mm.	psi	Mpa
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3-1/2	88.9	5.79	147.06	20.14	29.80	54	1371.	6 5000	34.47
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Fittings			Flanges	ì	Han	nmer Un	ions	Othe	r
RC4X5055		R35 - 3-1	8 5000# A	PI Type 6B	All Un	ion Configu	rations	LP Threaded C	onnectio
RC3X5055		R31 - 3-1	/8 3000# A	PI Type 6B				Graylo	ck
~~~~~~		i						Custom F	nds

## Attachment # 2

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

ConocoPhillips Company Well: Ruby Federal #27 Location: Sec. 17, T17S, R32E Date: 10/29/2013

1.1

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

1. 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.

James Chen Drilling Engineer Office: 281-206-5244 Cell: 832.678.1647

# 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 UP: Standard cable with 2" x 6" x 1/4" ralls, quisseltat eachterossmember

WHEELS 10/DIA x 9 long with rease fittings DOOR LATCH Stindependent ratches binders with chains, vertical second latch GASKE TS: Extruded rubber seal with metal

retainer s WELDS: All welds continuous except sub

structur e crossmembers FINISH: Coated Inside and out with direct to metal, rust inhibiting acrylic enamel color coat HYDROTESTING: Full capacity static test DIMEN SIONS: 22-11* long (21-8 inside), 99' wide (88' inside), see drawing for height OPTIONS: Steel grit blast and special paint, Ampliroll, Hell and Dino pickup

ROOF: 3/16" PL roof panels with tubing and channel support frame.

LIDS: (2) 68" x 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

LATCH (2) independent ratchet binders with chains oerlid

CASKETS: Extructed nubber seal with metal retainers

# Heavy Duty Split Metal Rolling Lid



CONT.	<u> </u>	D
20 YD	41	53
25 YD	53	65
30 YD	65	77



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