

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

MAR 12 2014

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMLC029405B
2. Name of Operator CONOCOPHILLIPS COMPANY		6. If Indian, Allottee or Tribe Name
3a. Address 600 N. DAIRY ASHFORD RD HOUSTON, TX 77079-1175		7. If Unit or CA/Agreement, Name and/or No. N/A
3b. Phone No. (include area code) Ph: 281-206-5281		8. Well Name and No. RUBY FEDERAL 25
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 17 T17S R32E Mer NMP SWNE 1990FNL 2085FEL		9. API Well No. 30-025-41017
		10. Field and Pool, or Exploratory MALJAMAR;GRAYBURG/SANANDR
		11. County or Parish, and State LEA COUNTY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Deepen
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Fracture Treat
	<input type="checkbox"/> Production (Start/Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Well Integrity
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Recomplete
	<input checked="" type="checkbox"/> Other
	Change to Original A
	PD
	<input type="checkbox"/> Change Plans
	<input type="checkbox"/> Plug and Abandon
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Convert to Injection
	<input type="checkbox"/> Plug Back

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips Company respectfully requests approval to change the approved plan for this well. The surface location had to be moved because of continuing development of the caliche pit to the north of the original stake. This request has been discussed with Cody Layton and Wesley Ingraham.

The new surface location is UL H, Sec. 17, T17S, R32E; 2210' FNL and 1120' FEL.

The bottom hole location remains the same as originally permitted.

Please see the attached documents supporting this request.

- 1 Updated plat package
- 2 Updated Drilling Plan
- 3 Updated Standard Drilling Plan (for Deviated wells)

Eng Rv 11/25/13 CRW

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #225842 verified by the BLM Well Information System For CONOCOPHILLIPS COMPANY, sent to the Hobbs Committed to AFMSS for processing by JOHNNY DICKERSON on 11/07/2013 ()	
Name (Printed/Typed) SUSAN MAUNDER	Title SENIOR REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 11/06/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>/S/ STEPHEN J. CAFFEY</u>	Title <u>K2</u>	Date <u>MAR - 5 2014</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

MAR 13 2014

K2

Additional data for EC transaction #225842 that would not fit on the form

32. Additional remarks, continued

- 4 Updated Wall Plot
- 5 Changes to the Surface Use Plan of Operations

As discussed with Mr. Layton, this surface location is on the ConocoPhillips Company's Emerald lease. We are submitting appropriate right of way applications, to the BLM realty group, to request authorization for the road, flow line and power line.

ConocoPhillips Company respectfully requests approval to construct and drill this well in March 2014, which may be in advance of the right of way completion.

Thank you for your time in reviewing this request.

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

Ruby Federal #25

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	769	769	Anhydrite
Salado (top of salt)	938	938	Salt
Tansill (base of salt)	1973	1973	Gas, Oil and Water
Yates	2149	2149	Gas, Oil and Water
Seven Rivers	2435	2436	Gas, Oil and Water
Queen	3077	3089	Gas, Oil and Water
Grayburg	3496	3515	Gas, Oil and Water
San Andres	3883	3910	Gas, Oil and Water
Glorieta	5336	5383	Gas, Oil and Water
Paddock	5442	5489	Gas, Oil and Water
Blinberry	5788	5835	Gas, Oil and Water
Tubb	6800	6847	Gas, Oil and Water
Deepest estimated perforation	6800	6847	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	7055	7102	200' below deepest estimated perforation

All of the water bearing formations identified above will be protected by setting of the 8-5/8" surface casing 25' - 70' into the Rustler formation 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 5-1/2" production casing 10' off bottom of TD 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:

Type	Hole Size	Interval MD RKB (ft)		OD	Wt	Gr	Conn	MIY	Col	Jt Str	Safety Factors Calculated per ConocoPhillips Corporate Criteria		
		From	To								Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
Cond	20	0	40' - 85' (30' - 75' BGL)	16	0.5" wall	B	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	794' - 839' 850	8-5/8	24#	J-55	STC	2950	1370	244	1.58	3.67	3.61
Prod	7-7/8	0	7047' - 7092'	5-1/2	17#	L-80	LTC	7740	6290	338	2.10	2.50	1.97

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:

Type	Depth	Wt	MIY	Col	Jt Str	Drill Fluid	Burst	Collapse	Tensile-Dry	Tens-Bouy
Surface Casing	839	24	2950	1370	244000	8.5	7.95	3.69	12.1	13.9
Production Casing	7092	17	7740	6290	338000	10	2.10	1.71	2.80	3.31

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

Type	Depth	Wt	MIY	Col	Jt Str	Pipe Yield MW	Burst	Col	Ten
Conductor	85	65	35000	-	-	432966	-	-	-
Surface Casing (8-5/8" 24# J-55 STC)	839	24	2950	1370	244000	381000	8.5	1.58	3.67
Production Casing (5-1/2" 17# L-80 LTC)	7092	17	7740	6290	336000	397000	10	2.10	2.50

Burst - ConocoPhillips Required Load Cases

The maximum internal (burst) load on the Surface Casing occurs when the surface casing is tested to 1500 psi (as per BLM Onshore Order 2 - B. Requirements).

The maximum internal (burst) load on the Production Casing occurs during the fracture stimulation where the maximum allowable working pressure

(MAWP) is the pressure that would fit ConocoPhillips Corporate Criteria for Minimum Factors.

Surface Casing Test Pressure =	1500 psi	Predicted Pore Pressure at TD (PPTD) =	8.55 ppg
Surface Rated Working Pressure (BORP) =	3000 psi	Predicted Frac Gradient at Shoe (CSFG) =	19.23 ppg
Field SW =	10 ppg		

Surface Casing Burst Safety Factor = API Burst Rating / Maximum Predicted Surface Pressure (MPSP) OR Maximum Allowable Surface Pressure (MASP)

Production Casing MAWP for the Fracture Stimulation = API Burst Rating / Corporate Minimum Burst Design Factor

Surface Casing Burst Safety Factor:

Case #1, MPSP (MWhd next section) =	839	x	0.052	x	10	=	436			
Case #2, MPSP (Field SW @ Bullheadcsg + 200 psi) =	839	x	0.052	x	19.23	=	436	+	200	= 603
Case #3, MPSP (Kick Vol @ next section TD) =	7092	x	0.052	x	8.55	=	625.3	-	371	= 2157
Case #4, MPSP (PPTD - GG) =	7092	x	0.052	x	8.55	=	709.2	=	2444	
Case #3 & #4 Limited to MPSP (CSFG + 0.2 ppg) =	839	x	0.052	x	(19.23 + 0.2)	=	848			
MASP (MWhd + Test Pressure) =	839	x	0.052	x	8.5	+	1500	=	1871	
Burst Safety Factor (Max, MPSP or MASP) =	2950	/	1871	=	1.58					

Production Casing Burst Safety Factor:

Case #1, MPSP (MWhd TD) =	7092	x	0.052	x	10	=	3687.84			
Case #4, MPSP (PPTD - GG) =	7092	x	0.052	x	8.55	=	709.2	=	2444	
Burst Safety Factor (Max, MPSP) =	7740	/	3688	=	2.10					
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 cementing to surface, 1/3 evacuation to the next casing setting depth, or deepest depth of exposure (full evacuation).

The maximum collapse load on the Production Casing occurs when cementing to surface, or 1/3 evacuation to the deepest depth of exposure; and therefore, the external pressure profile for the evacuation cases should be equal to the pore pressure of the horizons on the outside of the casing which we assumed to be PPTD.

Surface Casing Collapse Safety Factor = API Collapse Rating / Full Evacuation OR Cement Displacement during Cementing to Surface

Production Casing Collapse Safety Factor = API Collapse Rating / Maximum Predicted Surface Pressure OR Cement Displacement during Cementing to Surface

Cement Displacement Fluid (FW) =	8.34 ppg	Top of Cement =	Cement to Surface
Surface Cement Lead =	13.6 ppg	Prod Cement Lead =	11.8 ppg
Surface Cement Tail =	14.8 ppg	Prod Cement Tail =	16.4 ppg
Top of Surface Tail Cement =	300' ft	Top of Prod Tail Cement =	5200' ft

Surface Casing Collapse Safety Factor:

Full Evacuation Diff Pressure =	839	x	0.052	x	8.55	=	373			
Cementing Diff Lir Pressure =	((539	x	0.052	x	13.6	) + ( 300	x	0.052	x	14.8) = 248
Collapse Safety Factor =	1370	/	373	=	3.67					

Production Casing Collapse Safety Factor:

1/3 Evacuation Diff Pressure =	((7092	x	0.052	x	8.55) - (7092	/	3	x	0.052	x	8.34) = 2128
Cementing Diff Lir Pressure =	((1892	x	0.052	x	11.8	) + ( 5200	x	0.052	x	16.4	) = 2520
Collapse Safety Factor =	6290	/	2520	=	2.50							

Tensile Strength - ConocoPhillips Required Load Cases

The maximum axial (tension) load occurs if casing were to get stuck and pulled on to try to get it unstuck.

Maximum Allowable Axial Load for Pipe Yield = API Pipe Yield Strength Rating / Corporate Minimum Axial Design Factor

Maximum Allowable Axial Load for Joint = API Joint Strength Rating / Corporate Minimum Axial Design Factor

Maximum Allowable Hook Load (Limited to 75% of Rig Max Load) = Maximum Allowable Axial Load

Maximum Allowable Overpull Margin = Maximum Allowable Hook Load - Buoyant Wt of the String

Tensile Safety Factor = API Pipe Yield OR API Joint Strength OR Rig Max Load Rating / (Buoyant Wt of String + Minimum Overpull Required)

Rig Max Load (300,000 lbs) x 75% =	225000 lbs
Minimum Overpull Required =	50000 lbs

Surface Casing Tensile Strength Safety Factor:

Air Wt =	20136									
Bouyant Wt =	20136	x	0.870	=	17523					
Max. Allowable Axial Load (Pipe Yield) =	381000	/	1.40	=	272143					
Max. Allowable Axial Load (Joint) =	244000	/	1.40	=	174286					
Max. Allowable Hook Load (Limited to 75% of Rig Max Load) =	174286									
Max. Allowable Overpull Margin =	174286	- (20136	x	0.870	) =	156753				
Tensile Safety Factor =	244000	/ (17523	+	50000	) =	3.61				

Production Casing Tensile Strength Safety Factor:

Air Wt =	120564									
Bouyant Wt =	120564	x	0.847	=	102157					
Max. Allowable Axial Load (Pipe Yield) =	397000	/	1.40	=	283571					
Max. Allowable Axial Load (Joint) =	338000	/	1.40	=	241429					
Max. Allowable Hook Load (Limited to 75% of Rig Max Load) =	225000									
Max. Allowable Overpull Margin =	225000	- (120564	x	0.847	) =	122843				
Tensile Safety Factor =	300000	/ (102157	+	50000	) =	1.97				

Compression Strength - ConocoPhillips Required Load Cases

The maximum axial (compression) load for the well is where the surface casing is landed on the conductor

with a support of a plate or landing ring. The surface casing is also calculated to bear 60% of the load

but not limited. Any other axial loads such as a snubbing unit or other would need to be added to the load.

Compression Safety Factor = API Axial Joint Strength Rating OR API Axial Pipe Yield Rating / Maximum Predicted Load

Wellhead Load = 3000 lbs

Conductor & Surface Compression Safety Factor

Surf Casing Wt (Buoyant) =	(20136	x	0.870	) =	17523					
Prod Casing Wt (Buoyant) =	(120564	x	0.847	) =	102157					
Tubing Wt (Air Wt) =	7092	x	6.5	=	46098					
Tubing Fluid Wt =	7092	x	0.052	x	6.55	x	0.7854	x	2.441	= 11304
Load on Conductor =	3000	+	17523	+	102157	+	46098	+	11304	= 180082
Conductor Compression Safety Factor =	432966	/	180082	=	2.40					
Load on Surface Casing =	180082	x	60%	=	108049					
Surface Casing Compression Safety Factor =	244000	/	108049	=	2.26					

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		Intervals Ft MD		Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	Class C	Surface	494' – 539'	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	494' – 539'	794' – 839'	14.8	200	268	1% CaCl ₂ 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		Intervals Ft 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'	7047' – 7092'	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.

5-1/2" Production Casing & Cementing Program – TXI/LW Cementing Option for Grayburg-San Andres:

ConocoPhillips Company respectfully requests the options to our cementing program. This option will only be implemented in the cementing operation of wells requesting for co-mingling after approval and authorization by all agencies have been obtained. The intention for the alternative option to the cementing program for the Production Casing is to:

- Accommodate the additional frac'ing and stimulation of the Grayburg-San Andres by placement of the Tail Slurry from the casing shoe to the top of the Grayburg-San Andres formation,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

Slurry		Intervals Ft MD		Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	50:50 Poz/C	Surface	3000'	11.8	500	1300	10% Bentonite 8 lbs/sx Salt 0.2%-0.4% Fluid loss additive 0.125 lb/sx LCM if needed Excess = 200% or more if needed based on gauge hole volume	2.6
Tail	TXI/LW	3000'	7047' – 7092'	13.2	800	1120	0.5% Fluid loss additive 0.10% Retarder 0.2% Antifoam 0.125 lb/sx LCM if needed Excess = 150% or more if needed based on gauge hole volume	1.40

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 11" 3M 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 nipping 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:

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

DEPTH	TYPE	Density ppg	FV sec/qt	API Fluid Loss cc/30 min	pH	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

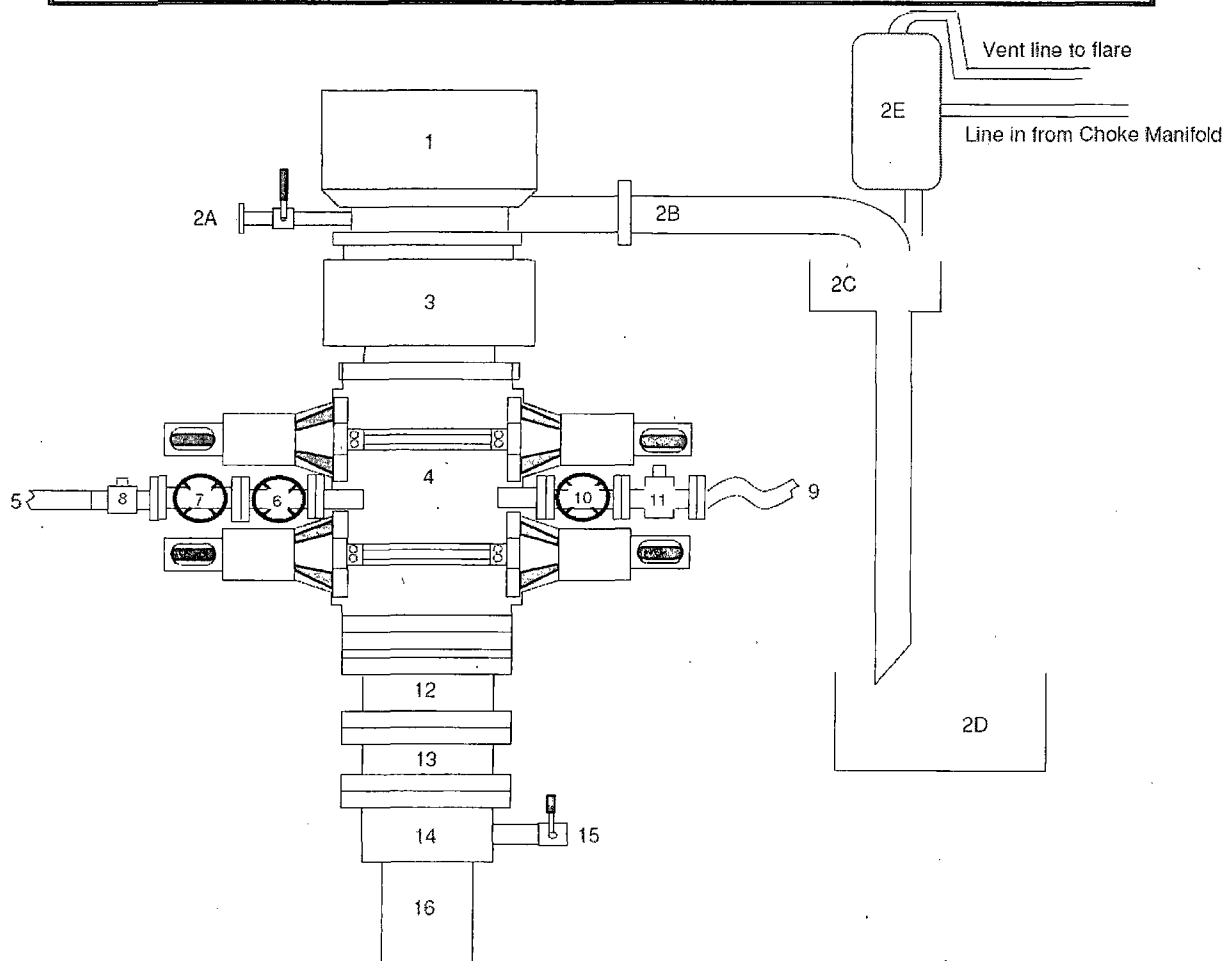
Contact Information:

Proposed 6 November 2013 by:
James Chen
Drilling Engineer, ConocoPhillips Company
Phone (832) 486-2184
Cell (832) 768-1647

Attachment # 1

BLOWOUT PREVENTER ARRANGEMENT

3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Rated Equipment

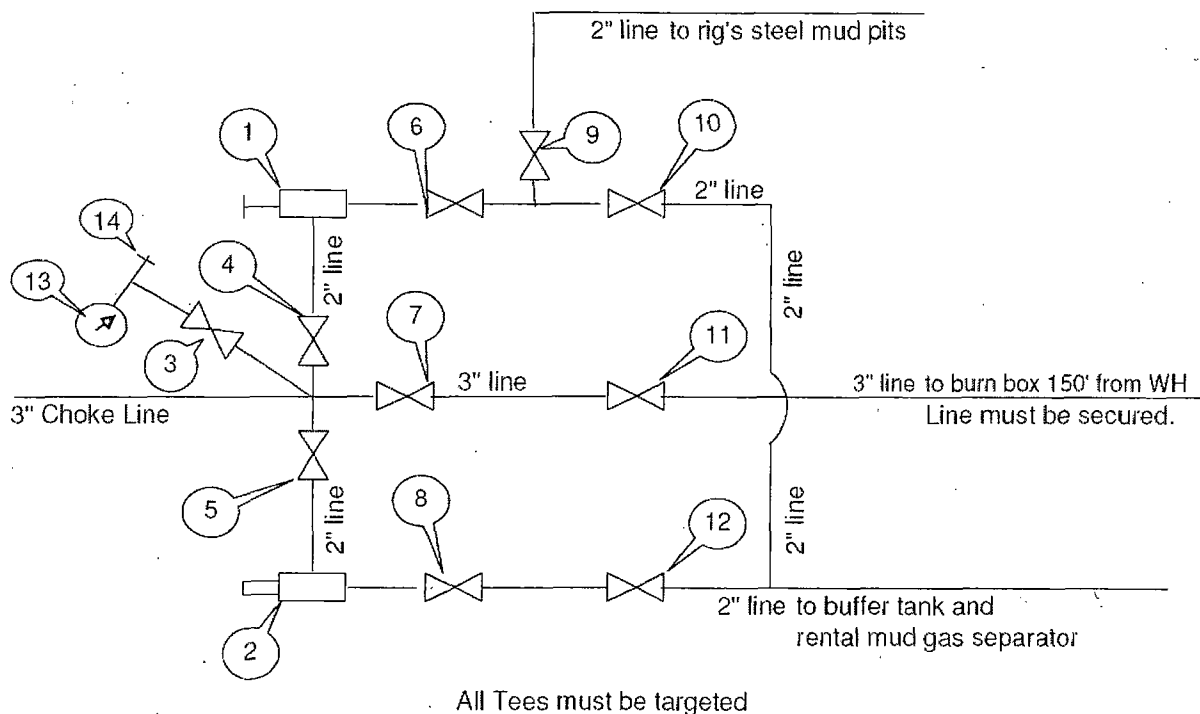


Item	Description
1	Rotating Head, 11"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (11", 3M)
4	Double Ram (11", 3M, equipped with Blind Rams and Pipe Rams)
5	Kill Line (2" flexible hose, 3000 psi WP)
6	Kill Line Valve, Inner (3-1/8", 3000 psi WP)
7	Kill Line Valve, Outer (3-1/8", 3000 psi WP)
8	Kill Line Check Valve (2-1/16", 3000 psi WP)
9	Choke Line (5M Stainless Steel Cofflex Line, 3-1/8" 3M API Type 6B, 3000 psi WP)
10	Choke Line Valve, Inner (3-1/8", 3000 psi WP)
11	Choke Line Valve, Outer, (Hydraulically operated, 3-1/8", 3000 psi WP)
12	Adapter Flange (11" 5M to 11" 3M)
13	Spacer Spool (11", 5M)
14	Casing Head (11" 5M)
15	Ball Valve and Threaded Nipple on Casing Head Outlet, 2" 5M
16	Surface Casing

Submitted by: James Chen, Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company, 25-Sep-2012

CHOKE MANIFOLD ARRANGEMENT

3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Equipment



Item	Description
1	Manual Adjustable Choke, 2-1/16", 3M
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
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
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:

James Chen

Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company

Date: 21-March-2013

ConocoPhillips MCBU

Buckeye

Ruby Federal

Ruby Federal 25

Original Hole

Plan: Actual Plan

Standard Planning Report - Geographic

06 August, 2013

ConocoPhillips

Planning Report - Geographic

Database:	EDM:Central:Planning	Local Co-ordinate Reference:	Well: Ruby Federal 25
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 4035.0usft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 4035.0usft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 25	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Project:	Buckeye, Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site:	Ruby Federal, New Mexico, Southeast		
Site Position:		Northing:	666,097.48 usft
From:	Lat/Long	Easting:	666,763.63 usft
Position Uncertainty:	3.5 usft	Slot Radius:	8 "
		Latitude:	32° 49' 48.040 N
		Longitude:	103° 47' 25.559 W
		Grid Convergence:	0.29 °

Well:	Ruby Federal 25, Deviated Well		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			4,022.0 usft

Wellbore:	Original Hole		
Magnetics	Model Name	Sample Date	Declination
	BGGM2012	9/21/2012	7.67
			60.64
			48,823

Design:	Actual Plan		
Audit Notes:			
Version:	1	Phase:	PROTOTYPE
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			248.16

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical 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	
1,973.0	0.00	0.00	1,973.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,706.0	11.00	237.89	2,701.5	-37.3	-59.4	1.50	1.50	0.00	237.89	
4,755.6	11.00	237.89	4,713.5	-245.0	-390.5	0.00	0.00	0.00	0.00	
5,488.6	0.00	0.00	5,442.0	-282.3	-449.9	1.50	-1.50	0.00	180.00	Ruby Federal 25 (Plat
7,101.6	0.00	0.00	7,055.0	-282.3	-449.9	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report - Geographic

Database:	EDM:Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 25
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 4035.0usft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 4035.0usft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 25	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
85.0	0.00	0.00	85.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
Conductor										
100.0	0.00	0.00	100.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
200.0	0.00	0.00	200.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
300.0	0.00	0.00	300.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
400.0	0.00	0.00	400.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
500.0	0.00	0.00	500.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
600.0	0.00	0.00	600.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
700.0	0.00	0.00	700.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
769.0	0.00	0.00	769.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
Rustler										
800.0	0.00	0.00	800.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
839.0	0.00	0.00	839.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
Surface										
900.0	0.00	0.00	900.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
938.0	0.00	0.00	938.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
Salado										
1,000.0	0.00	0.00	1,000.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
1,973.0	0.00	0.00	1,973.0	0.0	0.0	668,285.85	668,979.22	32° 50' 9.580 N	103° 46' 59.460 W	
Tansil										
2,000.0	0.41	237.89	2,000.0	-0.1	-0.1	668,285.80	668,979.13	32° 50' 9.580 N	103° 46' 59.461 W	
2,100.0	1.91	237.89	2,100.0	-1.1	-1.8	668,284.72	668,977.43	32° 50' 9.569 N	103° 46' 59.481 W	
2,149.1	2.64	237.89	2,149.0	-2.2	-3.4	668,283.69	668,975.78	32° 50' 9.559 N	103° 46' 59.500 W	
Yates										
2,200.0	3.41	237.89	2,199.9	-3.6	-5.7	668,282.26	668,973.50	32° 50' 9.545 N	103° 46' 59.527 W	
2,300.0	4.91	237.89	2,299.6	-7.4	-11.8	668,278.41	668,967.37	32° 50' 9.507 N	103° 46' 59.599 W	
2,400.0	6.41	237.89	2,399.1	-12.7	-20.2	668,273.18	668,959.02	32° 50' 9.456 N	103° 46' 59.697 W	
2,436.1	6.95	237.89	2,435.0	-14.9	-23.8	668,270.94	668,955.46	32° 50' 9.434 N	103° 46' 59.739 W	
Seven Rivers										
2,500.0	7.91	237.89	2,498.3	-19.3	-30.7	668,266.56	668,948.47	32° 50' 9.391 N	103° 46' 59.822 W	
2,600.0	9.41	237.89	2,597.2	-27.3	-43.5	668,258.56	668,935.73	32° 50' 9.312 N	103° 46' 59.971 W	
2,700.0	10.91	237.89	2,695.6	-36.7	-58.4	668,249.19	668,920.79	32° 50' 9.220 N	103° 47' 0.147 W	
2,706.0	11.00	237.89	2,701.5	-37.3	-59.4	668,248.58	668,919.82	32° 50' 9.214 N	103° 47' 0.158 W	
2,800.0	11.00	237.89	2,793.8	-46.8	-74.6	668,239.05	668,904.64	32° 50' 9.121 N	103° 47' 0.337 W	
2,900.0	11.00	237.89	2,891.9	-56.9	-90.7	668,228.92	668,888.49	32° 50' 9.021 N	103° 47' 0.527 W	
3,000.0	11.00	237.89	2,990.1	-67.1	-106.9	668,218.78	668,872.33	32° 50' 8.922 N	103° 47' 0.717 W	
3,088.5	11.00	237.89	3,077.0	-76.0	-121.2	668,209.81	668,858.03	32° 50' 8.834 N	103° 47' 0.885 W	
Queen										
3,100.0	11.00	237.89	3,088.3	-77.2	-123.0	668,208.65	668,856.18	32° 50' 8.822 N	103° 47' 0.907 W	
3,200.0	11.00	237.89	3,186.4	-87.3	-139.2	668,198.51	668,840.02	32° 50' 8.723 N	103° 47' 1.097 W	
3,300.0	11.00	237.89	3,284.6	-97.5	-155.4	668,188.37	668,823.87	32° 50' 8.624 N	103° 47' 1.287 W	
3,400.0	11.00	237.89	3,382.8	-107.6	-171.5	668,178.24	668,807.71	32° 50' 8.524 N	103° 47' 1.477 W	
3,500.0	11.00	237.89	3,480.9	-117.8	-187.7	668,168.10	668,791.55	32° 50' 8.425 N	103° 47' 1.667 W	

ConocoPhillips

Planning Report - Geographic

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well: Ruby Federal/25
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 4035.0usft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 4035.0usft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal/25	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
3,515.3	11.00	237.89	3,496.0	-119.3	-190.2	668,166.55	668,789.08	32° 50' 8.409 N	103° 47' 1.696 W	
Grayburg										
3,600.0	11.00	237.89	3,579.1	-127.9	-203.8	668,157.96	668,775.40	32° 50' 8.325 N	103° 47' 1.857 W	
3,700.0	11.00	237.89	3,677.3	-138.0	-220.0	668,147.83	668,759.24	32° 50' 8.226 N	103° 47' 2.046 W	
3,800.0	11.00	237.89	3,775.4	-148.2	-236.1	668,137.69	668,743.09	32° 50' 8.126 N	103° 47' 2.236 W	
3,900.0	11.00	237.89	3,873.6	-158.3	-252.3	668,127.56	668,726.93	32° 50' 8.027 N	103° 47' 2.426 W	
3,909.6	11.00	237.89	3,883.0	-159.3	-253.8	668,126.58	668,725.39	32° 50' 8.017 N	103° 47' 2.445 W	
San Andres										
4,000.0	11.00	237.89	3,971.8	-168.4	-268.5	668,117.42	668,710.78	32° 50' 7.927 N	103° 47' 2.616 W	
4,100.0	11.00	237.89	4,069.9	-178.6	-284.6	668,107.28	668,694.62	32° 50' 7.828 N	103° 47' 2.806 W	
4,200.0	11.00	237.89	4,168.1	-188.7	-300.8	668,097.15	668,678.47	32° 50' 7.728 N	103° 47' 2.996 W	
4,300.0	11.00	237.89	4,266.2	-198.8	-316.9	668,087.01	668,662.31	32° 50' 7.629 N	103° 47' 3.186 W	
4,400.0	11.00	237.89	4,364.4	-209.0	-333.1	668,076.87	668,646.16	32° 50' 7.529 N	103° 47' 3.376 W	
4,500.0	11.00	237.89	4,462.6	-219.1	-349.2	668,066.74	668,630.00	32° 50' 7.430 N	103° 47' 3.566 W	
4,600.0	11.00	237.89	4,560.7	-229.3	-365.4	668,056.60	668,613.85	32° 50' 7.330 N	103° 47' 3.756 W	
4,700.0	11.00	237.89	4,658.9	-239.4	-381.5	668,046.47	668,597.69	32° 50' 7.231 N	103° 47' 3.946 W	
4,755.6	11.00	237.89	4,713.5	-245.0	-390.5	668,040.83	668,588.71	32° 50' 7.176 N	103° 47' 4.052 W	
4,800.0	10.33	237.89	4,757.1	-249.4	-397.5	668,036.46	668,581.75	32° 50' 7.133 N	103° 47' 4.133 W	
4,900.0	8.83	237.89	4,855.7	-258.2	-411.6	668,027.62	668,567.66	32° 50' 7.046 N	103° 47' 4.299 W	
5,000.0	7.33	237.89	4,954.7	-265.7	-423.5	668,020.15	668,555.76	32° 50' 6.973 N	103° 47' 4.439 W	
5,100.0	5.83	237.89	5,054.1	-271.8	-433.2	668,014.06	668,546.05	32° 50' 6.913 N	103° 47' 4.553 W	
5,200.0	4.33	237.89	5,153.7	-276.5	-440.7	668,009.36	668,538.55	32° 50' 6.867 N	103° 47' 4.641 W	
5,300.0	2.83	237.89	5,253.5	-279.8	-446.0	668,006.04	668,533.26	32° 50' 6.834 N	103° 47' 4.704 W	
5,382.6	1.59	237.89	5,336.0	-281.5	-448.7	668,004.35	668,530.57	32° 50' 6.818 N	103° 47' 4.735 W	
Glorieta										
5,400.0	1.33	237.89	5,353.4	-281.8	-449.0	668,004.11	668,530.19	32° 50' 6.815 N	103° 47' 4.740 W	
5,488.6	0.00	0.00	5,442.0	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
Paddock										
5,500.0	0.00	0.00	5,453.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
5,600.0	0.00	0.00	5,553.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
5,700.0	0.00	0.00	5,653.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
5,800.0	0.00	0.00	5,753.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
5,834.6	0.00	0.00	5,788.0	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
Blinobry										
5,900.0	0.00	0.00	5,853.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,000.0	0.00	0.00	5,953.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,100.0	0.00	0.00	6,053.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,200.0	0.00	0.00	6,153.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,300.0	0.00	0.00	6,253.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,400.0	0.00	0.00	6,353.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,500.0	0.00	0.00	6,453.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,600.0	0.00	0.00	6,553.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,700.0	0.00	0.00	6,653.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,800.0	0.00	0.00	6,753.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
6,846.6	0.00	0.00	6,800.0	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
Tubb										
6,900.0	0.00	0.00	6,853.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
7,000.0	0.00	0.00	6,953.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
7,092.0	0.00	0.00	7,045.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
Production										
7,100.0	0.00	0.00	7,053.4	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
7,101.6	0.00	0.00	7,055.0	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N	103° 47' 4.750 W	
TD										

ConocoPhillips

Planning Report - Geographic

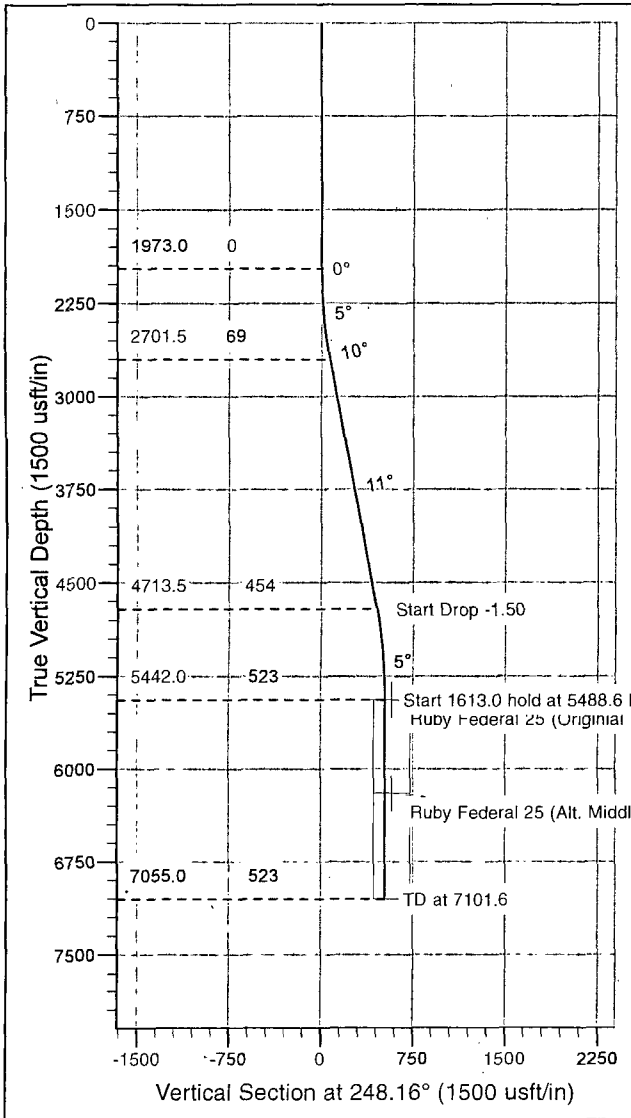
Database:	EDM, Central Planning	Local Co-ordinate Reference:	Well Ruby, Federal 25
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 4035.0usft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 4035.0usft, (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 25	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Design Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
									Latitude Longitude
Ruby Federal 25 (Original)		0.00	0.00	5,442.0	-215.0	-536.4	668,070.82	668,442.81	32° 50' 7.480 N 103° 47' 5.760 W
- plan misses target center by 109.6usft at 5488.6usft MD (5442.0 TVD, -282.3 N, -449.9 E)									
- Circle (radius 150.0)									
Ruby Federal 25 (Plat Bl)		0.00	0.00	5,442.0	-282.3	-449.9	668,003.57	668,529.32	32° 50' 6.810 N 103° 47' 4.750 W
- plan hits target center									
- Circle (radius 0.0)									
Ruby Federal 25 (Alt: Mi)		0.00	0.00	6,200.0	-215.0	-536.4	668,070.82	668,442.81	32° 50' 7.480 N 103° 47' 5.760 W
- plan misses target center by 109.6usft at 6246.6usft MD (6200.0 TVD, -282.3 N, -449.9 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter	
(usft)	(usft)	Name	(")	(")	
85.0	85.0	Conductor	16	20	
839.0	839.0	Surface	8-5/8	12-1/4	
7,092.0	7,045.4	Production	5-1/2	7-7/8	

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
769.0	769.0	Rustler		0.00		
938.0	938.0	Salado		0.00		
1,973.0	1,973.0	Tansill		0.00		
2,149.1	2,149.0	Yates		0.00		
2,436.1	2,435.0	Seven Rivers		0.00		
3,088.5	3,077.0	Queen		0.00		
3,515.3	3,496.0	Grayburg		0.00		
3,909.6	3,883.0	San Andres		0.00		
5,382.6	5,336.0	Glorieta		0.00		
5,488.6	5,442.0	Paddock		0.00		
5,834.6	5,788.0	Blinebry		0.00		
6,846.6	6,800.0	Tubb		0.00		
7,101.6	7,055.0	TD		0.00		

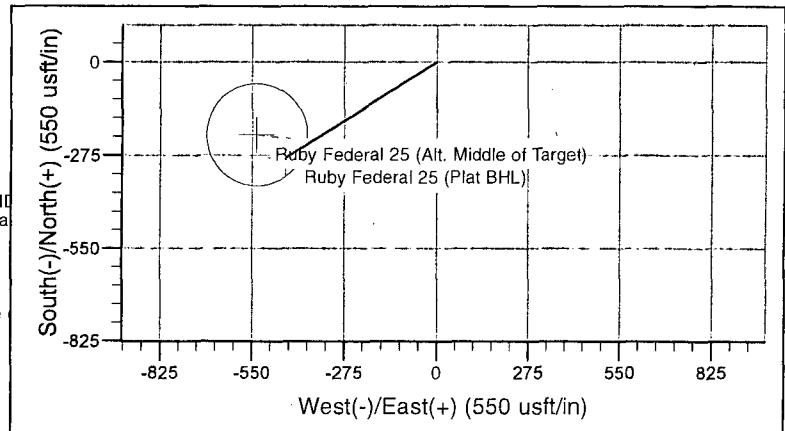
Proposed Directional Well Plan



Project: Buckeye
Site: Ruby Federal
Well: Ruby Federal 25
Wellbore: Original Hole
Design: Actual Plan

WELL DETAILS: Ruby Federal 25					
+N/-S	+E/-W	Northing	Ground Level:	4022.0	
0.0	0.0	668285.84	Easting	668979.21	Latitude
				32° 50' 9.580 N	Longitude
				103° 46' 59.460 W	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1973.0	0.00	0.00	1973.0	0.0	0.0	0.00	0.00	0.0	
3	2706.0	11.00	237.89	2701.5	-37.3	-59.4	1.50	237.89	69.0	
4	4755.6	11.00	237.89	4713.5	-245.0	-390.5	0.00	0.00	453.7	
5	5488.6	0.00	0.00	5442.0	-282.3	-449.9	1.50	180.00	522.6	Ruby Federal 25 (Plat BHL)
6	7101.6	0.00	0.00	7055.0	-282.3	-449.9	0.00	0.00	522.6	



CASING DETAILS			
TVD	MD	Name	Size
85.0	85.0	Conductor	16
839.0	839.0	Surface	8-5/8
7045.4	7092.0	Production	5-1/2

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
769.0	769.0	Rustler
938.0	938.0	Salado
1973.0	1973.0	Tansill
2149.0	2149.1	Yates
2435.0	2436.1	Seven Rivers
3077.0	3088.5	Queen
3496.0	3515.3	Grayburg
3883.0	3909.6	San Andres
5336.0	5382.6	Glorieta
5442.0	5488.6	Paddock
5788.0	5834.6	Blinberry
6800.0	6846.6	Tubb
7055.0	7101.6	TD

