

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD HOBBS OCD

FEB 21 2013

ATS-13-235
FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		RECEIVED	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. N/A	
2. Name of Operator ConocoPhillips Company		8. Lease Name and Well No. Ruby Federal #59 <38653>	
3a. Address P.O. Box 51810 Midland, TX 79710-1810		9. API Well No. 30225-41020	
3b. Phone No. (include area code) (432)688-6913		10. Field and Pool, or Exploratory Maljamar; Yeso West <244500>	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface UL N, Sec. 18, T17S, R32E; 330' FSL & 1850' FWL At proposed prod. zone UL N, Sec. 18, T17S, R32E; 330' FSL & 1650' FWL		11. Sec., T. R. M. or Blk. and Survey or Area Sec. 18, T17S, R32E	
14. Distance in miles and direction from nearest town or post office* Approximately 3 miles south of Maljamar, New Mexico		12. County or Parish Lea County	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	330' FSL	16. No. of acres in lease 1601.96	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	Approximately 550' to BLM Federal #18	19. Proposed Depth 6919' TVD/6925' MD	20. BLM/BIA Bond No. on file ES0085
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3949' GL	22. Approximate date work will start* 03/01/2013	23. Estimated duration 20 days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature <i>Susan B. Maunder</i>	Name (Printed/Typed) Susan B. Maunder	Date 11/16/12
--	--	------------------

Title

Senior Regulatory Specialist

Approved by (Signature) <i>/s/ James A. Amos</i>	Name (Printed/Typed)	Date FEB 20 2013
---	----------------------	---------------------

Title

FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

Application approval 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.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Approval Subject to General Requirements
& Special Stipulations Attached

Roswell Controlled Water Basin

K2
02/29/13

SEE ATTACHED FOR
CONDITIONS OF APPROVAL
FEB 27 2013

Drilling Plan
ConocoPhillips Company
Maljamar; Yeso, west

Ruby Federal 59

Lea County, New Mexico

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

The ranges of depths for the formation tops, thicknesses, and planned Total Depths for all the wells to be drilled under this Master Drilling Plan are presented in the table below.

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	653	653	Anhydrite
Salado (top of salt)	826	826	Salt
Tansill (base of salt)	1840	1840	Gas, Oil and Water
Yates	2023	2023	Gas, Oil and Water
Seven Rivers	2347	2347	Gas, Oil and Water
Queen	2966	2966	Gas, Oil and Water
Grayburg	3367	3368	Gas, Oil and Water
San Andres	3742	3744	Gas, Oil and Water
Glorieta	5239	5243	Gas, Oil and Water
Paddock	5323	5327	Gas, Oil and Water
Blinberry	5656	5660	Gas, Oil and Water
Tubb	6719	6725	Gas, Oil and Water
Deepest estimated perforation	6719	6725	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	6919	6925	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	Axial (Tension) DF
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	678' – 723'	8-5/8	24#	J-55	STC	2950	1370	244	2.68	6.51	1.4
Prod	7-7/8	0	6870' – 6915'	5-1/2	17#	L-80	LTC	7740	6290	338	1.15	2.05	1.4

The casing will be suitable for H₂S Service.

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 Design (Safety) Factors – BLM Criteria:

Type	Depth	Wt	MIY	Col	Jt Str	Drill Fluid	Burst	Collapse	Tensile-Dry	Tens-Bouy
Surface Casing	723	24	2950	1370	244000	8.5	9.23	4.29	14.06	16.16
Production Casing	6915	17	7740	6290	338000	10	2.15	1.75	2.88	3.39

Casing Design (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

Burst Design (Safety) Factors – ConocoPhillips Criteria

The maximum internal (burst) load on the Surface Casing occurs when the surface casing is tested to 1000 psi (pressured up to 1100 psi). 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 Design Factors.

Surface Casing Burst Design Factor = Burst Rating / Maximum Pressure during Casing Pressure Test

Production Casing MAWP for the Fracture Stimulation = Minimum Internal Yield / Production Casing Burst Design Factor

Surface Casing Burst Design Factor:

Burst Design Factor = 2950 psi / 1100 psi = 2.68

Production Casing MAWP:

MAWP for the Fracture Stimulation = 7740 psi / 1.15 = 6730 psi

Collapse Design (Safety) Factors – ConocoPhillips Criteria

The maximum collapse load on the Surface Casing occurs when the pressure is released after bumping the plug on the surface casing cement job. The maximum collapse load on the production casing occurs with the well is pumped off on production. We plan to cement the production casing to surface, and therefore the external pressure profile on the production casing should be equal to the pore pressure of the horizons on the outside of the casing which we estimate to be 8.55 ppg gradient.

Surface Casing Collapse Design Factor = Collapse Rating / (Cement Column Hydrostatic Pressure – Displacement Fluid Hydrostatic Pressure)

Production Casing Collapse Design Factor = Collapse Rating / Maximum Possible Pore Pressure

Surface Casing Collapse Design Factor:

Collapse Design Factor = 1370 psi / $\{[(300 \text{ ft} \times .052 \times 14.8 \text{ ppg}) + (423 \text{ ft} \times .052 \times 13.6 \text{ ppg})] - (723 \text{ ft} \times .052 \times 8.5 \text{ ppg})\}$

Collapse Design Factor = 1370 psi / 210 psi = 6.51

Production Casing Collapse Design Factor:

Collapse Design Factor = 6290 / (8.55 ppg \times 6915 ft) = 6290 psi / 59074 psi = 2.05

(Date: 11/16/2012)

Axial Design (Safety) Factors – ConocoPhillips Criteria

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

Maximum Allowable Hookload = Joint Strength Rating / Axial Design Factor

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

Surface Casing Overpull Margin:

Maximum Allowable Hookload = 244,000 lbs / 1.4

Maximum Allowable Hookload = 174,286 lbs

Overpull Margin = 174,286 lbs - (723 ft x 24 lb/ft)

Overpull Margin = 174,286 lbs - 17,352 lbs = 156,934 lbs

Production Casing Overpull Margin:

Maximum Allowable Hookload = 338,000 lbs / 1.4

Maximum Allowable Hookload = 241,429 lbs

Overpull Margin = 241,428 lbs - (6,915 ft x 17 lb/ft)

Overpull Margin = 241,428 lbs - 117,555 lbs = 123,874 lbs

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: 8-5/8" 24# J-55 STC

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	378' – 423'	13.6	270	462	4%Bentonite 2%CaCl ₂ .125%Polyflake 0.2% antifoam Excess =180% based on gauge hole volume	1.71
Tail	Class C	378' – 423'	678' – 723'	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: 5-1/2" 17# L-80 LTC

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 8 lbs/sx Salt 0.4% Fluid loss additive 0.125% LCM if needed Excess = 115 % or more if needed based on gauge hole volume	2.6
Tail	Class H	5200'	6870' – 6915'	16.4	400	428	0.2% Fluid loss additive 0.3% Dispersant 0.15% Retarder 0.2% Antifoam Excess = 45% or more if needed based on gauge hole volume	1.07

Displacement: Fresh Water with approximately 250 ppm gluteraldehyde biocide.

ConocoPhillips respectfully requests an additional option to our cementing program. The intention of this alternative is to accommodate additional isolation of the Grayburg-San Andres formation with cement.

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

The intention for cementing of the Production Casing is to:

- Place 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'	6800' – 7000'	13.2	1300	1820	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 for each alternative 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 requested to allow for the use of flexible hose. This request for variance 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	8.5 – 9.0	28 – 40	N.C.	N.C.	120 – 160
Surface Casing Point to TD	Brine (Saturated NaCl ₂)	10	29	N.C.	10 – 11	400 – 750
Conversion to Mud at TD	Brine Based Mud (NaCl ₂)	10	34 – 45	5 – 10	10 – 11	0 – 750

Drilling mud containing H₂S shall be degassed in accordance with API RP-49, item 5.14. The gases shall be piped into the flare system. Gas detection equipment and pit level flow monitoring equipment will be on location. ConocoPhillips Company will maintain sufficient mud and weighting material on location at all times.

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. Also, we propose an option to not mud up leaving only brine in the hole.

6. Logging, Coring, and Testing Program: *See COA*

- No drill stem tests will be done
- No mud logging is planned
- No whole cores are planned
- 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	H ₂ S (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.

(Date: 11/16/2012)

Page 6 of 9

8. Anticipated starting date and duration of operations:

Well pad and road constructions will begin as soon as all agency approvals are obtained. Anticipated date to drill these wells is first quarter 2013 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:

Program prepared by:
James Chen
Drilling Engineer, ConocoPhillips Company
Phone (832) 486-2184
Cell (832) 768-1647
Date: 03 July 2012



ConocoPhillips MCBU

Buckeye

Ruby Federal

Ruby Federal 59

Original Hole

Plan: Actual Plan

Standard Planning Report

03 July, 2012



ConocoPhillips or its affiliates
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 59
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3962.0ft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 3962.0ft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 59	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		

Site	Ruby Federal, New Mexico, East		
Site Position:		Northing:	666,097.48 ft
From:	Lat/Long	Easting:	666,763.62 ft
Position Uncertainty:	3.5 ft	Slot Radius:	8"
		Latitude:	32° 49' 48.040 N
		Longitude:	103° 47' 25.559 W
		Grid Convergence:	0.29 °

Well	Ruby Federal 59, Slant Directional Well		
Well Position	+N-S	0.0 ft	Northing: 665,416.49 ft
	+E-W	0.0 ft	Easting: 661,380.86 ft
Position Uncertainty	3.5 ft	Wellhead Elevation:	ft
		Latitude:	32° 49' 41.570 N
		Longitude:	103° 48' 28.681 W
		Ground Level:	3,949.0 ft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination
	BGGM2012	6/26/2012	7.72
			(°)
			Dip Angle
			60.65
			(°)
			Field Strength
			48,843
			(nT)

Design	Actual Plan		
Audit Notes:			
Version:	1	Phase:	PLAN
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			262.77
			(°)

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,457.2	0.00	0.00	2,457.2	0.0	0.0	0.00	0.00	0.00	0.00	
2,757.2	3.00	262.77	2,757.0	-1.0	-7.8	1.00	1.00	0.00	262.77	
6,924.8	3.00	262.77	6,919.0	-28.4	-224.2	0.00	0.00	0.00	0.00	Ruby Federal 59 (BHI)



ConocoPhillips or its affiliates
Planning Report

Database: EDM Central Planning
Company: ConocoPhillips MCBU
Project: Buckeye
Site: Ruby Federal
Well: Ruby Federal 59
Wellbore: Original Hole
Design: Actual Plan

Local Co-ordinate Reference: Well Ruby Federal 59
TVD Reference: RKB @ 3962.0ft (PD 822)
MD Reference: RKB @ 3962.0ft (PD 822)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
85.0	0.00	0.00	85.0	0.0	0.0	0.0	0.00	0.00	0.00
Conductor									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
653.0	0.00	0.00	653.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
678.0	0.00	0.00	678.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface									
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
826.0	0.00	0.00	826.0	0.0	0.0	0.0	0.00	0.00	0.00
Salado									
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
Tansill									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,023.0	0.00	0.00	2,023.0	0.0	0.0	0.0	0.00	0.00	0.00
Yates									
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,347.0	0.00	0.00	2,347.0	0.0	0.0	0.0	0.00	0.00	0.00
Seven Rivers									
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,457.2	0.00	0.00	2,457.2	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.43	262.77	2,500.0	0.0	-0.2	0.2	1.00	1.00	0.00
2,600.0	1.43	262.77	2,600.0	-0.2	-1.8	1.8	1.00	1.00	0.00
2,700.0	2.43	262.77	2,699.9	-0.6	-5.1	5.1	1.00	1.00	0.00
2,757.2	3.00	262.77	2,757.0	-1.0	-7.8	7.9	1.00	1.00	0.00
2,800.0	3.00	262.77	2,799.8	-1.3	-10.0	10.1	0.00	0.00	0.00
2,900.0	3.00	262.77	2,899.7	-1.9	-15.2	15.3	0.00	0.00	0.00
2,966.4	3.00	262.77	2,966.0	-2.4	-18.7	18.8	0.00	0.00	0.00
Queen									
3,000.0	3.00	262.77	2,999.5	-2.6	-20.4	20.6	0.00	0.00	0.00
3,100.0	3.00	262.77	3,099.4	-3.2	-25.6	25.8	0.00	0.00	0.00
3,200.0	3.00	262.77	3,199.3	-3.9	-30.8	31.0	0.00	0.00	0.00
3,300.0	3.00	262.77	3,299.1	-4.6	-36.0	36.3	0.00	0.00	0.00
3,368.0	3.00	262.77	3,367.0	-5.0	-39.5	39.8	0.00	0.00	0.00



ConocoPhillips or its affiliates
Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 59
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3962.0ft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 3962.0ft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 59	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Grayburg									
3,400.0	3.00	262.77	3,399.0	-5.2	-41.2	41.5	0.00	0.00	0.00
3,500.0	3.00	262.77	3,498.8	-5.9	-46.4	46.7	0.00	0.00	0.00
3,600.0	3.00	262.77	3,598.7	-6.5	-51.5	52.0	0.00	0.00	0.00
3,700.0	3.00	262.77	3,698.6	-7.2	-56.7	57.2	0.00	0.00	0.00
3,743.5	3.00	262.77	3,742.0	-7.5	-59.0	59.5	0.00	0.00	0.00
San Andres									
3,800.0	3.00	262.77	3,798.4	-7.9	-61.9	62.4	0.00	0.00	0.00
3,900.0	3.00	262.77	3,898.3	-8.5	-67.1	67.7	0.00	0.00	0.00
4,000.0	3.00	262.77	3,998.2	-9.2	-72.3	72.9	0.00	0.00	0.00
4,100.0	3.00	262.77	4,098.0	-9.8	-77.5	78.1	0.00	0.00	0.00
4,200.0	3.00	262.77	4,197.9	-10.5	-82.7	83.4	0.00	0.00	0.00
4,300.0	3.00	262.77	4,297.7	-11.2	-87.9	88.6	0.00	0.00	0.00
4,400.0	3.00	262.77	4,397.6	-11.8	-93.1	93.8	0.00	0.00	0.00
4,500.0	3.00	262.77	4,497.5	-12.5	-98.3	99.1	0.00	0.00	0.00
4,600.0	3.00	262.77	4,597.3	-13.1	-103.5	104.3	0.00	0.00	0.00
4,700.0	3.00	262.77	4,697.2	-13.8	-108.7	109.5	0.00	0.00	0.00
4,800.0	3.00	262.77	4,797.1	-14.4	-113.9	114.8	0.00	0.00	0.00
4,900.0	3.00	262.77	4,896.9	-15.1	-119.0	120.0	0.00	0.00	0.00
5,000.0	3.00	262.77	4,996.8	-15.8	-124.2	125.2	0.00	0.00	0.00
5,100.0	3.00	262.77	5,096.7	-16.4	-129.4	130.5	0.00	0.00	0.00
5,200.0	3.00	262.77	5,196.5	-17.1	-134.6	135.7	0.00	0.00	0.00
5,242.5	3.00	262.77	5,239.0	-17.4	-136.8	137.9	0.00	0.00	0.00
Glorieta									
5,300.0	3.00	262.77	5,296.4	-17.7	-139.8	140.9	0.00	0.00	0.00
5,326.7	3.00	262.77	5,323.0	-17.9	-141.2	142.3	0.00	0.00	0.00
Paddock									
5,331.0	3.00	262.77	5,327.4	-17.9	-141.4	142.6	0.00	0.00	0.00
Ruby Federal (Top of Target)									
5,400.0	3.00	262.77	5,396.2	-18.4	-145.0	146.2	0.00	0.00	0.00
5,500.0	3.00	262.77	5,496.1	-19.1	-150.2	151.4	0.00	0.00	0.00
5,600.0	3.00	262.77	5,596.0	-19.7	-155.4	156.6	0.00	0.00	0.00
5,660.1	3.00	262.77	5,656.0	-20.1	-158.5	159.8	0.00	0.00	0.00
Blinberry									
5,700.0	3.00	262.77	5,695.8	-20.4	-160.6	161.9	0.00	0.00	0.00
5,800.0	3.00	262.77	5,795.7	-21.0	-165.8	167.1	0.00	0.00	0.00
5,900.0	3.00	262.77	5,895.6	-21.7	-171.0	172.3	0.00	0.00	0.00
6,000.0	3.00	262.77	5,995.4	-22.3	-176.2	177.6	0.00	0.00	0.00
6,100.0	3.00	262.77	6,095.3	-23.0	-181.3	182.8	0.00	0.00	0.00
6,200.0	3.00	262.77	6,195.1	-23.7	-186.5	188.0	0.00	0.00	0.00
6,300.0	3.00	262.77	6,295.0	-24.3	-191.7	193.3	0.00	0.00	0.00
6,400.0	3.00	262.77	6,394.9	-25.0	-196.9	198.5	0.00	0.00	0.00
6,500.0	3.00	262.77	6,494.7	-25.6	-202.1	203.7	0.00	0.00	0.00
6,600.0	3.00	262.77	6,594.6	-26.3	-207.3	209.0	0.00	0.00	0.00
6,700.0	3.00	262.77	6,694.5	-27.0	-212.5	214.2	0.00	0.00	0.00
6,724.6	3.00	262.77	6,719.0	-27.1	-213.8	215.5	0.00	0.00	0.00
Tubb									
6,800.0	3.00	262.77	6,794.3	-27.6	-217.7	219.4	0.00	0.00	0.00
6,900.0	3.00	262.77	6,894.2	-28.3	-222.9	224.7	0.00	0.00	0.00
6,915.0	3.00	262.77	6,909.2	-28.4	-223.7	225.5	0.00	0.00	0.00
Production									
6,924.8	3.00	262.77	6,919.0	-28.4	-224.2	226.0	0.00	0.00	0.00



ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 59
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3962.0ft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 3962.0ft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 59	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TD - Ruby Federal 59 (BHL)									

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Ruby Federal (Top of Ta - plan misses target center by 83.5ft at 5331.0ft MD (5327.4 TVD, -17.9 N, -141.4 E) - Circle (radius 150.0)	0.00	0.00	5,323.0	-28.4	-224.2	665,388.09	661,156.66	32° 49' 41.300 N	103° 48' 31.310 W
Ruby Federal 59 (BHL) - plan hits target center - Circle (radius 150.0)	0.00	0.00	6,919.0	-28.4	-224.2	665,388.04	661,156.69	32° 49' 41.300 N	103° 48' 31.310 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
678.0	678.0	Surface	8-5/8	12-1/4
85.0	85.0	Conductor	16	20
6,915.0	6,909.2	Production	5-1/2	7-7/8

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,966.4	2,966.0	Queen		0.00	
1,840.0	1,840.0	Tansill		0.00	
5,660.1	5,656.0	Blaineby		0.00	
6,924.8	6,919.0	TD		0.00	
2,023.0	2,023.0	Yates		0.00	
5,242.5	5,239.0	Glorieta		0.00	
3,743.5	3,742.0	San Andres		0.00	
3,368.0	3,367.0	Grayburg		0.00	
6,724.6	6,719.0	Tubb		0.00	
2,347.0	2,347.0	Seven Rivers		0.00	
653.0	653.0	Rustler		0.00	
826.0	826.0	Salado		0.00	
5,326.7	5,323.0	Paddock		0.00	



ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Ruby Federal 59
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 3962.0ft (PD 822)
Project:	Buckeye	MD Reference:	RKB @ 3962.0ft (PD 822)
Site:	Ruby Federal	North Reference:	Grid
Well:	Ruby Federal 59	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TD - Ruby Federal 59 (BHL)									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Ruby Federal (Top of Ta	0.00	0.00	5,323.0	-28.4	-224.2	665,388.09	661,156.66	32° 49' 41.300 N	103° 48' 31.310 W
- plan misses target center by 83.5ft at 5331.0ft MD (5327.4 TVD, -17.9 N, -141.4 E)									
- Circle (radius 150.0)									
Ruby Federal 59 (BHL)	0.00	0.00	6,919.0	-28.4	-224.2	665,388.04	661,156.69	32° 49' 41.300 N	103° 48' 31.310 W
- plan hits target center									
- Circle (radius 150.0)									

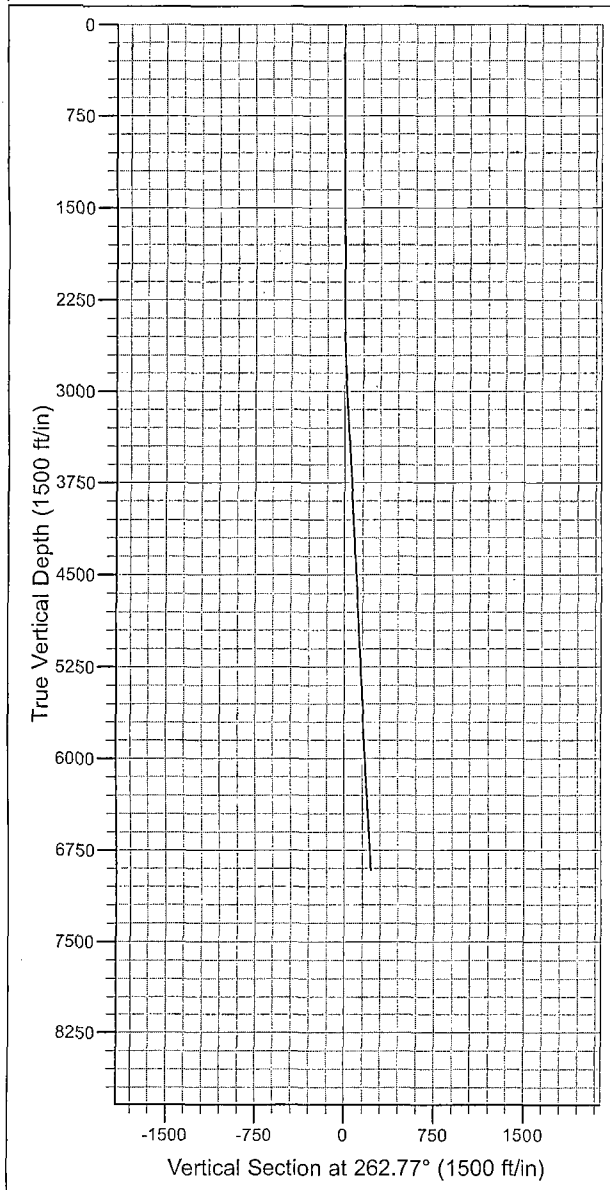
Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
678.0	678.0	Surface	8-5/8	12-1/4
85.0	85.0	Conductor	16	20
6,915.0	6,909.2	Production	5-1/2	7-7/8

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,966.4	2,966.0	Queen		0.00	
1,840.0	1,840.0	Tansill		0.00	
5,660.1	5,656.0	Blinbry		0.00	
6,924.8	6,919.0	TD		0.00	
2,023.0	2,023.0	Yates		0.00	
5,242.5	5,239.0	Glorieta		0.00	
3,743.5	3,742.0	San Andres		0.00	
3,368.0	3,367.0	Grayburg		0.00	
6,724.6	6,719.0	Tubb		0.00	
2,347.0	2,347.0	Seven Rivers		0.00	
653.0	653.0	Rustler		0.00	
826.0	826.0	Salado		0.00	
5,326.7	5,323.0	Paddock		0.00	

Proposed Directional Well Plan



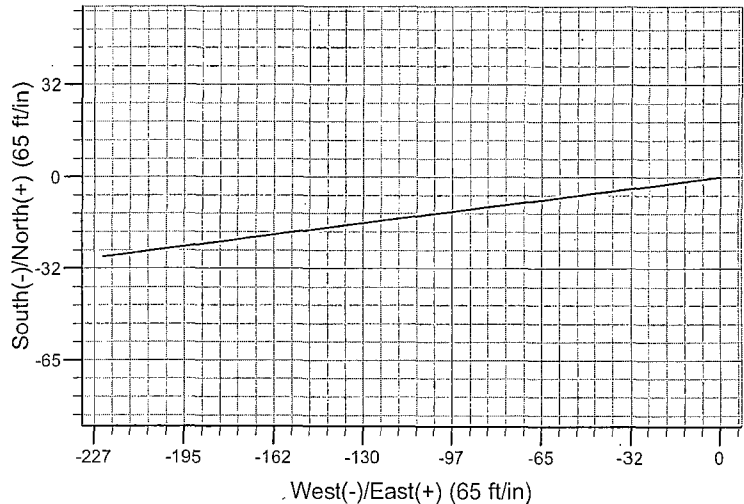
Project: Buckeye
 Site: Ruby Federal
 Well: Ruby Federal 59
 Wellbore: Original Hole
 Design: Actual Plan

WELL DETAILS: Ruby Federal 59

+N/-S	+E/-W	Ground Level:	3949.0	Latitude	Longitude
0.0	0.0	North	665416.49	661380.86	32° 49' 41.570 N 103° 48' 28.681 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	2457.2	0.00	0.00	2457.2	0.0	0.0	0.00	0.00	0.0	
3	2757.2	3.00	262.77	2757.0	-1.0	-7.8	1.00	262.77	7.9	
4	6924.8	3.00	262.77	6919.0	-28.4	-224.2	0.00	0.00	226.0	Ruby Federal 59 (BHL)

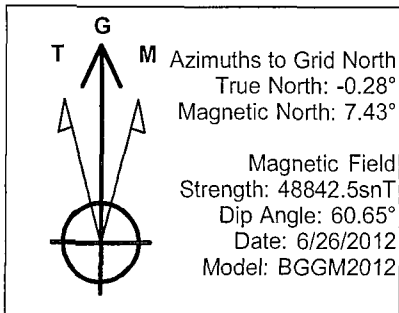


CASING DETAILS

TVD	MD	Name	Size
85.0	85.0	Conductor	16
678.0	678.0	Surface	8-5/8
6909.26	915.0	Production	5-1/2

FORMATION TOP DETAILS

TVD	Path	MD	Path	Formation
653.0	653.0			Rustler
826.0	826.0			Salado
1840.0	1840.0			Tansill
2023.0	2023.0			Yates
2347.0	2347.0			Seven Rivers
2966.0	2966.4			Queen
3367.0	3368.0			Grayburg
3742.0	3743.5			San Andres
5239.0	5242.5			Glorieta
5323.0	5326.7			Paddock
5656.0	5660.1			Blinberry
6719.0	6724.6			Tubb
6919.0	6924.8			TD



Request for Variance

ConocoPhillips Company

Lease Number: NM LC 029405B

Well: Ruby Federal #59

Location: Sec. 18, T17S, R32E

Date: 11-16-12

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

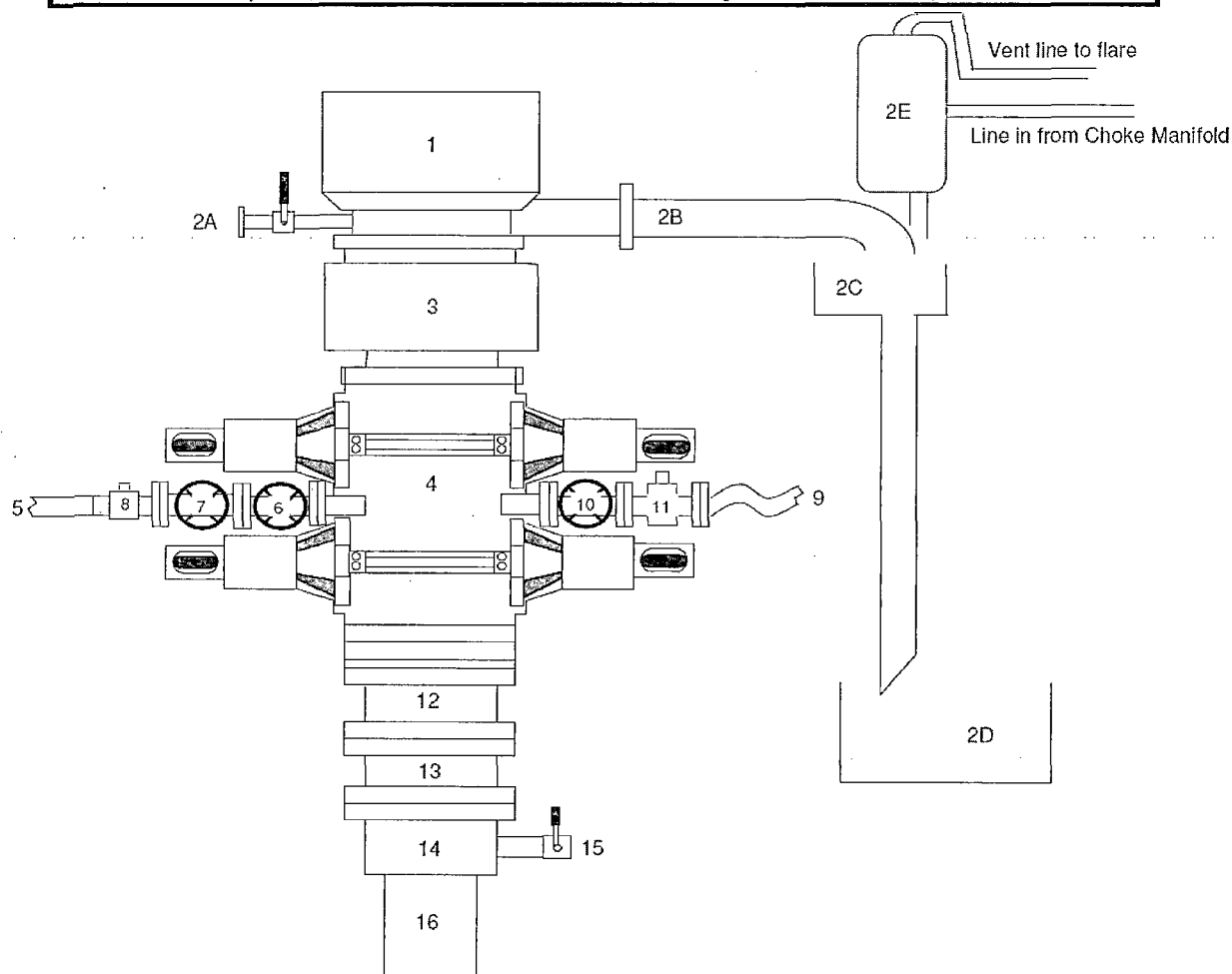
Cell (832) 768-1647

Date: 16 November 2012

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 Coflex 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

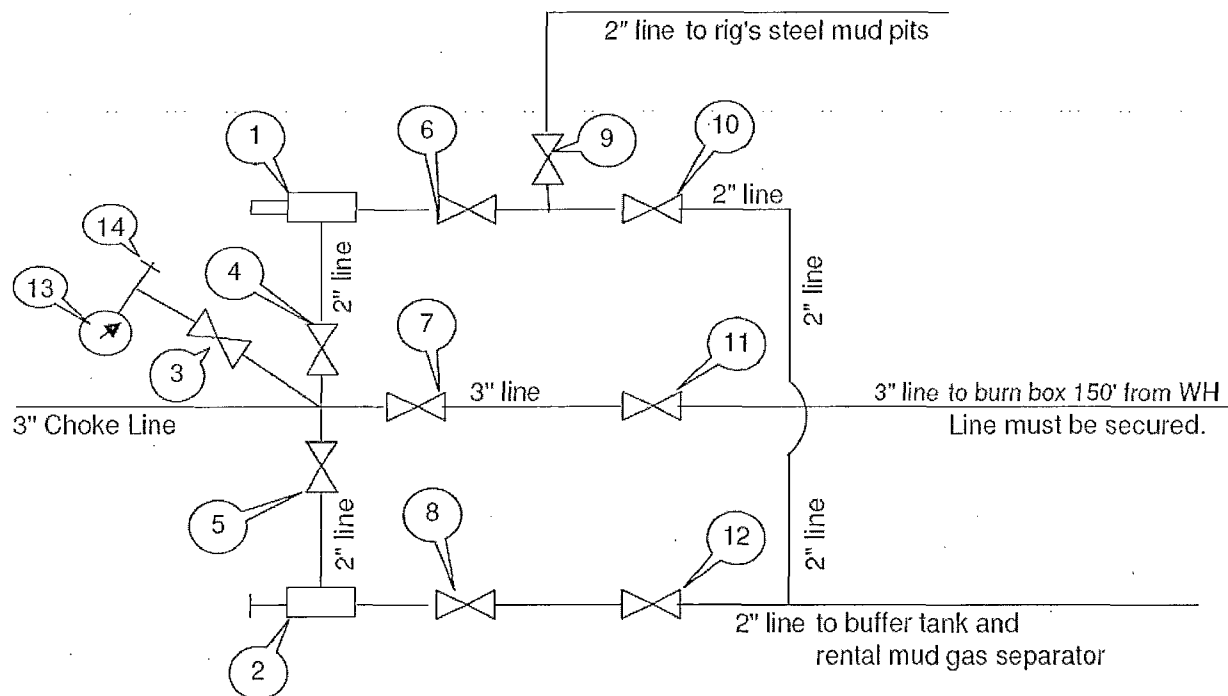
(Date: 11/16/2012)

Page 8 of 9

Attachment # 2

CHOKE MANIFOLD ARRANGEMENT

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



All Tees must be targeted

Item	Description
1	Remote Controlled Hydraulically Operated Adjustable Choke, 2-1/16", 3M
2	Manual 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.

Drawn by:

Steven O. Moore

Chief Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company

Date: 25-Sept-2012

(Date: 11/16/2012)

Page 9 of 9



Reliance Eliminator Choke & Kill

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

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

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

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm.	lb/ft	kg/m	in.	mm.	psi	Mpa
3	76.2	5.11	129.79	14.5	21.46	48	1219.2	5000	34.47
3-1/2	88.9	5.79	147.06	20.14	29.80	54	1371.6	5000	34.47



Fittings

RC4X5055
RC3X5055
RC4X5575

Flanges

R35 - 3-1/8 5000# API Type 6B
R31 - 3-1/8 3000# API Type 6B

Hammer Unions

All Union Configurations

Other

LP Threaded Connectio
Graylock
Custom Ends

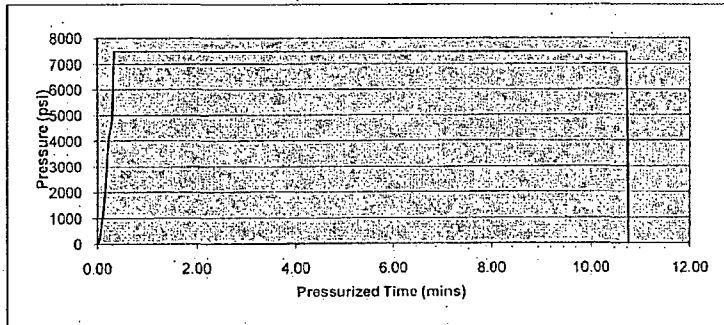
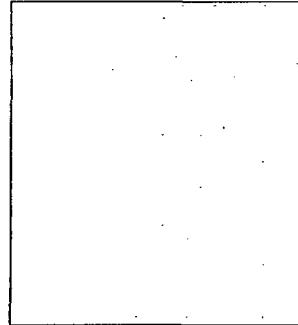


2030 E. 8th Street, Suite B • Greeley, CO 80631
Ph: (970) 346-3751 • Fax: (970) 353-3168 • Toll Free: (866) 771-9739

TEST CERTIFICATE

Customer: PRECISION DRILLING
P.O. #: RIG 822
Invoice #: 27792
Material: 3 1/2" FIREGUARD
Description: 3 1/2" X 10'
Coupling 1: 3 1/2" FLANGE R31
" Serial:
" Quality:
Coupling 2: 3 1/2" FLOATING R31
" Serial:
" Quality:
Working Pressure: 3000
Test Pressure: 7500
Duration (mins): 10

Cert No.: 27792
Date: 9/21/2012



Conducted By: FLORES M.
Test Technician

☒ Acceptable
☐ Not Acceptable