HOBBS OCD

JUN 18 2013

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13-507

AMENDED

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NM LC 060329
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name N/A
2. Name of Operator ConocoPhillips Company 217817	7. If Unit or CA Agreement, Name and No. N/A
3a. Address P.O. Box 51810 Midland, Texas 79710-1810	3b. Phone No. *(include area code)* 432-688-6913
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface 420' FSL and 1340' FEL; UL O, Sec. 17, T17S, R32E At proposed prod. zone 366' FSL and 964' FEL; UL P, Sec. 17, T17S, R32E	8. Lease Name and Well No. Emerald Federal #9 <387427>
	9. API Well No. 30-025- 41231
	10. Field and Pool, or Exploratory Maljamar; Yeso West <44500>
	11. Sec., T. R. M. or Blk. and Survey or Area Sec. 17, 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) 420' FSL Lease 20' FEL	16. No. of acres in lease 323.76 / 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 170' 240	19. Proposed Depth 7044' MD/7026'TVD / 20. BLM/BIA Bond No. on file ES 0085
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4032' GL	22. Approximate date work will start* 08/23/2013 / 23. Estimated duration 10 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Susan B. Maunder	Name *(Printed/Typed)* Susan B. Maunder	Date 4/26/13
Title Senior Regulatory Specialist		
Approved by *(Signature)* /s/George MacDonell	Name *(Printed/Typed)* /s/George MacDonell	Date JUN 13 2013
Title for 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)

Roswell Controlled Water Basin

KZ

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Drilling Plan
ConocoPhillips Company
Maljamar; Yeso, west

Emerald Federal #9

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	791	791	Anhydrite
Salado (top of salt)	972	972	Salt
Tansill (base of salt)	1980	1980	Gas, Oil and Water
Yates	2116	2116	Gas, Oil and Water
Seven Rivers	2451	2451	Gas, Oil and Water
Queen	3082	3085	Gas, Oil and Water
Grayburg	3493	3497	Gas, Oil and Water
San Andres	3875	3881	Gas, Oil and Water
Glorieta	5364	5375	Gas, Oil and Water
Paddock	5438	5450	Gas, Oil and Water
Blinebry	5780	5793	Gas, Oil and Water
Tubb	6826	6843	Gas, Oil and Water
Deepest estimated perforation	6826	6843	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	7026	7044	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		
	(in)	From	To	(inches)	(lb/ft)			(psi)	(psi)	(klbs)	Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
Cond	20	0	40' – 85' (30' – 75' BGL)	16	0.5" wall	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	816' – 861'	8-5/8	24#	J-55	STC	2950	1370	244	1.57	5.39	3.59
Prod	7-7/8	0	6989' – 7034'	5-1/2	17#	L-80	LTC	7740	6290	338	2.12	2.46	1.98

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:

Type	Depth	Wt	MIY	Col	Jt Str	Drill Fluid	Burst	Collapse	Tensile-Dry	Tens-Bouy
Surface Casing	861	24	2950	1370	244000	8.5	7.75	3.60	11.8	13.6
Production Casing	7034	17	7740	6290	338000	10	2.12	1.72	2.83	3.34

Casing Safety Factors – Additional ConocoPhillips Criteria:

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

ConocoPhillips Corporate 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)	861	24	2950	1370	244000	381000	8.5	1.57	5.39	3.59
Production Casing (5-1/2" 17# L-80 LTC)	7034	17	7740	6290	338000	397000	10	2.12	2.46	1.98

Safety Factors – ConocoPhillips Criteria

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 - III. 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
Surface Rated Working Pressure (BOPE) = 3000 psi
Field SW = 10 ppg
Predicted Pore Pressure at TD (PPTD) = 8.55 ppg
Predicted Frac Gradient at Shoe (CSFG) = 19.23 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 (MWhyd next section) =	861	x	0.052	x	10	=	448				
Case #2. MPSP (Field SW @ Bullhead$_{CSFG}$ + 200 psi) =	861	x	0.052	x	19.23	-	448	+	200	=	613
Case #3. MPSP (Kick Vol @ next section TD) =	7034	x	0.052	x	8.55	-	617.3	-	381	=	*2129*
Case #4. MPSP (PPTD - GG) =	7034	x	0.052	x	8.55	-	703.4	=	*2424*		
Case #3 & #4 Limited to MPSP (CSFG + 0.2 ppg) =	861	x	0.052	x (	19.23	+	0.2	) =	870		
MASP (MWhyd + Test Pressure) =	861	x	0.052	x	8.5	+	1500	=	1881		
Burst Safety Factor (Max. MPSP or MASP) =	2950	/	1881	=	**1.57**						

Production Casing Burst Safety Factor:

Case #1. MPSP (MWhyd TD) =	7034	x	0.052	x	10	=	3657.68				
Case #4. MPSP (PPTD - GG) =	7034	x	0.052	x	8.55	-	703.4	=	2424		
Burst Safety Factor (Max. MPSP) =	7740	/	3658	=	**2.12**						
MAWP for the Fracture Stimulation (Corporate Criteria) =	7740	/	1.15	=	6730						

Collapse 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 8.5 ppg gradient.

Surface Casing Collapse Safety Factor = API Collapse Rating / 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

Surface Casing Collapse Safety Factor:

Maximum Diff Lift Pressure =	[(	561	x	0.052	x	13.6	) + (	300	x	0.052	x	14.8	) -	373	] =	254
Collapse Safety Factor =	1370	/	254	=	**5.39**											

Production Casing Collapse Safety Factor:

Maximum Diff Lift Pressure =	[(	1634	x	0.052	x	11.8	) + (	5400	x	0.052	x	16.4	) -	3051	] =	2557
Case #4. MPSP (PPTD-GG) =	7034	x	0.052	x	8.6	-	703.4	=	2424							
Collapse Safety Factor =	6290	/	2557	=	**2.46**											

Tensial Strength 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 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 - Bouyant Wt of the String
Tensial Safety Factor = API Pipe Yield 'OR' API Joint Strength 'OR' Rig Max Load Rating / (Bouyant Wt of String + Minimum Overpull Required)

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

Surface Casing Tensial Strength Safety Factor:

Air Wt =	**20664**								
Bouyant Wt =	20664	x	0.870	=	**17982**				
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	- (	20664	x	0.870	) =	**156303**		
Tensial Safety Factor =	244000	/ (	17982	+	50000	) =	**3.59**		

Production Casing Tensial Strength Safety Factor:

Air Wt =	**119578**								
Bouyant Wt =	119578	x	0.847	=	**101322**				
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	- (	119578	x	0.847	) =	**123678**		
Tensial Safety Factor =	300000	/ (	101322	+	50000	) =	**1.98**		

Compression Strength Safety Factors – ConocoPhillips Criteria

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

Compression Safety Factor

Surf Casing Wt (Bouyant) =	(	20664	x	0.870	) =	**17982**							
Prod Casing Wt (Bouyant) =	(	119578	x	0.847	) =	**101322**							
Tubing Wt (Air Wt) =	7034	x	6.5	=	**45721**								
Tubing Fluid Wt =	7034	x	0.052	x	6.55	x	0.7854	x	2.441	^2 =	**11212**		
Load on Conductor =	3000	+	17982	+	101322	+	45721	+	11212	=	**179237**		
Conductor Compression Safety Factor =	432966	/	179237	=	**2.42**								
Load on Surface Casing =	179237	x	60%	=	**107542**								
Surface Casing Compression Safety Factor =	244000	/	107542	=	**2.27**								

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	516' – 561'	13.6	300	510	+ 2% Extender + 2% $CaCl_2$ + 0.125 lb/sx Lost Circulation Control Agent + 0.2% Defoamer Excess =200% based on gauge hole volume	1.70
Tail	Class C	516' – 561'	816' – 861'	14.8	200	268	1% CaCl2 Excess = 100% based on gauge hole volume	1.34

Displacement: Fresh Water.

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

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

The intention for the cementing program for the Production Casing – Single Stage Cementing Option is to:
- Place the Tail Slurry from the casing shoe to above the top of the 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'	6989' – 7034'	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.

Proposal for Option to Adjust Production Casing Cement Volumes:

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

4. Pressure Control Equipment:

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

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

5. Proposed Mud System:

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.	150 – 300
Surface Casing Point to TD	Brine (Saturated $NaCl_2$) in Steel Pits	10	29	N.C.	10 – 11	300 – 1000
Conversion to Mud at TD	Brine Based Mud ($NaCl_2$) in Steel Pits	10	33 – 40	5 – 10	10 – 11	0 – 1000

Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14. H2S Monitoring Alarm installed at the possum belly could be set as low as 5 to 10 ppm and go into high alarm. The gases shall be piped into the flare system. Gas detection equipment and pit level flow monitoring equipment will be on location. A percentage flow paddle installed in the flow line measures relative amount of mud flowing in non-pressurized return line. There are 4 mud probes in the system. One probe is installed in each of the individual tanks to measure the volume of the drilling fluid in individual mud and trip tanks at the well site. The mud probe data is collected by the Pit Volume Totalizer (PVT) system and the information is available real-time via display in the dog house and the company representative's office on location. ConocoPhillips Company will maintain sufficient mud and weighting material on location if hole conditions warrant.

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.

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.

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

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': Spectral GR, Gamma Ray, Resistivity, Density, and BHC Sonic
   - Total Depth to surface Casing Shoe: Caliper
   - Total Depth to surface, Gamma Ray and Neutron
   - Total Depth to 2500'; Dielectric Scanner (optional)
   - Formation pressure data (XPT) on electric line if needed (optional)
   - Rotary Sidewall Cores on electric line if needed (optional)
   - FMI (Formation Micromager) 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 H_2S 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

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 is mid 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:

Proposed 16 April 2013 by:
James Chen
Drilling Engineer, ConocoPhillips Company
Phone (832) 486-2184
Cell (832) 768-1647

ConocoPhillips MCBU

Buckeye
Emerald Federal
Emerald Federal 9

Original Hole

Plan: Actual Plan

Standard Planning Report - Geographic

22 April, 2013

Database:	EDM Central Planning	**Local Co-ordinate Reference:**	Well Emerald Federal 9
Company:	ConocoPhillips MCBU	**TVD Reference:**	RKB @ 4045.0usft (PD 822)
Project:	Buckeye	**MD Reference:**	RKB @ 4045.0usft (PD 822)
Site:	Emerald Federal	**North Reference:**	Grid
Well:	Emerald Federal 9	**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	Emerald Federal, New Mexico, Southeast				
Site Position:		**Northing:**	666,142.95 usft	**Latitude:**	32° 49' 48.382 N
From:	Lat/Long	**Easting:**	668,872.52 usft	**Longitude:**	103° 47' 0.841 W
Position Uncertainty:	*3.5 usft*	***Slot Radius:***	*8 "*	***Grid Convergence:***	*0.30 °*

Well	Emerald Federal 9, Deviated Well					
Well Position	**+N/-S**	0.0 usft	**Northing:**	665,535.91 usft	**Latitude:**	32° 49' 42.380 N
	+E/-W	0.0 usft	**Easting:**	668,775.09 usft	**Longitude:**	103° 47' 2.020 W
Position Uncertainty		3.5 usft	**Wellhead Elevation:**		**Ground Level:**	4,032.0 usft

Wellbore	Original Hole				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2012	4/22/2013	7.60	60.61	48,746

Design	Actual Plan				
Audit Notes:					
Version:	1	**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	103.57	

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	
2,116.0	0.00	0.00	2,116.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,425.6	4.64	103.57	2,425.2	-2.9	12.2	1.50	1.50	0.00	103.57	
5,448.3	4.64	103.57	5,438.0	-60.4	250.1	0.00	0.00	0.00	0.00	Emerald Federal 9 (T
7,041.5	4.64	103.57	7,026.0	-90.6	375.5	0.00	0.00	0.00	0.00	

Database:	EDM Central Planning	**Local Co-ordinate Reference:**	Well Emerald Federal 9
Company:	ConocoPhillips MCBU	**TVD Reference:**	RKB @ 4045.0usft (PD 822)
Project:	Buckeye	**MD Reference:**	RKB @ 4045.0usft (PD 822)
Site:	Emerald Federal	**North Reference:**	Grid
Well:	Emerald Federal 9	**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	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
75.0	0.00	0.00	75.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Conductor									
100.0	0.00	0.00	100.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
200.0	0.00	0.00	200.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
300.0	0.00	0.00	300.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
400.0	0.00	0.00	400.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
500.0	0.00	0.00	500.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
600.0	0.00	0.00	600.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
700.0	0.00	0.00	700.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
791.0	0.00	0.00	791.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Rustler									
800.0	0.00	0.00	800.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
816.0	0.00	0.00	816.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Surface									
900.0	0.00	0.00	900.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
972.0	0.00	0.00	972.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Salado									
1,000.0	0.00	0.00	1,000.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
1,980.0	0.00	0.00	1,980.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Tansill									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
2,116.0	0.00	0.00	2,116.0	0.0	0.0	665,535.91	668,775.09	32° 49' 42.380 N	103° 47' 2.020 W
Yates									
2,200.0	1.26	103.57	2,200.0	-0.2	0.9	665,535.69	668,775.98	32° 49' 42.378 N	103° 47' 2.009 W
2,300.0	2.76	103.57	2,299.9	-1.0	4.3	665,534.87	668,779.39	32° 49' 42.370 N	103° 47' 1.970 W
2,400.0	4.26	103.57	2,399.7	-2.5	10.3	665,533.44	668,785.34	32° 49' 42.355 N	103° 47' 1.900 W
2,425.6	4.64	103.57	2,425.2	-2.9	12.2	665,532.97	668,787.27	32° 49' 42.350 N	103° 47' 1.877 W
2,451.4	4.64	103.57	2,451.0	-3.4	14.2	665,532.48	668,789.31	32° 49' 42.345 N	103° 47' 1.854 W
Seven Rivers									
2,500.0	4.64	103.57	2,499.4	-4.4	18.0	665,531.56	668,793.13	32° 49' 42.336 N	103° 47' 1.809 W
2,600.0	4.64	103.57	2,599.1	-6.3	25.9	665,529.66	668,801.00	32° 49' 42.317 N	103° 47' 1.717 W
2,700.0	4.64	103.57	2,698.8	-8.2	33.8	665,527.76	668,808.87	32° 49' 42.298 N	103° 47' 1.625 W
2,800.0	4.64	103.57	2,798.4	-10.1	41.7	665,525.86	668,816.74	32° 49' 42.278 N	103° 47' 1.532 W
2,900.0	4.64	103.57	2,898.1	-12.0	49.5	665,523.96	668,824.61	32° 49' 42.259 N	103° 47' 1.440 W
3,000.0	4.64	103.57	2,997.8	-13.9	57.4	665,522.06	668,832.48	32° 49' 42.240 N	103° 47' 1.348 W
3,084.5	4.64	103.57	3,082.0	-15.5	64.0	665,520.45	668,839.13	32° 49' 42.224 N	103° 47' 1.270 W
Queen									
3,100.0	4.64	103.57	3,097.4	-15.8	65.3	665,520.16	668,840.35	32° 49' 42.221 N	103° 47' 1.256 W
3,200.0	4.64	103.57	3,197.1	-17.7	73.1	665,518.26	668,848.22	32° 49' 42.202 N	103° 47' 1.164 W
3,300.0	4.64	103.57	3,296.8	-19.6	81.0	665,516.36	668,856.09	32° 49' 42.182 N	103° 47' 1.072 W
3,400.0	4.64	103.57	3,396.5	-21.5	88.9	665,514.46	668,863.96	32° 49' 42.163 N	103° 47' 0.980 W

Database:	EDM Central Planning	**Local Co-ordinate Reference:**	Well Emerald Federal 9
Company:	ConocoPhillips MCBU	**TVD Reference:**	RKB @ 4045.0usft (PD 822)
Project:	Buckeye	**MD Reference:**	RKB @ 4045.0usft (PD 822)
Site:	Emerald Federal	**North Reference:**	Grid
Well:	Emerald Federal 9	**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
3,496.9	4.64	103.57	3,493.0	-23.3	96.5	665,512.62	668,871.58	32° 49' 42.145 N	103° 47' 0.891 W
Grayburg									
3,500.0	4.64	103.57	3,496.1	-23.4	96.7	665,512.56	668,871.83	32° 49' 42.144 N	103° 47' 0.888 W
3,600.0	4.64	103.57	3,595.8	-25.2	104.6	665,510.66	668,879.70	32° 49' 42.125 N	103° 47' 0.796 W
3,700.0	4.64	103.57	3,695.5	-27.1	112.5	665,508.76	668,887.57	32° 49' 42.106 N	103° 47' 0.703 W
3,800.0	4.64	103.57	3,795.1	-29.0	120.4	665,506.86	668,895.44	32° 49' 42.086 N	103° 47' 0.611 W
3,880.1	4.64	103.57	3,875.0	-30.6	126.7	665,505.34	668,901.74	32° 49' 42.071 N	103° 47' 0.538 W
San Andres									
3,900.0	4.64	103.57	3,894.8	-30.9	128.2	665,504.96	668,903.31	32° 49' 42.067 N	103° 47' 0.519 W
4,000.0	4.64	103.57	3,994.5	-32.8	136.1	665,503.07	668,911.18	32° 49' 42.048 N	103° 47' 0.427 W
4,100.0	4.64	103.57	4,094.2	-34.7	144.0	665,501.17	668,919.05	32° 49' 42.029 N	103° 47' 0.335 W
4,200.0	4.64	103.57	4,193.8	-36.6	151.8	665,499.27	668,926.92	32° 49' 42.010 N	103° 47' 0.243 W
4,300.0	4.64	103.57	4,293.5	-38.5	159.7	665,497.37	668,934.78	32° 49' 41.990 N	103° 47' 0.151 W
4,400.0	4.64	103.57	4,393.2	-40.4	167.6	665,495.47	668,942.65	32° 49' 41.971 N	103° 47' 0.059 W
4,500.0	4.64	103.57	4,492.9	-42.3	175.4	665,493.57	668,950.52	32° 49' 41.952 N	103° 46' 59.967 W
4,600.0	4.64	103.57	4,592.5	-44.2	183.3	665,491.67	668,958.39	32° 49' 41.933 N	103° 46' 59.874 W
4,700.0	4.64	103.57	4,692.2	-46.1	191.2	665,489.77	668,966.26	32° 49' 41.914 N	103° 46' 59.782 W
4,800.0	4.64	103.57	4,791.9	-48.0	199.1	665,487.87	668,974.13	32° 49' 41.894 N	103° 46' 59.690 W
4,900.0	4.64	103.57	4,891.5	-49.9	206.9	665,485.97	668,982.00	32° 49' 41.875 N	103° 46' 59.598 W
5,000.0	4.64	103.57	4,991.2	-51.8	214.8	665,484.07	668,989.87	32° 49' 41.856 N	103° 46' 59.506 W
5,100.0	4.64	103.57	5,090.9	-53.7	222.7	665,482.17	668,997.74	32° 49' 41.837 N	103° 46' 59.414 W
5,200.0	4.64	103.57	5,190.6	-55.6	230.5	665,480.27	669,005.61	32° 49' 41.818 N	103° 46' 59.322 W
5,300.0	4.64	103.57	5,290.2	-57.5	238.4	665,478.37	669,013.48	32° 49' 41.798 N	103° 46' 59.230 W
5,374.0	4.64	103.57	5,364.0	-58.9	244.2	665,476.97	669,019.31	32° 49' 41.784 N	103° 46' 59.162 W
Glorieta									
5,400.0	4.64	103.57	5,389.9	-59.4	246.3	665,476.47	669,021.35	32° 49' 41.779 N	103° 46' 59.138 W
5,448.3	4.64	103.57	5,438.0	-60.4	250.1	665,475.56	669,025.15	32° 49' 41.770 N	103° 46' 59.093 W
Paddock									
5,500.0	4.64	103.57	5,489.6	-61.3	254.1	665,474.57	669,029.22	32° 49' 41.760 N	103° 46' 59.045 W
5,600.0	4.64	103.57	5,589.2	-63.2	262.0	665,472.68	669,037.09	32° 49' 41.741 N	103° 46' 58.953 W
5,700.0	4.64	103.57	5,688.9	-65.1	269.9	665,470.78	669,044.96	32° 49' 41.722 N	103° 46' 58.861 W
5,791.4	4.64	103.57	5,780.0	-66.9	277.1	665,469.04	669,052.15	32° 49' 41.704 N	103° 46' 58.777 W
Blinebry									
5,800.0	4.64	103.57	5,788.6	-67.0	277.8	665,468.88	669,052.83	32° 49' 41.702 N	103° 46' 58.769 W
5,900.0	4.64	103.57	5,888.3	-68.9	285.6	665,466.98	669,060.70	32° 49' 41.683 N	103° 46' 58.677 W
6,000.0	4.64	103.57	5,987.9	-70.8	293.5	665,465.08	669,068.57	32° 49' 41.664 N	103° 46' 58.585 W
6,100.0	4.64	103.57	6,087.6	-72.7	301.4	665,463.18	669,076.44	32° 49' 41.645 N	103° 46' 58.493 W
6,200.0	4.64	103.57	6,187.3	-74.6	309.2	665,461.28	669,084.31	32° 49' 41.626 N	103° 46' 58.401 W
6,300.0	4.64	103.57	6,286.9	-76.5	317.1	665,459.38	669,092.18	32° 49' 41.606 N	103° 46' 58.309 W
6,400.0	4.64	103.57	6,386.6	-78.4	325.0	665,457.48	669,100.05	32° 49' 41.587 N	103° 46' 58.217 W
6,500.0	4.64	103.57	6,486.3	-80.3	332.9	665,455.58	669,107.92	32° 49' 41.568 N	103° 46' 58.124 W
6,600.0	4.64	103.57	6,586.0	-82.2	340.7	665,453.68	669,115.79	32° 49' 41.549 N	103° 46' 58.032 W
6,700.0	4.64	103.57	6,685.6	-84.1	348.6	665,451.78	669,123.66	32° 49' 41.530 N	103° 46' 57.940 W
6,800.0	4.64	103.57	6,785.3	-86.0	356.5	665,449.88	669,131.53	32° 49' 41.510 N	103° 46' 57.848 W
6,840.8	4.64	103.57	6,826.0	-86.8	359.7	665,449.11	669,134.74	32° 49' 41.503 N	103° 46' 57.810 W
Tubb									
6,900.0	4.64	103.57	6,885.0	-87.9	364.3	665,447.98	669,139.40	32° 49' 41.491 N	103° 46' 57.756 W
7,000.0	4.64	103.57	6,984.6	-89.8	372.2	665,446.08	669,147.27	32° 49' 41.472 N	103° 46' 57.664 W
7,034.0	4.64	103.57	7,018.5	-90.5	374.9	665,445.44	669,149.94	32° 49' 41.465 N	103° 46' 57.633 W
Production									
7,041.5	4.64	103.57	7,026.0	-90.6	375.5	665,445.30	669,150.53	32° 49' 41.464 N	103° 46' 57.626 W
TD									

Database:	EDM Central Planning	**Local Co-ordinate Reference:**	Well Emerald Federal 9
Company:	ConocoPhillips MCBU	**TVD Reference:**	RKB @ 4045.0usft (PD 822)
Project:	Buckeye	**MD Reference:**	RKB @ 4045.0usft (PD 822)
Site:	Emerald Federal	**North Reference:**	Grid
Well:	Emerald Federal 9	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	Actual Plan		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Emerald Federal 9 (Top	0.00	0.01	5,438.0	-126.5	355.7	665,409.41	669,130.72	32° 49' 41.110 N	103° 46' 57.860 W
- plan misses target center by 124.2usft at 5457.8usft MD (5447.5 TVD, -60.5 N, 250.8 E)									
- Circle (radius 150.0)									

Casing Points

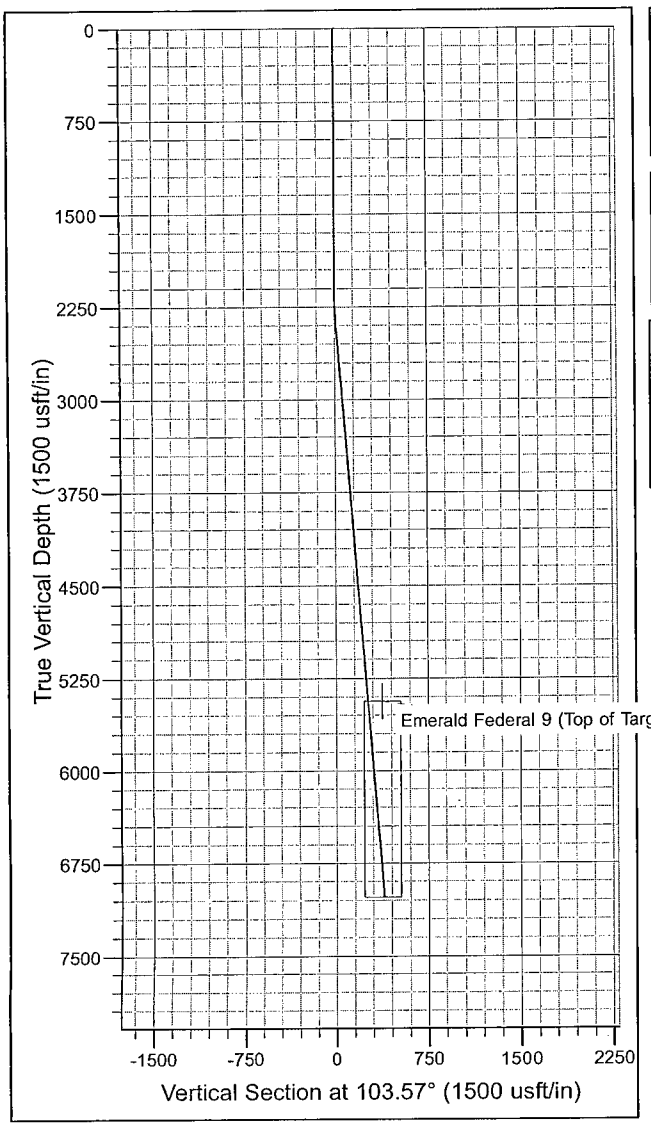
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
75.0	75.0	Conductor	16	20
816.0	816.0	Surface	8-5/8	12-1/4
7,034.0	7,018.5	Production	5-1/2	7-7/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
791.0	791.0	Rustler		0.00	
972.0	972.0	Salado		0.00	
1,980.0	1,980.0	Tansill		0.00	
2,116.0	2,116.0	Yates		0.00	
2,451.4	2,451.0	Seven Rivers		0.00	
3,084.5	3,082.0	Queen		0.00	
3,496.9	3,493.0	Grayburg		0.00	
3,880.1	3,875.0	San Andres		0.00	
5,374.0	5,364.0	Glorieta		0.00	
5,448.3	5,438.0	Paddock		0.00	
5,791.4	5,780.0	Blinebry		0.00	
6,840.8	6,826.0	Tubb		0.00	
7,041.5	7,026.0	TD		0.00	

ConocoPhillips

Proposed Directional Well Plan



Project: Buckeye
Site: Emerald Federal
Well: Emerald Federal 9
Wellbore: Original Hole
Design: Actual Plan

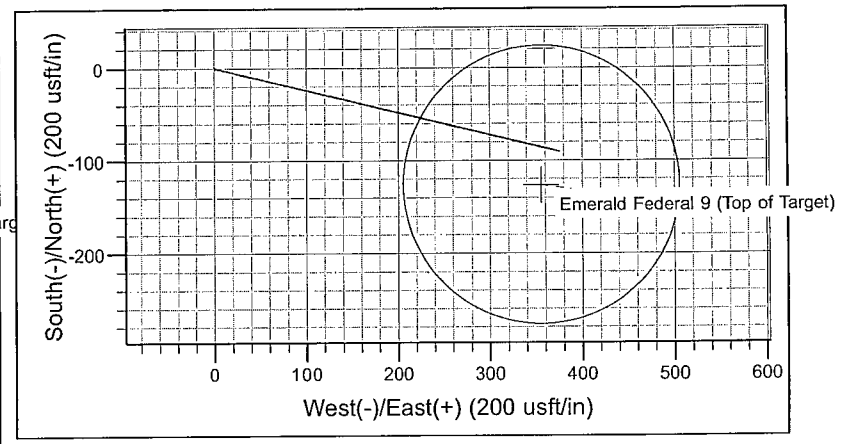
WELL DETAILS: Emerald Federal 9

Ground Level: 4032.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	665535.91	668775.08	32° 49' 42.380 N	103° 47' 2.020 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2116.0	0.00	0.00	2116.0	0.0	0.0	0.00	0.00	0.0	
3	2425.6	4.64	103.57	2425.2	-2.9	12.2	1.50	103.57	12.5	
4	5448.3	4.64	103.57	5438.0	-60.4	250.1	0.00	0.00	257.3	Emerald Federal 9 (Top of Target)
5	7041.5	4.64	103.57	7026.0	-90.6	375.5	0.00	0.00	386.2	

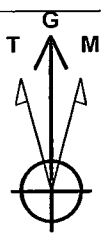


CASING DETAILS

TVD	MD	Name	Size
75.0	75.0	Conductor	16
816.0	816.0	Surface	8-5/8
7018.5	7034.0	Production	5-1/2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
791.0	791.0	Rustler
972.0	972.0	Salado
1980.0	1980.0	Tansill
2116.0	2116.0	Yates
2451.0	2451.4	Seven Rivers
3082.0	3084.5	Queen
3493.0	3496.9	Grayburg
3875.0	3880.1	San Andres
5364.0	5374.0	Glorieta
5438.0	5448.3	Paddock
5780.0	5791.4	Blinebry
6826.0	6840.8	Tubb
7026.0	7041.5	TD

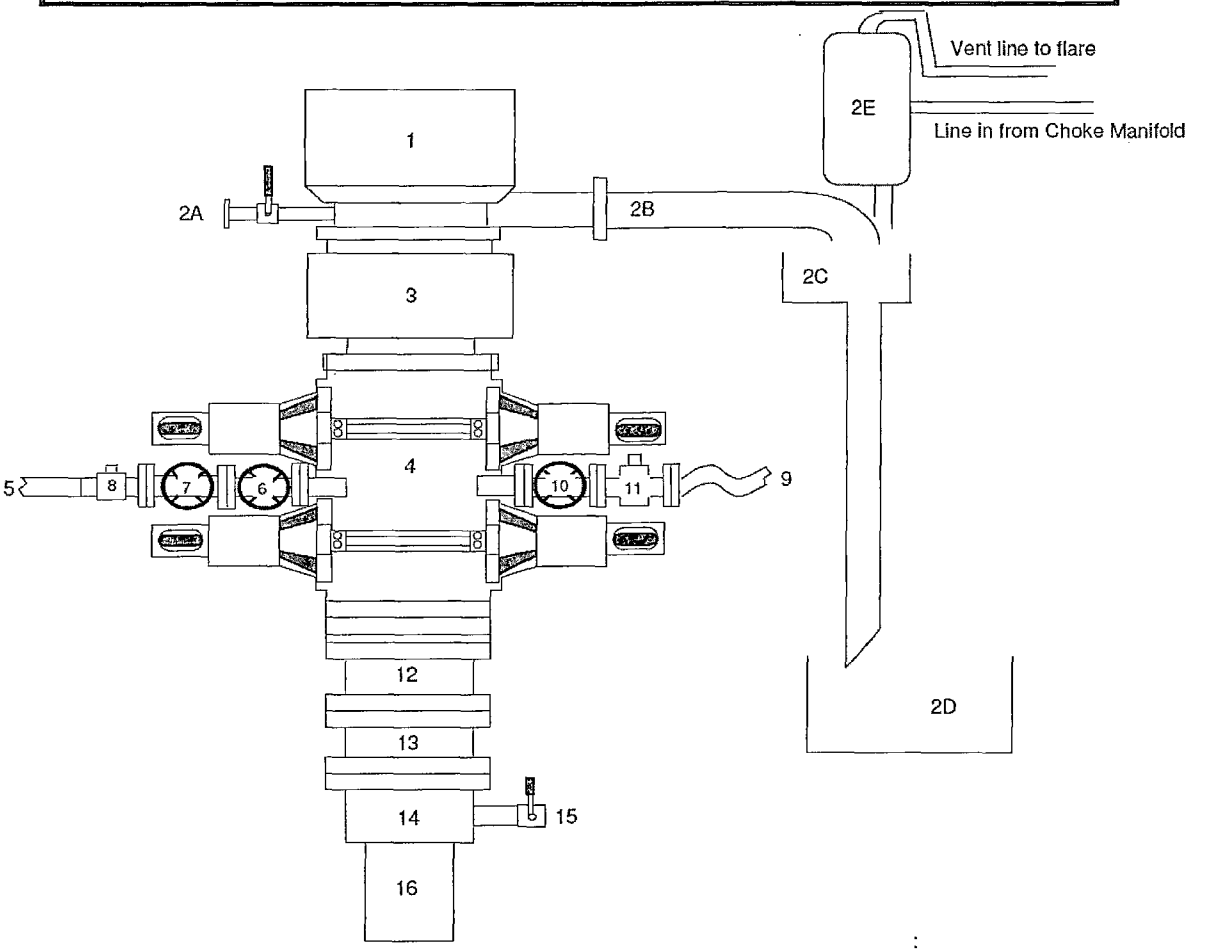


Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.30°

Magnetic Field
Strength: 48746.1snT
Dip Angle: 60.61°
Date: 4/22/2013
Model: BGGM2012

Attachment # 1

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



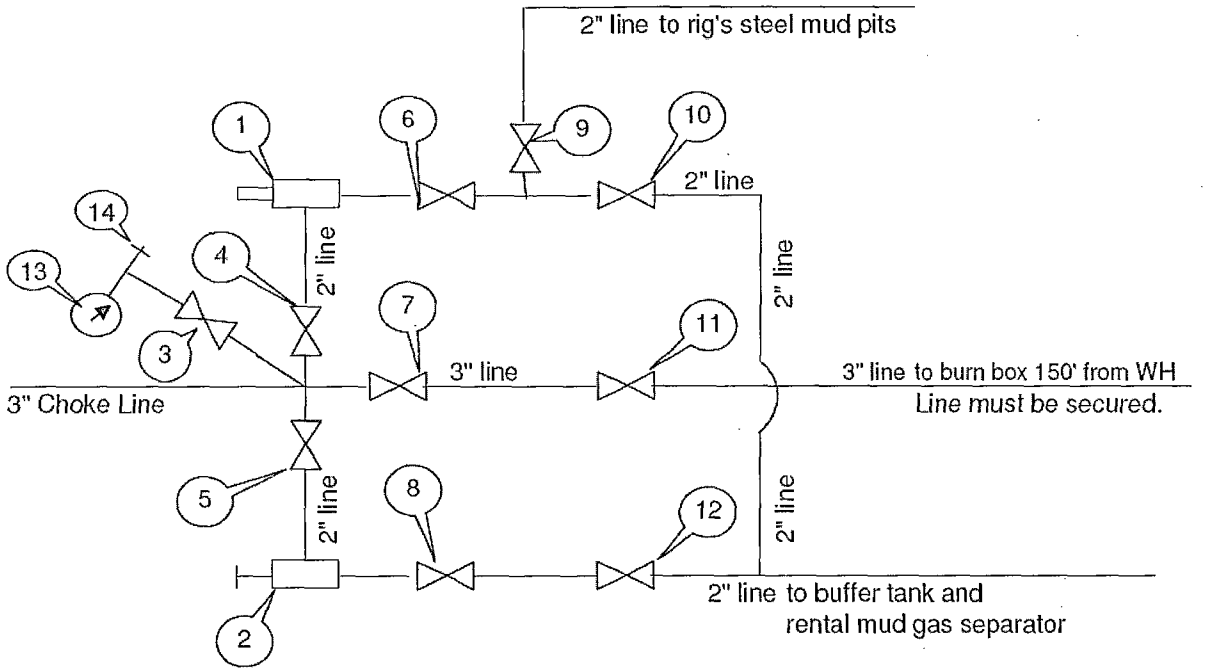
Item	Description
1	Rotating Head, 11"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (11", 3M)
4	Double Ram (11", 3M, equipped with 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

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

Request for Variance

ConocoPhillips Company
Lease Number: NM LC 060329
Well: Emerald Federal #9
Location: Sec. 17, T17S, R32E
Date: 02-24-13

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: 24 February 2013

Attachment # 1

RELIANCE
Industrial Products USA, Ltd.

[redacted]

[redacted]

RELIANCE

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

[redacted]

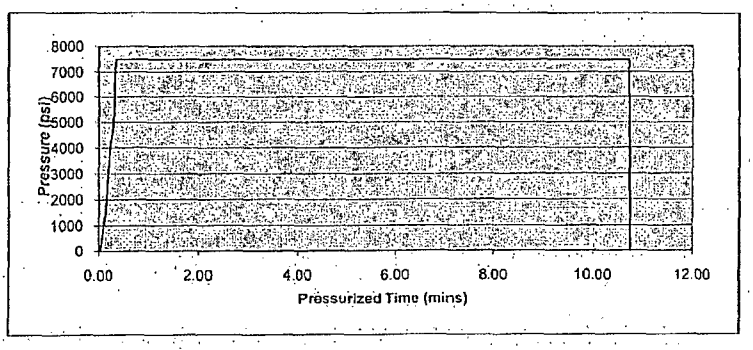
Fittings	Flanges	Hammer Unions	Other
RC4X5055	R35 - 3-1/8 5000# API Type 6B	All Union Configurations	LP Threaded Connectio
RC3X5055	R31 - 3-1/8 3000# API Type 6B		Graylock
RC4X5575			Custom Ends

Attachment # 2

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

T E S T C E R T I F I C A T E

Customer:	PRECISION DRILLING	Cert No.:	27792
P.O. #:	RIG 822	Date:	9/21/2012
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		



Conducted By: FLORES M.
Test Technician

☑ Acceptable
☐ Not Acceptable

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

ConocoPhillips Company
Well: Emerald Federal #9
Location: Sec. 17, T17S, R32E
Date: 02-22-13

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 haul-off bins or in frac tanks as needed. The intent is as follows:

   - We propose to use the rigs's 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:

   Controlled Recovery Inc./ Operator: R-360 Permian Basin, LLC
   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 West of Hobbs, NM and 32 miles East of Carlsbad, NM).

   The Permit Number for R-360 is NM-1-006/R-9166

   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 Controlled Recovery 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**)

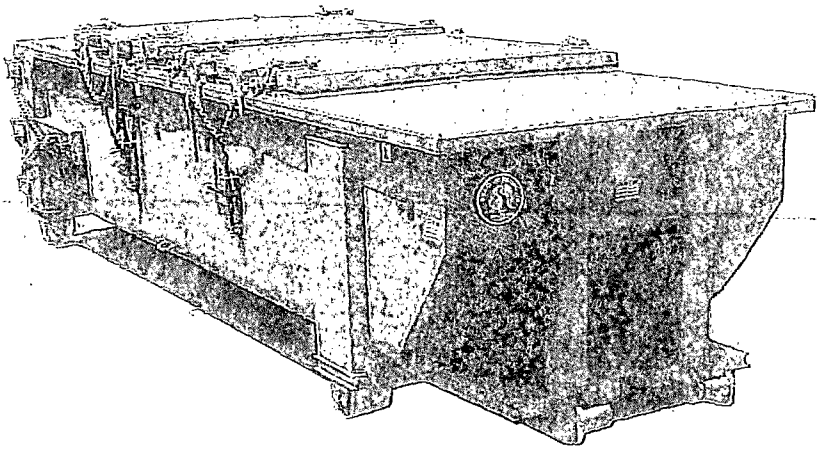
   - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

James Chen
Drilling Engineer
Office: 832.486.2184
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, inside liner hooks
DOOR: 3/16" PL with tubing frame
FRONT: 3/16" PL slant formed
PICK UP: Standard cable with 2" x 6" x 1/4" rails, gusset at each crossmember
WHEELS: 10 DIA x 9 long with rease fittings
DOOR LATCH: 3 independent ratchet binders with chains, vertical second latch
GASKETS: Extruded rubber seal with metal retainers
WELDS: All welds continuous except sub-structure crossmembers
FINISH: Coated inside and out with direct to metal, rust inhibiting acrylic enamel color coat
HYDROTESTING: Full capacity static test
DIMENSIONS: 22'-11" long (21'-8" inside), 99" wide (88" inside), see drawing for height
OPTIONS: Steel grit blast and special paint, Ampliroll, Heil 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 per lid
GASKETS: Extruded rubber seal with metal retainers

Heavy Duty Split Metal Rolling Lid



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