

HOBBS OCD
OCD#00000000OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 05 2014

Lease Serial No.
NM LC 029405B

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

6. If Indian, Allottee or Tribe Name
N/A1a. Type of work: ☒ DRILL ☐ REENTER7. If Unit or CA Agreement, Name and No.
N/A1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone8. Lease Name and Well No.
Ruby Federal 472. Name of Operator
ConocoPhillips Company9. API Well No.
30-025-3a. Address 600 N. Dairy Ashford Rd, Office
P10-4-4054
Houston, TX 77079-11753b. Phone No. (include area code)
(281)206-528110. Field and Pool, or Exploratory
Maljamar; Yeso West

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface UL C, Sec. 18, T17S, R32E; 965' FNL and 2350' FWL

At proposed prod. zone same as above

11. Sec., T. R. M. or Blk. and Survey of Area
Sec. 18, T17S, R32E14. Distance in miles and direction from nearest town or post office*
Approximately 3 miles south of Maljamar, New Mexico12. County or Parish
Lea County13. State
NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

290'

16. No. of acres in lease
1601.9617. Spacing Unit dedicated to this well
40 acres18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

approximately 1160'

19. Proposed Depth
6920' TVD/MD20. BLM/BIA Bond No. on file
ES008521. Elevations (Show whether DF, KDB, RT, GL, etc.)
3972' GL22. Approximate date work will start*
02/10/201423. Estimated duration
7 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. Maunders

Name (Printed/Typed)

Susan B. Maunders

Date

10/31/13

Title

Senior Regulatory Specialist

Approved by (Signature)

/s/ STEPHEN J. CAFFEY

Name (Printed/Typed)

Date

FEB - 4 2014

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)

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

FEB 10 2014 dm

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

Ruby Federal #47

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 Depths FT MD	Contents
Quaternary	Surface	Fresh Water
Rustler	699	Anhydrite
Salado (top of salt)	884	Salt
Tansill (base of salt)	1876	Gas, Oil and Water
Yates	2058	Gas, Oil and Water
Seven Rivers	2365	Gas, Oil and Water
Queen	3003	Gas, Oil and Water
Grayburg	3444	Gas, Oil and Water
San Andres	3796	Gas, Oil and Water
Glorieta	5262	Gas, Oil and Water
Paddock	5342	Gas, Oil and Water
Blinberry	5708	Gas, Oil and Water
Tubb	6720	Gas, Oil and Water
Deepest estimated perforation	6720	Deepest estimated perf. is ~ Top of Tubb
Total Depth (maximum)	6920	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	724' – 769'	8-5/8	24#	J-55	STC	2950	1370	244	1.60	4.01	3.69
Prod	7-7/8	0	6865' – 6910'	5-1/2	17#	L-80	LTC	7740	6290	338	2.15	2.53	2.01

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	769	24	2950	1370	244000	8.5	8.68	4.03	13.2	15.2
Production Casing	6910	17	7740	6290	338000	10	2.15	1.75	2.88	3.40

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)	769	24	2950	1370	244000	381000	8.5	1.60 4.01 3.69
Production Casing (5-1/2" 17# L-80/LTC)	6910	17	7740	6290	338000	397000	10	2.15 2.53 2.01

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 - II 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 (PPPD) =	8.55 ppg
Surface Rated Working Pressure (ROPE) =	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 (MWHyd next section) =	769	x	0.052	x	10	=	400			
Case #2: MPSP (Field SW @ Bullhead case + 200 psi) =	769	x	0.052	x	19.23	=	400	+	200	= 569
Case #3: MPSP (Kick Vol @ next section TD) =	6910	x	0.052	x	8.55	=	614.1	+	340	= 2118
Case #4: MPSP (PPPD - GG) =	6910	x	0.052	x	8.55	=	691	=	2381	
Case #3 & #4 Limited to MPSP (CSFG + 0.2 ppg) =	769	x	0.052	x	19.23	=	0.2	=	777	
MASP (MWHyd + Test Pressure) =	769	x	0.052	x	8.5	=	1500	=	1840	
Burst Safety Factor (Max. MPSP or MASP) =	2950	/	1840	=	1.60					

Production Casing Burst Safety Factor:

Case #1: MPSP (MWHyd TD) =	6910	x	0.052	x	10	=	3593.2			
Case #4: MPSP (PPPD - GG) =	6910	x	0.052	x	8.55	=	691	=	2381	
Burst Safety Factor (Max. MPSP) =	7740	/	3593	=	2.15					
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 horizon on the outside of the casing which we assumed to be PPPD.

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 (FV) =	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 =	769	x	0.052	x	8.55	=	342			
Cementing Diff Lift Pressure =	((469	x	0.052	x	13.6	) + ( 300	x	0.052	x	14.8) - 333] = 229
Collapse Safety Factor =	1370	/	342	=	4.01					

Production Casing Collapse Safety Factor:

1/3 Evacuation Diff Pressure =	((	6910	x	0.052	x	8.55	) - (	6910	/	3	x	0.052	x	8.34	)] =	2073
Cementing Diff Lift Pressure =	((	1710	x	0.052	x	11.8	) + (	5200	x	0.052	x	16.4	) -	2997	] =	2487
Collapse Safety Factor =	6290	/	2487	=	2.53											

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 =	18456										
Buoyant Wt =	18456	x	0.870	=	16061						
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	- (18456	x	0.870	) =	158225					
Tensile Safety Factor =	244000	/ (16061	+	50000	) =	3.69					

Production Casing Tensile Strength Safety Factor:

Air Wt =	117470										
Buoyant Wt =	117470	x	0.847	=	99536						
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	- (117470	x	0.847	) =	125464					
Tensile Safety Factor =	300000	/ (99536	+	50000	) =	2.01					

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 pile or landing rig. 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) =	(18456	x	0.870	) =	16061						
Prod. Casing Wt (Buoyant) =	(117470	x	0.847	) =	99536						
Tubing Wt (Air Wt) =	6910	x	6.5	=	44915						
Tubing Fluid Wt =	6910	x	0.052	x	6.55	x	0.7854	x	2.441	*2 =	11014
Load on Conductor =	3000	+	16061	+	99536	+	44915	+	11014	=	174526
Conductor Compression Safety Factor =	432966	/	174526	=	2.48						
Load on Surface Casing =	174526	x	60%	=	104715						
Surface Casing Compression Safety Factor =	244000	/	104715	=	2.33						

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	
8 5/8	Lead	Class C	Surface	424' – 469'	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	424' – 469'	724' – 769'	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

5 1/2

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'	6865' – 6910'	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 glutaraldehyde 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'	6865' – 6910'	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.

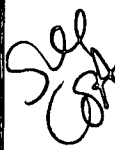
6. Logging, Coring, and Testing Program:

- 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

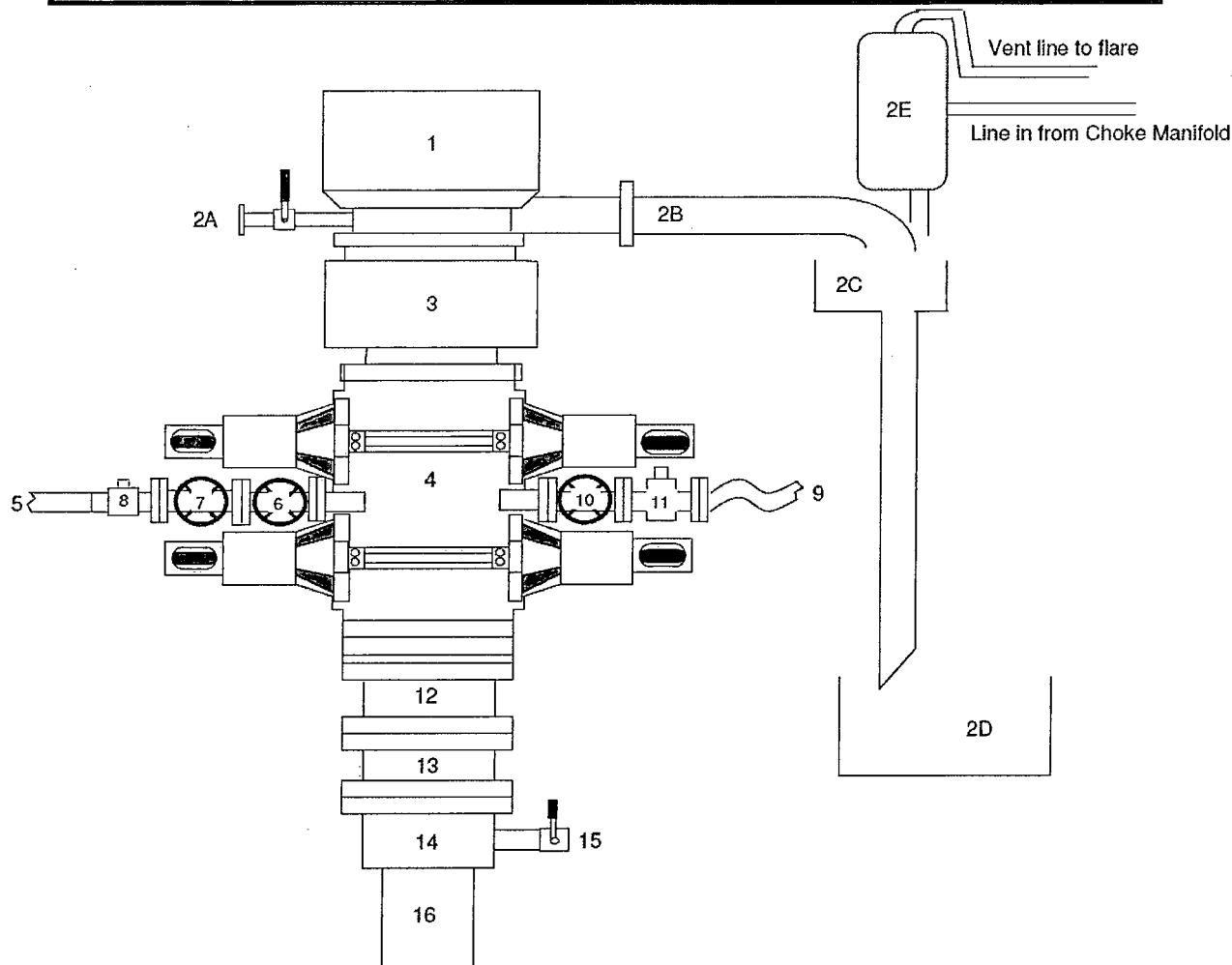
Contact Information:

Proposed 13 August 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

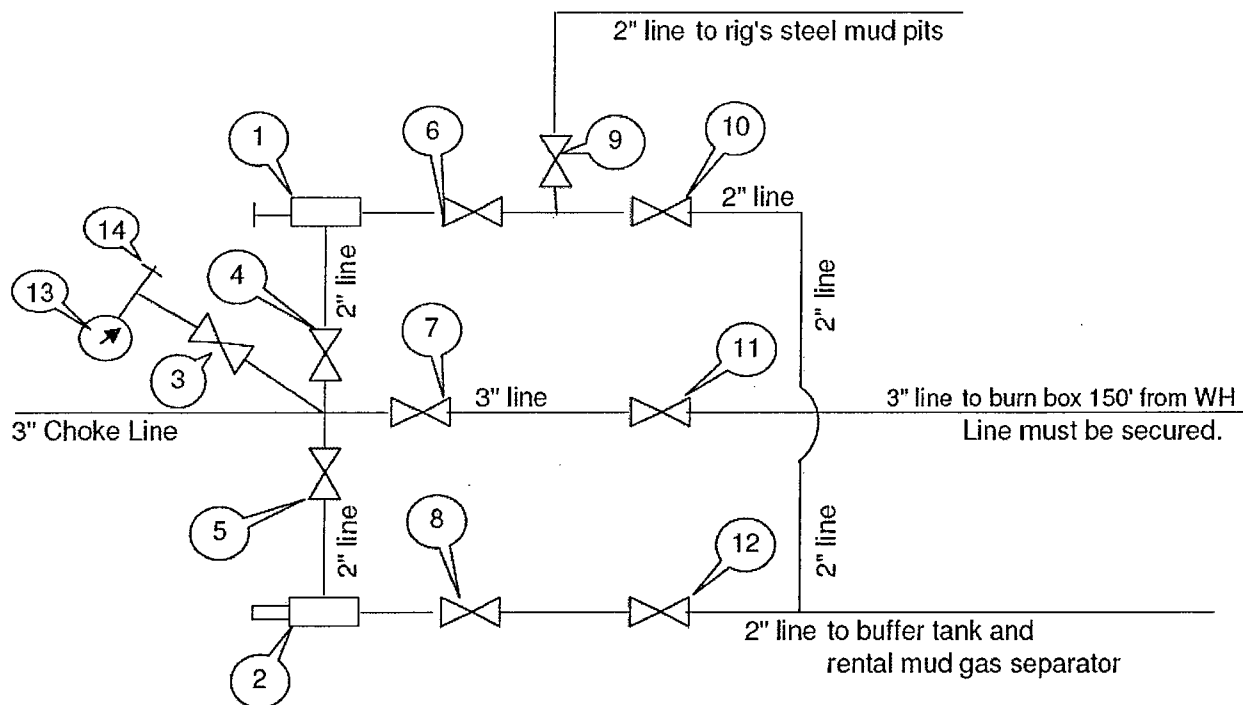


Item	Description
1	Rotating Head, 11"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (11", 3M)
4	Double Ram (11", 3M, equipped with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

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	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

Request for Variance

ConocoPhillips Company


Lease Number: NM LC 029405B

Well: Ruby Federal #47

Location: Sec. 18, T17S, R32E

Date: 8/13/2013

Request:

 ConocoPhillips Company respectfully requests a variance to install a flexible choke line instead of a straight choke line prescribed in the Onshore Order No. 2, III.A.2.b Minimum standards and enforcement provisions for choke manifold equipment. This request is made under the provision of Onshore Order No. 2, IV Variances from Minimum Standard. The rig to be used to drill this well is equipped with a flexible choke line if the requested variance is approved and determined that the proposed alternative meets the objectives of the applicable minimum standards.

Justifications:

The applicability of the flexible choke line will reduce the number of target tees required to make up from the choke valve to the choke manifold. This configuration will facilitate ease of rig up and BOPE Testing.

Attachments:

- Attachment # 1 Specification from Manufacturer
- Attachment # 2 Mill & Test Certification from Manufacturer

Contact Information:

Program prepared by:

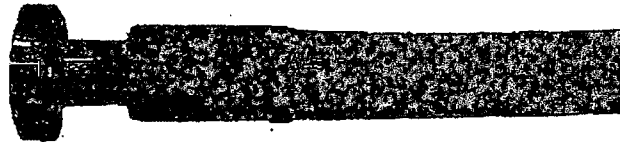
James Chen

Drilling Engineer, ConocoPhillips Company

Phone (832) 486-2184

Cell (832) 768-1647

Date: 26 September 2012



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

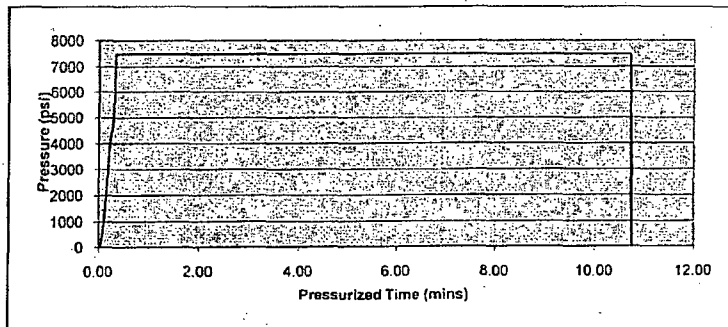


2030 E. 8th Street, Suite B • Greeley, CO 80631
Ph: (970) 346-3751 • Fax: (970) 353-3168 • Toll Free: (866) 771-9739

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

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

ConocoPhillips Company
Well: Ruby Federal #47
Location: Sec. 18, T17S, R372E
Date: 8/13/2013

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' 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 need repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and/or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

R-360 Inc.
4507 West Carlsbad Hwy, Hobbs, NM 88240,
P.O. Box 388; Hobbs, New Mexico 88241
Toll Free Phone: 877.505.4274, Local Phone Number: 432.638.4076

The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

The Permit Number for R-360 is NM-01-0006.

A photograph showing the type of haul-off bins that will be used is attached.

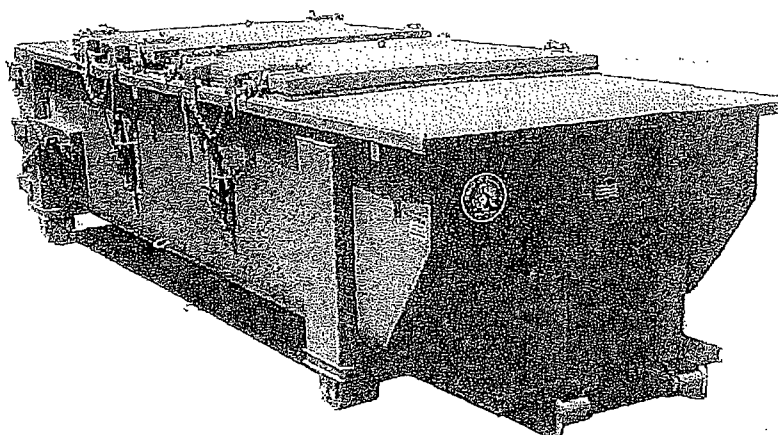
3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.
4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd; Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: **Section 3, T19S R37E**)
 - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

James Chen
Drilling Engineer
Office: 832.486.2184
Cell: 832.678.1647

SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

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, Ampliroil, Hail 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



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

