

DRILLING PROGRAM

YELLOW CREEK FEDERAL 31-23-1

1,074 FSL, 2,248 FWL

NESW, SECTION 31, T1N, R97W, 6th P.M.

Rio Blanco County, Colorado

Original Federal Lease: COC-62834

Assignment of Oil and Gas Lease: COC-73708

1. Estimated Tops

FORMATION / MARKER	Measured Depth	Datum (KB = 6409')
Green River	884'	5,525'
Mahogany	1,029'	5,380'
B Groove	1,149'	5,260'
Top Nahcolite	1,569'	4,840'
Base Nahcolite	2,234'	4,175'
Blue Marker	2,334'	4,075'
Orange Marker	2,539'	3,870'
Wasatch	2,859'	3,550'
Mesaverde	7,829'	-1,420'
Cameo	10,734'	-4,325'
Rollins	11,159'	-4,750'
Cozzette	11,309'	-4,900'
Corcoran	11,489'	-5,080'
Sego 2	12,219'	-5,810'
Sego 1	12,499'	-6,090'
Loyd	12,749'	-6,340'
Castlegate 2	13,049'	-6,640'
Castlegate 1	13,269'	-6,860'
TD	13,369'	-6,960'

2. Prospective Formation Depth

The prospective formation depth is the Mesaverde group which occurs from the top of the Mesaverde section at 7,829' MD to TD at 13,369' MD. The entire interval is prospective for gas and associated condensate (oil).

3. BOPE Specifications

The anticipated bottom-hole pressure will be no greater than a 0.50 psi/ft pressure gradient. A 5,000 psi WP BOP system as described in Figure 1 of this Drilling Plan will be installed and maintained when drilling out of the surface casing. There are no shallow drilling hazards

expected while drilling the surface hole, therefore a diverter will not be necessary nor installed. The BOP system including the casing will be pressure tested to minimum standards set forth in "Onshore order #2". The BOP will be mechanically checked daily during drilling operations and pressure tested to 250 psi low pressure and 5,000 psi high pressure on the following schedule:

- Upon initial installation
- After any component change
- Thirty days after previous test
- As required by well conditions

NOTE: The annular preventer will be tested to a 250 psi low pressure and 2,500 psi high pressure. Along with the BOPs, the upper kelly cock, full opening stabbing valve and choke manifold will be tested to the rated pressures (250 psi low and 5,000 psi high).

4. Casing Program/Design

				Safety Factors			
String	Size-Wt-Grade	Conn	Interval/ (Hole Size)	Burst	Collapse	Tension	
Conductor	20" 104# K55 (0.5" wall)	-	0 – 60'	-	-	-	
Surface	9.625" 36# K55 (New)	BTC	0 – 3,600' (14.75")	1.57	1.20	6.75	
Production	5.5" 17# HCP110 (New)	LTC	0 – 13,369' (8.75")	2.27	1.76	2.29	
					Recommended Make-Up Torque		
	Air Weight (lbs)	Buoyed Wt. (lbs)	Max Pull (lbs)	Max Press. (psi)	Optimum (ft-lbs)		
Surface	129,600	111,715	604,000	2,816	See note		
Production	227,273	194,318	356,000	8,512	6,270		
Note:	Make up surface casing with BTC connections to stenciled mark on casing.						

Design Criteria Used:					
	Surface Pressure (psi)	Frac. Grad. @ Shoe (ppg)	Backup Grad. (ppg)	Packer Fluid (ppg)	Fluid Weight Casing Set In (ppg)
Surface	2242	13.0	8.7	-	9.0
Production	4697	-	9.0	-	9.5

5. Cement Program/Design

Surface Casing:

- The surface will be cemented from 3,600' to the surface using two stages utilizing a stage tool at 1,569' (top of the Nacholite interval).
 - Stage 1: 3,600' – 1,569' (includes 25% excess volume over gauge hole)
 - 50 bbl fresh water spacer
 - 720 sx lead cement comprised of Halliburton ECONOCEM + retarder mixed at 12.7 ppg with a yield of 1.87 ft³/sk
 - 350 sx tail cement comprised of Halliburton HALCEM + retarder mixed at 15.8 ppg with a yield of 1.15 ft³/sk
 - 275 bbl drilling mud displacement at 9 ppg
 - Stage 2: 1,569' – 0' (includes 75% excess volume over gauge hole)
 - 50 bbl fresh water spacer
 - 1,000 sx lead cement comprised of Halliburton ECONOCEM + retarder mixed at 12.7 ppg with a yield of 1.87 ft³/sk
 - 121 bbl drilling mud displacement at 9 ppg
 - Top Out Cement
 - 200 sx Halliburton Premium + 2% CaCl₂ (accelerator)

NOTE: Slurries used will be the slurries listed above, or equivalent slurries depending on service provider selected. In the event, the slurries listed above are not used, the total volume in cubic feet will be used, regardless of the cement yield.

Production Casing:

- The production casing will be cemented from TD to a minimum of 200' inside the 9-5/8" surface casing using a conventional one stage cementing operation. The volume will be based on open-hole caliper volume with an additional 50% excess.
 - Stage 1
 - 40 bbl Superflush 101 (reactive spacer) mixed at 10 ppg
 - 10 bbl fresh water spacer
 - 3,700' of lead cement comprised of Halliburton EXTENDACEM + 1.5 lb/sk Pheno Seal – Blend (lost circulation material – LCM) + 1.5 lb/sk Walnut Hulls 10/40 (LCM) + 0.25 lb/sk Poly-E-Flake (LCM) mixed at 11 ppg with a yield of 2.76 ft³/sk
 - 2,000' of lead cement comprised of Halliburton ECONOCEM + retarder + 0.25 lb/sk Poly-E-Flake (LCM) + 1 lb/sk Walnut Shells (LCM) + 0.3% STEELSEAL (LCM) + 1 lb/sk Pheno Seal – Blend (LCM) mixed at 12.7 ppg with a yield of 1.93 ft³/sk
 - 4,269' of tail cement comprised of Halliburton EXPANDACEM + retarder + 8 lb/sk Gilsonite (LCM) + Super CBL (expander) + 0.25 lb/sk Poly-E-Flake (LCM) + 1 lb/sk Pheno Seal – Blend (LCM) + 1 lb/sk Walnut Shells (LCM) + 0.3% STEELSEAL (LCM) mixed at 13.5 ppg with a yield of 1.73 ft³/sk

NOTE: Slurries used will be the slurries listed above, or equivalent slurries depending on service provider selected.

6. Mud Program/Design

Interval	Hole Size (in)	Mud Type	Mud Weight (ppg)	Viscosity (sec/qt)	Yield Point (lb/100 ft ²)	API Fluid Loss (ml/30min)	Total Solids (%)
0 – 3,600'	14.75	Water/LNSD	8.3 – 9.2	38 – 100	4 – 28	4 – 28	6 – 30
3,600' – 13,369'	8.75	Water/LNSD/AIR/N ₂	9.0 – 9.5	40 – 75	5 – 25	4 – 15	6 – 30

Though water-based mud will be utilized throughout the drilling of the well, air/nitrogen may be introduced to the system when drilling the production hole to combat potential fluid loss problems. A parasite string will be installed on the surface casing to allow “lightening” of the fluid column while drilling the production hole interval (3,600' – 13,369') in the event that it is required. The compressor will be located approximately 100' – 150' from the wellbore. The exact placement will depend on rig and location layout. A rotating head will be utilized (see attached BOP schematic) and the returns will be sent through a gas buster and expelled to the atmosphere.

There will be sufficient mud on location to control a blowout should one occur.

Mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

7. Testing, Logging and Coring Procedures

Testing	None anticipated.
Coring	Sidewall cores may be taken during logging operations. Conventional cores are not planned depending upon results from logging evaluation.
Logging	Triple combo from TD to surface casing. Gamma Ray from surface casing shoe to surface. FMI is possible within the Mesaverde.
Sampling	Samples will be taken from surface casing drillout to TD.

8. Bottom-hole Pressures and Potential Drilling Hazards

The expected bottom hole pressure is +/- 6,250 psi based on a 9.0 ppg pore pressure gradient at 13,369'. No abnormal pressures are anticipated. No hydrogen sulfide gas is anticipated.

There is potential for fluid losses while drilling the surface hole (0' – 3,600') in the Nahcolite interval (1,569' – 2,234'). If severe losses occur, the losses will be combated with LCM and cement while drilling. A stage tool and two-stage cement operation will be utilized to provide sufficient cement in the surface casing annulus, allowing cement returns to the surface.

There is potential for fluid losses while drilling the production interval (3,600' – TD) due to the natural fractures occurring in the Mesaverde formations. A parasite string installed near the shoe of the surface casing along with nitrogen and/or air injection will be utilized to lighten the density of

the drilling fluid to maintain full mud returns. The nitrogen and/or air will be sent through the gas buster and expelled to the atmosphere.

9. Miscellaneous

The anticipated spud date is during the summer of 2011, depending on APD approval, location construction and rig availability. The anticipated duration of the operation is 40 days (rig mobilization through rig release).

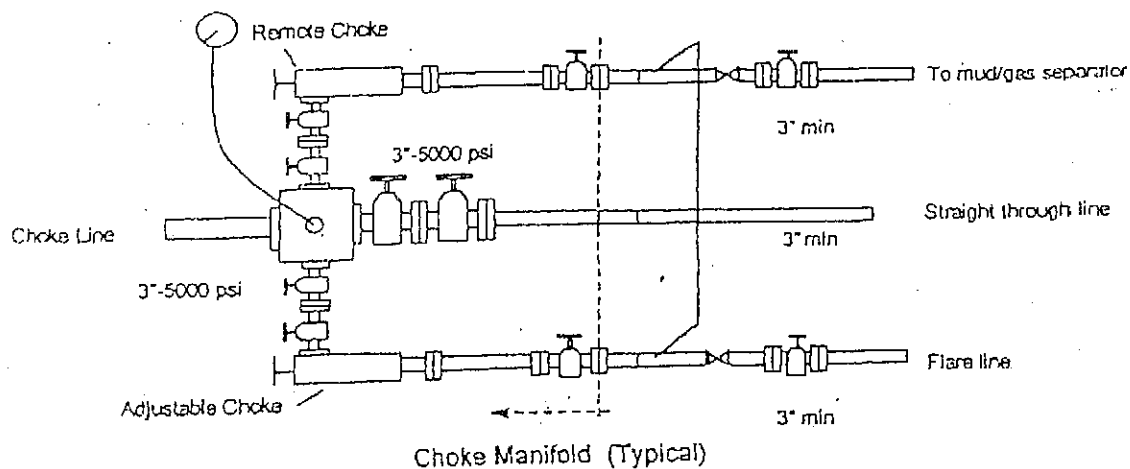
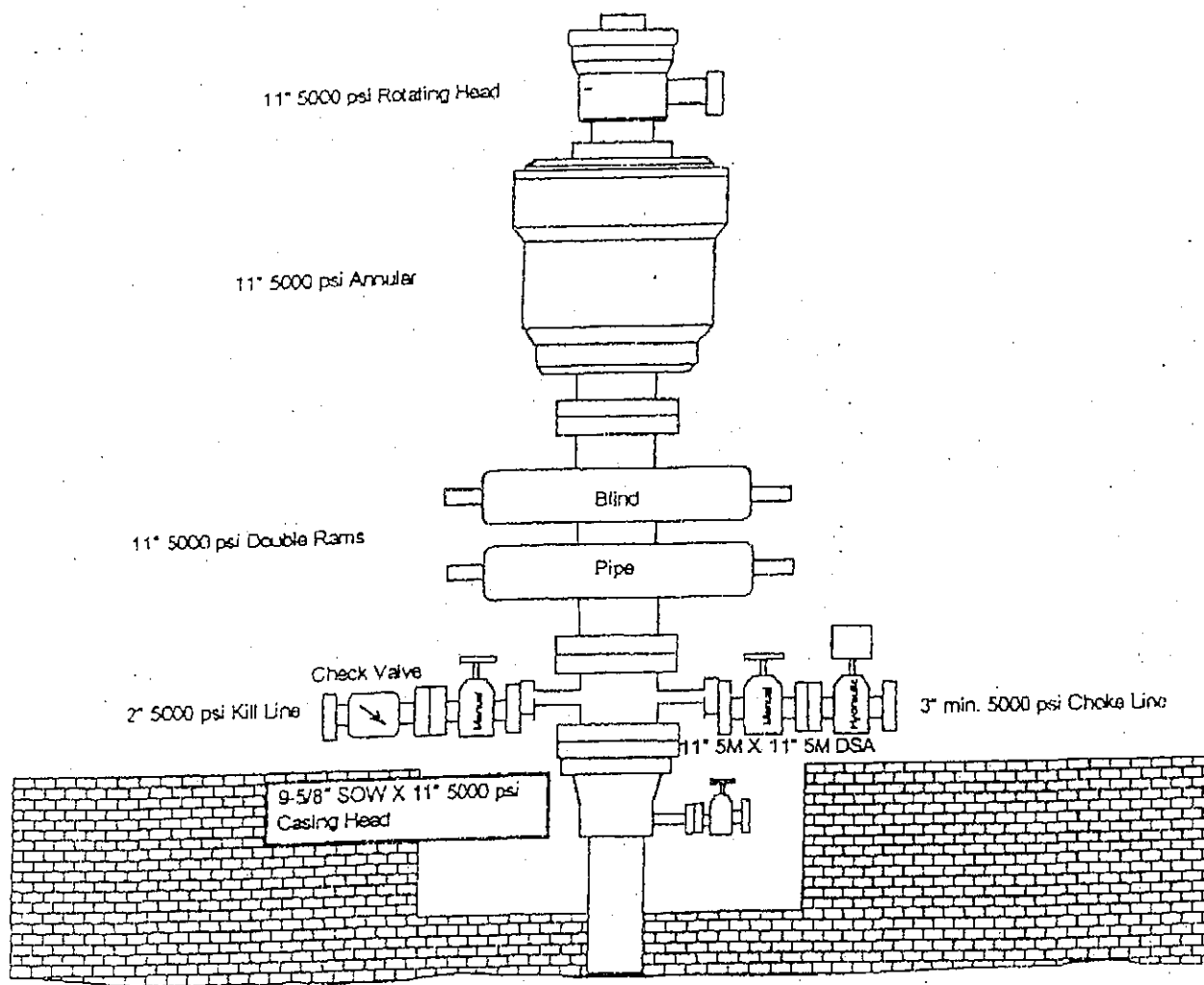
PERMITTING PERSON

Reed Haddock
Regulatory Analyst
BOPCO, L.P.
9949 S. Oswego St.
Suite 200
Parker, CO 80134
(O) 303-799-5080

DRILLING OPERATIONS

Jeffrey S. Fooshee
Division Drilling and Production Superintendent
BOPCO, L.P.
9949 S. Oswego St.
Suite 200
Parker, CO 80134
(O) 303-799-5080

BOPE Diagram 5000 psi WP



AFE Number: TBD
Field: Yellow Creek Federal
API Well Number: TBD
Elevation (ft): 6384'
KB to GL (ft): 25'
Objectives: Mesaverde

Prepared By: Jeffrey S. Fooshee

Date: 13-Jan-11