

Application to Drill
Wolf Creek 32 State Com No. 1
Cimarex Energy Co. of Colorado

Unit M, Section 32
T24S R27E, Eddy County, NM

30-015-36749

NOV - 4 2008

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- 1 Location: 990 FSL & 990 FWL
- 2 Elevation above sea level: 3407' GR
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: 12850'
- 6 Estimated tops of geological markers:

Base Salt	2049'	Cisco-Canyon	10506'
Delaware	2248'	Strawn	10762'
Bone Spring	5767'	Atoka	10953'
1st Bone Spring Ss	6768'	Morrow	11565'
2nd Bone Spring Ss	8053'	Middle Morrow	11925'
3rd Bone Spring Ss	8631'	Lower Morrow	12241'
Wolfcamp	8953'		
- 7 Possible mineral bearing formation:

Morrow	Gas
Atoka	Gas
Strawn	Gas
Cisco	Gas
Wolfcamp	Gas

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 215'	8.4-8.6	30-32	May lose circ	FW gel spud mud
215' to 2,750'	8.4-8.6	28-29	May lose circ	FW
2,750' to 12,850'	8.4-9.7	28-29	NC	FW, Brine w/ hi-vis sweeps

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

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9 Casing Plan:

String	Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
<i>Surface</i>	17½"	0'	to	215'	New	13¾"	48	8-R	STC	H-40
<i>Intermediate</i>	12¼"	0'	to	2750'	New	9½"	40	8-R	LTC	J-55
<i>Production</i>	8¾"	0'	to	12850'	New	4½"	11.6	8-R	LTC	P-110

10 Cementing:

Surface	340 sx Premium Plus C Type III + 0.125# Poly-e-flake + 2% CaCl ₂ (wt 14.8, yld 1.34) TOC Surface
Intermediate	<u>Lead:</u> 396 sx Interfill C + 1/4# Flocele (wt 11.9, yld 2.45) <u>Tail:</u> 250 sx Premium Plus + 1% CaCl ₂ (wt 14.8, yld 1.33) TOC Surface
Production	<u>Lead:</u> 1810 sx-Interfill H + 0.25% HR-7 + 5# Gilsonite + 0.25# Flocele (wt 11.9, yld 2.47) <u>Tail:</u> 671 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 5# Gilsonite + 0.125# Poly-e-flake + 0.35% HR-7 (wt 13.2, yld 1.67) TOC 2550'

Fresh water zones will be protected by setting 13¾" casing at 215' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 2750' and cementing to surface and by setting 4½" casing at 12850' and cementing to 2550.'

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

11 Pressure control Equipment:

Exhibit "E". A 13¾" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000# annular-type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be nipped up on the 9½" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

We are requesting a variance for testing the 13¾" surface casing from Onshore Order No. 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. We are requesting to test the 13¾" casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.