

**RIVERSIDE 30 FEDERAL COM #1**  
**DRILLING PLAN**  
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4. Casing Program

<u>INTERVALS</u>	<u>LENGTH</u>	<u>CASING</u>	<u>BURST</u> <u>PSI</u> <u>(DF)</u>	<u>COLLAPSE</u> <u>PSI</u> <u>(DF)</u>	<u>TENSION</u> <u>LBS</u> <u>(DF)</u>	<u>TORQUE</u> <u>FT-LBS</u> <u>(DF)</u>
<u>Surface</u>						
0 - 1400'	1400'	8 5/8" 32# J-55 STC	3930	2530	372M	4020
<u>Production</u>						
0 - 1000'	1000'	5 1/2" 17# L-80 LTC	(1.85) 7740	(2.53) 5673	(5.81) 338M	3410
1000' - 6900'	5900'	5 1/2" 15.5# J-55 LTC	(1.71) 4810	(10.9) 3926	(2.41) 217M	2390
6900' - 8700'	1800'	5 1/2" 17# L-80 LTC	(1.18) 7740 (6.06)	(1.13) 6290 (1.40)	(1.80) 338M (11.69)	3410

Cementing Program

8 5/8" Surface Casing: Cement to surface -- with 464 sxs (35:65) Poz (Fly Ash): Class C Cement + 6% bwoc Bentonite +5% bwow Sodium Chloride + 1/4lb/sx celloflk + 100.7% Fresh Water with 200 sxs Class C + 2% bwoc Calcium Chloride +1/4lb/sx celloflk + 56.3% Fresh Water

5 1/2" Production Casing: Cement to 8700' – with 485 sxs Class H + 3% bwow Potassium Chloride + 1% bwow FL-25 + 0.1% bwow Sodium Metasilicate + 5lbs/sxs LCM-1 + .25 lbs/sxs Cello Flake + .003 gps FP-13L + 46.5% Fresh Water

The cement volumes for the 5 1/2" casing will be revised pending the caliper measurement from the open hole logs.

5. Minimum Specifications for Pressure Control

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag-type (Hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOP's will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. As per BLM Drilling Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be function tested.