

Warren Unit #309
PROPOSED CASING & CEMENT PLAN

Surface casing size:	8-5/8", 24#, J-55, ST&C	Casing OD:	8.525 in
Surface casing depth:	1,400 ft	Casing ID:	8.097 in
Hole size:	12.25 in	Shoe jt length:	40 ft
Static temperature:	88 deg F	Lead Excess:	97 %
Circulating temperature:	84 deg F	Tail Excess:	120 %
Lead:	425 sx	Cl C + 0.25 pps Cello Flake + 0.005 gps FP-6L + 2% Sodium Metasilicate	
Tail:	200 sx	Cl C + 2% CaCl + 0.005 gps FP-6L	
Properties		Lead	Tail
Slurry Weight (ppg)		12.4	14.8
Slurry Yield (cfps)		2.15	1.34
Mix Water (gps)		12.33	6.35
Pump time - 70 BC (HH:MM)		6:25	2:20
Free Water (mls) @ 80 deg F @ 90 deg angle		0	0
Compressive Strength (psi)			
12 hrs @		89 deg F	124
24 hrs @		89 deg F	250
			1200
			2500

Production casing size:	5-1/2", 17#, J55, LT&C	Casing OD:	5.500 in
Production casing depth:	6,850 ft	Casing ID:	4.892 in
Hole size:	7.875 in	Shoe jt length:	80 ft
Static temperature:	114 deg F	Lead Excess:	74 %
Circulating temperature:	113 deg F	Tail Excess:	47 %
Lead:	650 sx	50:50 Poz:Cl C + 5% bwow NaCl + 0.25 pps Cello Flake + 0.005 gps FP-6L + 10% Bentonite	
Tail:	210 sx	15:61:11 Poz:Cl C: CSE + 5% bwow NaCl + 1% FL-62 + 0.005 gps FP-6L	
Properties		Lead	Tail
Slurry Weight (ppg)		11.85	13.6
Slurry Yield (cfps)		2.41	1.49
Mix Water (gps)		13.79	7.31
Pump time - 70 BC (HH:MM)		3:15	3:00
Free Water (mls) @ 80 deg F @ 90 deg angle		1	0
Fluid Loss (cc/30 min) @ 1000 psi and 80 deg F		792	62
Compressive Strength (psi)			
12 hrs @		114 deg F	50
24 hrs @		114 deg F	175
			1013
			1877