

CEMENTING CONTINUED:

MUD FLUSHES AND SPACERS WILL PRECEDE CEMENT SLURRIES ON 7" AND 4 1/2" CASINGS. CEMENT ADDITIVE CONCENTRATIONS WILL BE ADJUSTED BASED ON THE RESULTS OF LABORATORY TESTING TO GIVE PROPERTIES SEEMED NECESSARY.

NOTE: IF LOSS CIRCULATION IS ENCOUNTERED ON EITHER THE 5 5/8" OR THE 7" SECTIONS OF HOLE, A TWO STAGE JOB MAY BE REQUIRED

6. TYPE AND MUD SYSTEM CHARACTERISTICS:

FROM	TO	TYPE	WT.	VISC.	WL.
0	500	FW. W/ GEL, LIME & PAPER	8.0-9.0	25 - 40	NO
500	5000	BRINE WTR/ SALT GEL, LIME & PAPER SWEEPS/ OIL & STARCH AS NECESSARY.	10.0-10.2	25 - 32	NO
5000	12200	CUT BRINE, LIME & PAPER SWEEPS.	9.0-9.3	25 - 32	40
12200	15800	INVERT OIL MUD: 85/15 OWR. ADDITIVES AS NEEDED TO MAINTAIN MUD WT. VIS. & WL.	12.5-14.0	40 - 50	API 15 HTHP 15-25

NOTE: OIL MUD WILL BE USED FROM THE 7" CASING SEAT TO TD. INITIAL MW WILL BE 12.5 PPG. OFFSET WELLS HAVE RANGED FROM 13.5 PPG TO 14.0 PPG @ TD. MW WILL BE AS HIGH AS NEEDED TO CONTROL FORMATION PRESSURES.

7. BOP AND AUXILIARY EQUIPMENT:

BOP & CHOKE MANIFOLD WILL BE SETUP AS INDICATED ON EXHIBIT #D1 THROUGH #D4.

ACCUMULATOR VOLUME WILL BE SUFFICIENT TO PROVIDE REPEATED OPEN AND CLOSING OF PREVENTERS.

A FULL OPENING SAFETY VALVE FOR EACH CONNECTION IN USE IN THE DRILL STRING WILL BE KEPT ON THE FLOOR AT ALL TIMES DURING THE DRILLING OPERATIONS. VALVE WILL BE KEPT IN THE OPEN POSITION AND THE OPERATING WRENCH WILL BE ACCESSIBLE. AN UPPER AND LOWER KELLY COCK WILL BE USED.

THE HOLE WILL BE KEPT FULL AND FILL VOLUMES WILL BE MONITORED ON ALL TRIPS. A TRIP TANK WILL BE OPERATIONAL BELOW THE 7" CASING SEAT.

POT, HYDRAULIC CHOKE, BULK BARITE, GAS SEPARATOR AND ROTATING HEAD WILL BE INSTALLED AND IN SERVICE BY 11300' (ABOVE THE WOLFCAMP). FLOW SENSORS WILL BE INSTALLED BY 8000' (ABOVE THE FIRST BONE SPRINGS SAND).

RECEIVED

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