

APPLICATION TO DRILL  
UNOCAL  
UNOCAL "8" Federal #1  
1980' FNL & 660' FWL Sec. 8  
T20S-R34E Lea Co., NM

9. Cementing and Setting Depth:

20" Conductor

Set @ 40'. Cement with redimix to surface.

13 3/8" Surface Casing

Set @ 1500'. Cement with 1600 sx classic "C" + additives. Circulate to surface.

8 5/8" Intermediate Casing

Set @ 5200' Cement 1<sup>st</sup> Stage with 1100 Sx. Class "C" Cement. DV Tool at 3200' 2<sup>nd</sup> Stage with 800 Sx. Class "C" Circulate to surface.

5 1/2" Production Casing

Set @ 13700' Cement 1<sup>st</sup> Stage with 1100 Sx Class "H" cement DV Tool @ 10500' cement 2<sup>nd</sup> Stage with 1500 Sx. Lite-Weight cement Top of cement to 5000' 200' in the intermediate.

10. Pressure Control Equipment: Exhibit "E-1" shows BOP Arrangement for drilling intermediate hole. Will nipple up on 13-3/8" casing with 3000 PSI WP equipment. Exhibit "E-2" shows choke manifold. Exhibit "F-1" shows BOP arrangement in use while drilling production hole, this is 5000 PSI WP equipment. Exhibit "F-2" shows choke manifold to be used with 5000 PSI WP equipment. Exhibit "F-3" shows the hydraulic closing unit for BOP. BOP will be tested after installation per API Specs and will be worked at least once daily, & blind rams worked when on trips when drillpipe is out of hole. Flow sensor PVT, full opening stabbing valve and upper Kelly Cock will be utilized.

11. Proposed Mud Circulating System:

Depth	Mud Wt.	Mud Visc.	Fluid Loss	Type Mud
0-1500	8.6-9	AR	NC	Spud mud fresh water
1500-5200	10	AR	NC	Brine water use paper for seepage
5200-12000	9.5-10	AR	NC	Brine water
12000-TD	9.5-10	AR	NC	Brine water