

APPLICATION TO DRILL

UNION OIL CO. OF CALIFORNIA ^{SJS}
UNOCAL RED HILLS "28" FEDERAL ~~WELL~~ #2
1980' FNL & 660' FWL Sec. 28
T25S-R33E LEA CO. NM

9. Cementing and setting depth.

- 20" Set 825' of 16" (80' of 84# J-55 ST&C, 625' of 65# H-40 ST&C, 120" of 84# J-55 ST&C Casing) Cement W/600 Sx Class "C" + 3% bentonite + 2% CaCl, tail in W/300 Sx Class "C" + 2% CaCl circulate to surface.
- 14 3/4" Set 5000' of 10 3/4" (160' of 60.7# P-110 ST&C, 4000' of 51# N-80 ST&C, 840' OF 60.7# P-110 ST&C Casing) Cement W/2500 SX 65/35 POZ + 6% bentonite + 5# gilsonite + 15# salt/Sx, tail in W/500 Sx Class "C" +5# salt/Sx. Circulate to surface.
- 9 1/2" Set 13000' of 7 3/4" (2000' of 46.1# P110 LT&C, 6000' of 39# P-110 LT&C, 5000' of 46.1# P-110 LT&C Casing.) First stage 600 Sx Class "H" 65/35 POZ + 6% bentonite + 5#/Sx KCl. Second stage 300Sx Class "H" 50/50POZ + 2% bentonite +5#/Sx KCl. top cement 4800'.
- 6 1/2" Set 2300' of 5" 21# P-110 LT&C LINER. Cement W300 Sx Class "H" +35% Silica sand. Top of cement 12700'. (300' overlap.)

10. Pressure control equipment. Exhibit "E" A BOP ^{SJS} consisting of double ram type preventor and bag preventor. Units will be hydraulically operated. Exhibit "E-1" is of choke manifold and closing unit. Blind rams on top pipe ramson bottom to correspond with the size of drill pipe in use. BOP will be nipped up on 16" casing with a 2000 PSI working pressure. After 7 3/4" casing is set BOP will be changed out to a 10000 PSI working pressure BOP, at this time a mud/gas seperator will be installed. BOP will be worked at least once each day while drilling and blind rams will be worked on trips when drill pipe is out of hole. Flo sensor PVT, full opening stabbing valve and upper kelley cock will be utilized.

11. Proposed mud circulating system.

Depth	Mud Wt.	Mud Visc	Fluid loss	Type Mud
0-825	8.4-9	28-30 (AR)	NC	Fresh water spud mud
825-5000	10	28-30 (AR)	NC	Brine water add paper for for seepage & lime for pH control
5000-13000	8.5-9.2	28-35 (AR)	NC	Fresh water mud paper for seepage and lime for pH control
13000-15000	14.3-15.2	34-40 (AR)	8-10 cc	Add weighting material for well control.

In order to run logs and casing viscosity may have to be raised and water loss lowered depending on hole conditions.