Application for Pe .t to Drill Government "AL" No. October 24, 1980

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7. Estimated tops of important geologic markers:

Bone Springs	4720'
Wolfcamp	8925 <b>'</b>
Canyon	9650'
Strawn	10,035
Atoka	10,500'
Morrow	10,725'
"B" Zone	10,870'
"A" Zone	11,100'
Chester	11,250'
Projected TD	11,325'

8. Estimated depths at which anticipated water, oil gas or other mineral bearing formations are expected to be encountered:

A. Primary objective Morrow "B" Zone 10,870'

B. Secondary objectives Morrow "A" Zone 11,100' Atoka 10,500' Wolfcamp 8,925'

9. The proposed casing program is as follows:

Surface: 13-3/8" OD 48# H-40 ST&C new casing Intermediate: 8-5/8" OD 24# & 32# K-55 ST&C new casing Production: 5-1/2" OD 17# & 20# N-80 LT&C new casing

- 10. Casing setting depth and cementing program:
  - A. 13-3/8" OD surface set at 600'. Circulate cement with 600 sacks Class "C" with 2% CaCl.
  - B. 8-5/8" OD intermediate set at 3000'. Circulate cement with 250 sacks Halco Thik-Set with 10# Gilsonite, 1/2# Flocele/sack and 2% CaCl followed by 1100 sacks Halco Lite with 5# Gilsonite and 1/4# Flocele/sack followed by 300 sacks Class "C" with 2% CaCl. If cement does not circulate, determine top of cement by temperature survey then finish cementing to the surface through 1" in the annulus using Class "C" with 2-4% CaCl.
  - C. 5-1/2" OD production string set at 11,325'. Cement with 700 sacks Class "H" with 0.6% CFR-2 and 5# KCl/sack. Anticipated top of cement is 8250'.