Application for Permit to Drill Government "S" No. 2

August 14, 1979

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7. Estimated tops of important geologic markers:

Wolfcamp	8850 <b>'</b>
Canyon Carbonate	9840 <b>'</b>
Strawn Carbonate	10060'
Atoka	10540'
Morrow	10750'
"B" Zone	10930 <b>'</b>
"A" Zone	<b>11</b> 120'
Chester	11250 <b>'</b>
Projected TD	11400'

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

Α.	Primary objective Mon	rrow "B" Zone	10930'
в.	Secondary objectives	Morrow "A" Zone Strawn Wolfcamp	11120' 10060' 8850'

9. The proposed casing program is as follows:

Surface:	13-3/8" OD 48# H40 ST&C new casing
Intermediate:	8-5/8" OD 24# & 32# K55 ST&C new casing
Production:	5-1/2" OD 17# & 20# N80 LT&C new casing

- 10. Casing setting depth and cementing program:
  - A. 13-3/8" OD surface set at 400'. Circulate cement with 400 sacks Class "C" with 2% CaCl.
  - B. 8-5/8" OD intermediate set at 3000'. Circulate cement with 250 sacks Halco Thix-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 11,400'. Cement with 700 sacks Class "H" with 0.6% CFR-2 and 5# KCL/sack. Anticipated top of cement 8250'.

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