Application for Perit to Drill Government "AO" No. " December 2, 1981

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7. Estimated tops of important geologic markers:

Bone Springs	4720'
Wolfcamp	8840'
Cisco	9197 '
Canyon	9510 '
Strawn	9897 '
Atoka	10,197'
Morrow	10,587'
"B" Zone	10,744'
"A" Zone	10,954'
Chester	11,142'
Projected TD	11,217'

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

Α.	Primary	objective	Morrow	"B"	Zone	10,744'
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Secondary	objectives	Morrow "A	"Zone	10,954'
		Atoka		10,197'
		Strawn		9897 '
		Wolfcamp		8840 '
	Secondary	Secondary objectives	Atoka Strawn	Strawn

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 400'. 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 11,217'. Cement with 700 sacks Class "H" with 0.6% CFR-2 and 5# KCl/sack. Anticipated top of cement is 8250'.