Application for Pe. \_t to Drill Federal "N" No. 1 October 22, 1980

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7. Estimated tops of important geologic markers:

D 1 - remo Limo	1465 <b>'</b>	(+1900')
Deleware Line	4965'	(-1600')
Bone Springs	7964'	(-4600')
Dean SS		(-5000')
Wolfcamp	8365	•
Atoka	10,495'	(-7130')
	10,805	(-7440')
Morrow	11,015	(-7650')
Morrow "B" Zone		(-7950')
Morrow A Zone	11,310'	
Chester	11,500'	(-8135')
	11,700'	(-8335')
Total Depth		

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

Α.	Primary Objective:	Morrow A (SS)	11,310'
в.	Secondary Objective:	Atoka Wolfcamp Bone Springs	10,495' 8,365' 4,965

9. The proposed casing program is as follows:

- 6	13-3/8" OD 48# H-40 ST&C new casing
Surrace.	8-5/8" OD 24# & 32# K-55 ST&C new casing
Intermediate:	5-1/2" OD 17# & 20# N-80 LT&C new casing
Production:	5-1/2" OD 1/# & 20# N=80 Hide New commuter

- 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 Thick-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 11,700'. Cement with 1050 sacks Class "H" with 0.6% CFR-2 and 5# KCl/sack. Anticipated top of cement 8250'