

Application for Permit to Drill Federal AK #1

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6. Proposed total depth is 10,300 feet.
7. Estimated tops of important geologic markers.

Bone Springs	4522'
Dean	6722'
Wolfcamp	7317'
Strawn	8713'
Atoka	9092'
Morrow	9872'
Morrow B	9932'
Morrow A	10128'
Chester	10300'
Total Depth	10300'

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

Primary Objective:	Morrow B	9932'
Secondary Objective:	Strawn	8713'
	Morrow A	10128'

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# K55 ST&C new casing
Production: 5-1/2" OD 17# N80 LT&C casing

10. Casing setting depth and cementing program:

- A. 20" OD conductor casing set at 30'.
- B. 13-3/8" OD surface casing set at 350' in 17-1/2" hole. Circulate cement with 300 sacks Halliburton Lite (or equivalent) with 2% CaCl₂ and 0.25 lb/sk Flocele. Tail with 200 sacks Class C 2% CaCl₂. If cement does not circulate, determine the top of cement by temperature survey then finish cementing to the surface through 1" in the annulus using Class "C" with 2% CaCl₂.