

APPLICATION FOR PERMIT TO DRILL

Bar 4 Federal #1

1. The geologic surface formation is Quaternary.

2. The estimated tops of important geologic markers are:

1. <u>Wolfcamp</u>	<u>9800</u>	6. _____
2. <u>Strawn Lime</u>	<u>12250</u>	7. _____
3. <u>Atoka "A-5" Sand</u>	<u>12450</u>	8. _____
4. <u>Atoka Bank</u>	<u>12500</u>	9. _____
5. _____		10. _____

3. Depths at which oil, water, or gas bearing formations are expected to be encountered.

Wolfcamp limes 9800 - 12500
Atoka Sands 12500 - 12800

4. Brief description of testing, logging, and coring programs.

Drill Stem test as necessary.
Gamma Ray: Surface - TD
Sonic and/or Neutron Density: Top Delaware Sand - TD
Dual Laterolog: Top Delaware Sand - TD
Mud Logger: Top Delaware Sand - TD
No coring anticipated.

5. Any anticipated abnormal pressures or temperatures expected? Any potential hazards - H₂S?

Possible abnormal pressures from Wolfcamp through the Atoka

No H₂S zones expected.