

Bell Lake "11" Federal #1

Sec. "11"

APPLICATION FOR PERMIT TO DRILL

1. The geologic surface formation is Quaternary.
2. The estimated tops of important geologic markers are:

1. <u>Atoka</u> <u>14,400'</u>	6. _____
2. <u>Morrow</u> <u>15,300'</u>	7. _____
3. <u>Delaware</u> <u>5,000'</u>	8. _____
4. <u>Wolfcamp</u> <u>10,700'</u>	9. _____
5. <u>Strawn</u> <u>14,000'</u>	10. _____
3. Depths at which oil, water, or gas bearing formations are expected to be encountered.

14,000' - Gas
14,400' - Gas
15,300' - Gas
4. Brief description of testing, logging, and coring programs.

Gamma Ray from surface to TD. Sonic and/or Neutron Density from 5000' to TD. Dual Laterlog from 13,000' and 16,000'. Dipmeter from 13,000' to 16,000'. DST as necessary, no coring anticipated.
5. Any anticipated abnormal pressures or temperatures expected? Any potential hazards - H₂S?

Possible abnormal pressure in the Wolfcamp and Atoka formations.

1. (A) Pressure control equipment to be used.

Double BOP & choke manifold

Rotating preventer from 5000' to 13,000'.

Double BOP, single BOP, rotating preventor annulus preventor and choke manifold from 13,000 to 16,000.

- (B) Pressure ratings (or API series).

3,000# or 900 series from 5000' to 13,000'

10,000 psi equipment from 13,000 to 16,000'

- (C) Testing procedures and frequency.

Test w/plug in wellhead

@ installation at surface casing point

and @ 9-5/8" casing point

and @ 7" casing point.

- (D) Schematic Diagram.

Attached.

2. Mud Program

Type and Characteristics

Fresh water 89-92 35 vis no water loss in surface hole.

Salt water 9.7-10.2 35 vis 20cc water loss under surface to 13,000'.

EZ oil mud from 13,000' to 16,000'.

Quantities and types of weighting material to be maintained

1000 sx Barite.

FIELD: _____
LEASE: _____

