

AE 1

Application for Permit to Drill Government ~~"AD"~~ No. ~~1~~

February 1, 1977

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|----------------|--|
| 600 - 3000'    | fresh water. If lost circulation is encountered in the Capitan Reef, dry drill ahead to casing point using periodic vis. sweeps. |
| 3000 - 8500'   | fresh water, detergent, paper for seepage and Lime for pH control.   |
| 8500 - 11000'  | brine water with caustic for pH control 9.8-10.0#/gal.   |
| 11000 - 11780' | Drispac 10.0-10.6#/gal., 31-34 vis., 10-12 cc water loss, pH 9-11.   |

13. Testing, Logging and Coring Program

- A. Two (2) DST's Morrow and Strawn.
- B. Mud Logging Program - one man unit 8800' to TD.
- C. Electric Logging Program - Compensated Neutron-Formation Density, Dual Laterolog-Micro-SFL, Coriband.
- D. Coring Program - none.

14. No abnormal temperatures or H<sub>2</sub>S gas is anticipated. Possibility of high pressure zones in Wolfcamp, Strawn and Atoka. Adequate flare lines will be installed off the mud gas separator and testing equipment to insure that gas may be piped away a safe distance from the well where it may be ignited and burned.

In addition to the Pressure Control Equipment described in Item No. 11, the following equipment will be installed and in operation before drilling into the Wolfcamp zone:

- a. Swaco adjustable choke in choke manifold.
- b. Pit volume totalizer.
- c. Flow line sensor.
- d. Degasser.
- e. 100 barrel trip tank with pump.