Application to Drill Government "AK" No. 1

March 6, 1980

Page No. 4

12. Mud Program

0- 150	Spud mud. Gel floculated with Lime.
150- 1800	Gel floculated with Lime. Treat with Coarse fibrous LCM. If severe loss occurs, dry drill ahead to casing point.
1800- 4000	Drill out with fresh water and circulate reserve pit.
4000- 5400	To the existing system, add 10#/barrel KCL to stabilize the Shale. Maintain KCL content at 40,000 ppm.
5400- 7110	Mud up at top of Cisco formation maintain- ing 8.8-9.0#/gallon weight and 32-33 vis- cosity with water loss 10 cc or less. Use Flosal to increase viscosity and KCL to maintain weight.

- 13. Testing, Logging and Coring Program
  - A. Three (3) drill stem tests Cisco, Strawn and Morrow.
  - B. Mud Logging Program two man unit 2500' TD.
  - C. Electric Logging Program BHC-SON-GR, CNL-FDC-GR-CAL, DLL-RXO-HDT (Schlumberger).
  - D. Coring Program 2-50' cores in the Morrow SS.
- 14. No abnormal temperatures or H<sub>2</sub>S gas is anticipated. There is a possibility of overpressured zones in the 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 noted in Item #11, the following equipment will be installed and in operation before drilling into the Wolfcamp zone:

- A. A recording pit level indicator to determine pit volume gains and losses.
- B. A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.