

OPERATIONS PLAN

In accordance with your letter dated July 1, 1976 from the U.S. Department of the Interior, Geological Survey, the following operations plan is respectively submitted: (The numerical headings correspond to the numbers of the July 1, 1976 letter.)

1) Mancos shale; Cretaceous Age.

2) 0 to 1318' - Mancos Shale (Cretaceous)

1318 to 1538' - Dakota Formation (Cretaceous)

1538 to 2060' - Morrison Formation (Jurassic)

2060 to 2394' - Junction Creek Formation (Jurassic)

2394 to 2604' - Summerville Formation (Jurassic)

2604 to 2617' - Todilto Formation (Jurassic)

2617 to 2700' - Entrada Formation (Jurassic)

2700 to 2776' - Kayenta Formation (Jurassic)

2776 to 2840' - Wingate Formation (Jurassic)

2840 to 4043' - Chinle Formation (Triassic)

4043 to 4073' - Shinarump Formation (Triassic)

4073 to 4226' - Moenkopi Formation (Triassic)

4226 to 4672' - De Chelly Formation (Permian)

4672 to 5786' - Cutler Formation (Permian)

5786 to 6036' - Rico Formation (Permian)

6036 to 6684' - Hermosa Formation (Pennsylvanian)

6684 to 7460' - Paradox Formation (Pennsylvanian)

7460 to TD - Molas Formation (Pennsylvanian)

3) Water flow at approximately 2200 feet. Possible oil productive zone at 7000 feet. Primary objective for oil production at 7200 feet.

- 4) 40' (used) 16" conductor - 2,400'± (new) 9 5/8" - 36# K-55 ST&C casing.
- 5) (5000) (3000) Double gate and Hydril - hydraulic operated. Daily check on BOP closing and opening. Weekly BOP test with test plug inserted in place of wear flange and also crew training with BOP drills. Pressure test to API equipment rating.
- 6) Non-dispersed mud system with adequate viscosity to clean hole. No control on water loss except while drilling zones of interest, or unless hole dictates need for same. Weight mud up prior to drilling abnormally pressured zones using nearby wells as control points.
- 7) Upper and lower kelly cocks, string float, mud system monitoring equipment, and a sub on the floor with a full opening valve to be stabbed into drill pipe when kelly is not in the string will be incorporated as auxiliary equipment.
- 8) DST's will be run over important zones of hydrocarbon shows. Adequate logs will be run to allow a complete petrophysical evaluation of all potential hydrocarbon producing horizons. A Dual Induction resistivity log and one porosity device will be run as a minimum program, with additional porosity logs as required for complete definition of rock characteristics.
- 9) We plan to monitor mud system for gas, including H₂S monitor at all times with mud logging unit.
- 10) April 15, 1977 thru May 15, 1977.