

DRILLING PLAN
HAPPY VALLEY FEDERAL #1
SECTION 28, T-22-S, R-26-E
EDDY COUNTY, NEW MEXICO

1. Estimated tops of important geological markers:

Delaware	1,300'
Bone Springs	5,200'
Wolfcamp	8,900'
Strawn	9,900'
Atoka	10,300'
Morrow	10,800'

2. Estimated depths at which the top of anticipated water, oil, gas, or other mineral-bearing formations are expected to be encountered and the plan for protecting such resources:

	<u>Depth</u>	<u>Protection</u>
Deepest F. W.	300'	Casing and Cement
Oil - Delaware	1,300'	Casing and Cement
Oil - Canyon	9,200'	Casing and Cement
Oil - Strawn	9,900'	Casing and Cement
Oil - Atoka	10,300'	Casing and Cement
Gas - Morrow	10,800'	Casing and Cement

3. Minimum specifications for pressure control equipment:

- A. Wellhead Equipment:
- | | |
|------------------|-----------------------------------|
| A-Section | 13-3/8-8RD x 13-5/8-3000 psi |
| B-Section | 13-5/8-3000 psi x 11-3000 psi |
| Tubing Head | 11-3000 psi x 7-1/16-5000 psi |
| Tbg. Hd. Adapter | 7-1/16-5000 psi x 2-9/16-5000 psi |
| Tree | 2-9/16-5000 psi |
- B. Blowout Preventers: Refer to attached drawings and list of equipment. The SA BOP will be used on surface casing to \pm 2600'. The RRA will be used on intermediate casing from 2600' to 13,600'.
- C. BOP Control Unit : Unit will be hydraulically operated from a control unit, located at least 40 feet from the BOP stack.
- D. Testing : Refer to the attached "Equipment Testing and Crew Training Requirements."

4. Supplementary drilling equipment information:

- A. Kelly Cocks : Upper and lower installed on Kelly.
- B. Safety Valve : Full opening ball type to fit each size and type drill pipe in use will be available on rig floor at all times.