

MERIT ENERGY COMPANY

Sundance Federal Well #31
1980' FWL and 660' FNL
Unit C Section 4-T24S-R31E
Eddy County, New Mexico

1. The estimated top of geologic markers are as follows:

Delaware Lime	4060'
Cherry Canyon	5175'
Brushy Canyon	6325'
Bone Springs	7900'
2. The estimated depth at which anticipated water, oil and gas are expected to be encountered:

Water	Surface to 500'
Oil and Gas	Delaware Lime 4060' to Bone Springs 8200'
3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" casing and rated for 3000#. BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B & B-1.
4. Auxiliary Equipment and proposed Casing Program:
 - A. Auxiliary Equipment: Kelly Cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit drill pipe and collars will be available on rig floor in open position at all times for use when Kelly is not in use.
 - B. Casing and Cementing Program:

Hole Size: 17 1/2"	Total Depth: 650'	Casing Size: 13 3/8"
Setting Depth: 650'	Mud Weight: 8.8 ppg	

 Casing Design:

O.D.	Weight	Grade	Thread	Coupling	Interval	Length
13 3/8"	54.50#	J-55	8R	ST & C	0-650'	650'

 Minimum Casing Design Factors:
 Collapse 11.30, Burst 27.30, Tensile Strength 8.53
 - Cement Program:

Lead Slurry: 280 sacks-3565 posC with 6% Bentonite 2% CaCl ₂
1/8 lb per sack Cellophane Flake
Expected Linear Fill: Est. Hole Volume-554 feet
Slurry Properties: Weight-12.8 ppg Yeild-1.98 cu.ft./sack
Tail Slurry: 290 sacks Class "C" with 2% CaCl ₂
Expected Linear Fill: Est. Hole Volume-552.94 feet
Slurry Properties: Weight-12.8 ppg Yeild-1.32 cu.ft./sack

Hole Size: 11"	Total Depth: 4200'	Casing Size: 8 5/8"
Setting Depth: 4200'	Mud Weight: 10.0	