

SUPPLEMENTAL DRILLING DATA

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WELL #1 HALE FEDERAL
1980' FNL & 1980' FWL SEC. 11-19S-30E
EDDY COUNTY, NEW MEXICO

1. SURFACE FORMATION: Alluvial soils of Quaternary Age.

2. ESTIMATED GEOLOGIC TOPS:

Salt	420'	Wolfcamp Lm	9250'
Base Salt	1800'	Cisco Sh	9700'
Yates	2000'	Strawn Lm	10350'
Queen	2900'	Atoka	10700'
Grayburg	3200'	Morrow	11300'
San Andres	3650'	Barnett	12000'
Bone Spring	5900'		

3. POSSIBLE WATER AND HYDROCARBON BEARING ZONES:

Fresh Water: Above 300'
Gas: Atoka, Morrow

4. PROPOSED CASING PROGRAM:

<u>Size</u>	<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>	<u>Condition</u>
13 3/8"	0 - 350'	48 #	H-40	STC	New
8 5/8"	0 - 2400'	24 #	J-55	STC	New
	2400 - 2600'	28 #	H-40	STC	New
	2600 - 3700'	32 #	H-40	STC	New
4 1/2"	0 - 1600'	11.6#	N-80	BUTT	New
	1600 - 11000'	11.6#	N-80	LTC	New
	11000 - 12250'	11.6#	N-80	LTC	New

5. PRESSURE CONTROL EQUIPMENT: Blowout preventer stack will consist of an annular-type preventer and two ram-type preventers with 3000 psi working pressure. A sketch of BOP is attached.