

**ATTACHMENT TO FORM 3160-3
TOMAHAWK 34 FEDERAL #1
660' FNL AND 1,650' FEL
SECTION 34, T20S, R33E
LEA COUNTY, NEW MEXICO**

DRILLING PROGRAM

1. GEOLOGIC NAME OF SURFACE FORMATION

Alluvium

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

B/Salt	3,150	T/Strawn	12,580
T/Yates	3,395	T/Atoka	12,870
T/Delaware	5,350	T/Morrow	13,110
T/Bone Spring	8,418	T/Morrow A Sand	13,550
T/1 st Bone Spring Sand	9,480	T/Morrow B Sand	13,630
T/2 nd Bone Spring Sand	10,050	T/Morrow C Sand	14,040
T/3 rd Bone Spring Carb	10,600	TD	14,500
T/Wolfcamp	11,600		

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

T/Delaware	5,350	Oil
T/3 rd Bone Spring Sand	10,600	Oil
T/Atoka	12,870	Gas
T/Morrow A Sand	13,550	Gas
T/Morrow B Sand	13,630	Gas

4. CASING AND CEMENTING PROGRAM

<u>Setting From</u> <u>Casing Size</u>	<u>From</u> <u>To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
13-3/8"	0' - 500'	48#	J-55	ST&C
8-5/8"	0' - 4,500'	32#	J-55	ST&C & BT&C
5-1/2"	0' - 4,200'	20#	N-80	LT&C
5-1/2"	4,200' - 8,400'	17#	N-80	LT&C
5-1/2"	8,400' - 14,500'	20#	N-80	LT&C

We plan to drill a 17-1/2" hole to equal 500'. 13-3/8" casing will be cemented with 500 sacks or volume to tie back to surface.