Attached to F 3160-3 Mack Energy Corporation Brigham H #4 1702 FSL & 921 FWL NW/4 SW/4, Sec 21 T17S R30E Eddy County, NM

# **DRILLING PROGRAM**

#### 1. Geologic Name of Surface Formation

Quaternary

### 2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Top of Salt	505'
Base of Salt	1025'
Yates	1600'
Queen	2130'
San Andres	3050'
Glorietta	4320'
Ab0	6580'

#### 3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

Water Sand	150'	Fresh Water
Grayburg	2580'	Oil/Gas
San Andres	3050'	Oil/Gas
Paddock	3950'	Oil/Gas
Abo	6580'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 425' and circulating cement back to surface will protect the surface fresh water sand. Salt Section will be protect by setting 8 5/8" casing to 1040' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by cementing 5 1/2" production casing which will be run at TD.

## 4. Casing Program:

Hole Size	e Interval	OD Casing	Weight, Grade, Jt, Cond., Type
17 ½" 12 ¼"	0-425' 0-1040'	13 3/8" 8 5/8"	48#, K-55, ST&C, New, R-3 24#, K-55, ST&C, New, R-3
7 7/8"	0-TD	5 1/2"	17#, J-55, LT&C, New, R-3

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