

SOUTHLAND ROYALTY COMPANY
Pecos River Federal 20 Comm. No. 1
1980' FSL, 1980' FEL, Sec. 20, T-19-S, R-27-E
Eddy County, New Mexico

To supplement USGS Form 9-331C "Application to Drill" the following additional information is submitted concerning questions on Page 5 of NTL-6:

1. See Form 9-331C.
2. See Form 9-331C.
3. The geological name of surface formation is: Guadalupian
4. See Form 9-331C.
5. See Form 9-331C.
6. The estimated tops of important geological markers are:

Yates	117'	1st Bone Springs	2672'	Strawn	8752'
7 Rivers	222'	3rd Bone Springs	7462'	Atoka	9492'
Queen	812'	Wolfcamp	7740'	Morrow	9662'
Grayburg	1112'	Cisco	8122'	Mississippian	10,420'
San Andres	1752'	Canyon	8532'		

7. The estimated depths at which anticipated water, oil, gas and mineral bearing strata are as follows:

San Andres (Oil)	1752'
Wolfcamp (Gas)	7740'
Cisco (Gas)	8122'
Strawn (Gas)	8752'
Atoka (Gas)	9492'
Morrow (Gas)	9662'

8. See Form 9-331C. All casing will be new.
9. See Form 9-331C for depths of strings. Cement volumes and additions as follows:
 - a. 11 3/4" casing: cement w/360 sx. Class "C" cement with 2% calcium chloride. Cement to be circulated back to surface.
 - b. 8 5/8" casing: cement w/800 sx. Class "C" Lite cement w/5# salt/sx. and 5# Gilsomite/sx. and 1/4# Flocele/sx. plus 200 sx. Class "C" cement w/2% calcium chloride. Circulate cement back to surface. A caliper log will be run in conjunction with other logs prior to running casing to obtain exact hole volumes. It is estimated that the volumes used will circulate cement back to surface of ground.
 - c. 4 1/2" casing: cement w/800 sx. Class "H" cement consisting of 700 sx. Class "H" cement w/5# KCL/sx. plus 3/4% fluid loss additive. Will run caliper in conjunction w/open hole logs prior to setting 4 1/2" casing to determine exact cementing volumes. Top cement estimated to be at 7000'. Cementing volumes could vary depending on development of intermediate horizons. Could add 1/4# Celloflake if lost circ. or seepage suspected.