

SOUTHLAND ROYALTY COMPANY  
Empire Federal "21A" Com #1  
660' FNL & 1980' FWL  
Sec. 21, T-18-S, R-29-E  
Eddy County, New Mexico (NM 030752)

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:      Guadalupean
4. See Form 9-331C.
5. See Form 9-331C.
6. The estimated tops of important geological markers are:

T/salt	1100'	3rd Bone Spring	8400'
Queen	2000'	Wolfcamp	8600'
Grayburg	2400'	Cisco	9750'
San Andres	2900'	Atoka	10,300'
1st Bone Spring	6750'	Morrow	10,575'
2nd Bone Spring	7650'	Mississippian	11,325'

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

San Andres (Oil)	2900'
Wolfcamp (Oil)	8600'
Cisco (Gas)	9750'
Atoka (Gas)	10,300'
Morrow (Gas)	10,575'

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/approx. 250 sxs Cl "C" w/2% CaCl. Cement to circ. back to surface.
  - b. 8 5/8" casing: Cement w/approx. 1000 sxs Cl "C" lite wt cmt & 400 sxs Cl "C" w/2% CaCl. Circ cmt back to surface. A caliper log will be run in conjunction with other logs prior to running csg to obtain exact hole volumes. It is estimated that the volumes used will circulate back to surface.
  - c. 4 1/2" casing: Cement w/approx. 500 sxs Cl "C" lite wt cement & 600 sxs Cl "H". Will run caliper in conjunction with open hole logs prior to setting 4 1/2" casing to determine exact hole volumes. Top of cement estimated to be at 8000'. Cementing volumes could vary depending on development of intermediate horizons.

