

SOUTHLAND ROYALTY COMPANY

Citgo Federal Comm. 5 No. 1  
NM-28714

660' FNL, 1980' FEL, Sec. 5, T-20-S, R-28-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: Paleorthid-Haplargid
4. See Form 9-331C.
5. See Form 9-331C.
6. The estimated tops of important geological markers are:

T/Salt	530'	Wolfcamp	8895'
B/Salt	850'	Penn	9250'
Queen	1670'	Strawn	9560'
San Andres	2615'	Atoka	10260'
T/Bonesprings	8200'	Morrow	10420'
		Mississippian	11160'

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

San Andres	2615'	(Oil)
Bonesprings	9200'	(Oil)
Wolfcamp	8895'	(Oil)
Strawn	9560'	(Gas)
Atoka	10260'	(Gas)
Morrow	10420'	(Gas)

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 with 375 sx. Class "C" with 2% gel. Circulate cement back to surface.
  - b. 8 5/8" casing: cement with 950 sx. Lite cement with 5# salt/sx., 5# Gilsonite/sx, 1/4# Flocele/sx. followed by 200 sxs. Class "C" with 5# Gilsonite/sx., 1/4# Flocele/sx & 2% calcium chloride. Circulate cement back to surface.
  - c. 4 1/2" casing: cement w/300 sx. Class "H" cement with 3/4% CFR-2, 5# KCL/sx. Will run caliper in conjunction with open hole logs prior to setting 4 1/2" casing to determine exact volumes necessary. Top of cement estimated to be @ 8000'. Cement volumes could vary depending on development of intermediate horizons.