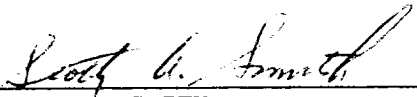


GRACE FEDERAL 19-1
Deviation Survey

The following are deviation surveys taken during the drilling of the

Grace Federal 19-1
NE SW Sec. 19, T24N-R6W
Rio Arriba Co., NM

7/19/79	1/2° @	800'
7/20/79	3/4° @	1670'
7/21/79	1° @	2678'
7/23/79	1° @	3661'
7/25/79	1 1/4° @	4507'
8/14/79	1/2° @	5087'
8/21/79	1° @	5775'


SCOTTY A. SMITH
District Opr. Mgr., So. Rockies

31 October 1979

State of Colorado)
) ss
County of Denver)

The foregoing instrument was acknowledged before me this 31st
day of OCTOBER, 1979. Witness my hand and official seal.

My Commission expires September 15, 1982


NOTARY PUBLIC

