

# DRILLING PLAN

KRAUSE UN FEDERAL #4E  
SE SE Section 33-T28N-R11W  
San Juan County, New Mexico

1. Surface Formation: Macimiento
2. Geological Markers:

Ojo Alamo	755'	Upper Mancos	4563'
Kirtland	1307'	Gallup	5455'
Fruitland	1655'	Lower Mancos	5998'
Pictured Cliffs	1868'	Greenhorn	6246'
Lewis	1953'	Graneros	6308'
Chacra	2308'	Dakota	6428'
Cliff House	3415'	Morrison	6585'
Pt. Lookout	4278'		
3. Anticipated Mineral Bearing Formations:

Ojo Alamo	(Water)
Fruitland	(Poss. Gas)
Pictured Cliffs	(Poss. Gas)
Cliff House	(Poss. Gas)
Gallup	(Poss. Gas)
Dakota	(Poss. Oil/Gas)
4. Casing Program:

Surface to 900'	8-5/8" 24# K-55 ST&C
Production to TD	4-1/2" 10.5# K-55 ST&C
5. Control Equipment: Blowout Preventor - Ram Type, hydraulic operated  
Rams - Two: One blind ram and one pipe ram.  
Series - 900 (3000#WP, 600#T)  
Manufacturer - Cameron or Shaffer  
Pressure test at 1000 psi prior to drilling  
out of casing string. Operational checks  
to be made daily and on trips.  
Sketch attached.
6. Drilling Fluids:

0'	to	900'	Gel and lime to drill surface hole and set casing
900'	to	TD	low solids non-dispersed 9.0 - 9.1#/gal., 38-45 vis., WL 8 cc or less.
7. Auxiliary Equipment: Kelly cock  
Sub on floor with full opening valve for use in drill pipe  
when Kelly is not in the string.
8. Testing, Logging and Coring: At this time no drill stem tests or cores are planned.  
However, hole conditions and information obtained  
while drilling may alter these plans.
9. Abnormal Pressures, Temperatures, Potential Hazards: There are no abnormal pressures,  
temperatures or potential hazards in the area. The maximum anticipated pressure is  
3600 psi. Weight material will be maintained on location at all times.
10. Starting Date - Completion: Dirtwork and road work for this location will require  
2 or 3 days. Moving in and rigging up 2 to 3 days. Drilling and completion will  
require approximately 30 days, for a total of 36 days. In the event of bad weather  
or other delays, this time could be considerably extended.

NTL-6 indicates a minimum of 30 days are required to obtain District Engineer's  
approval, in which case operations on this well could not be commenced until  
approximately May 10, 1980. Depending upon rig availability, equipment, weather,  
etc., this starting date could be extended.