Northwest Production Corporation Operations Plan - Jicarilla 123 C #23

I. Location: 990'N, 1600'W, Section 5, T-25-N, R-4-W, Rio Arriba County, NM

Field: So.Blanco Pictured Cliffs Elevation: 6855'GL

II. Geology:

A. Surface Formation: San Jose

| Sub-surface | Formation Tops: | • | |
|-------------|-----------------|-----------------|-------|
| Ojo Alamo | 2900' | Pictured Cliffs | 3345' |
| Kirtland | 3005' | Lewis | 3415' |
| Fruitland | 3190' | Total Depth | 3455' |

- B. Logging Program: Induction Electric and Gamma Ray Density at TD.
- C. Coring: none
- D. Testing: none

III. Drilling:

A. Anticipated Starting Date and Duration of the Project:

1977 Drilling Program - approximately 4 days to complete.

B. Circulating Medium: Treated water and a low solids gel base mud will be used from surface to TD.

IV. Materials:

| Α. | Casing Program: | Hole Size | Depth | Csg.Size | Wt.&Grade |
|----|-----------------|-----------|-------|----------|------------|
| | | 12 1/4" | 120' | 8 5/8" | 24.0# J-55 |
| | | 6 3/4" | 3455' | 2 7/8" | 6.4# J-55 |

- B. Float Equipment: 8 5/8" surface casing cement guide shoe.
 - 2 7/8" production casing 10' shoe joint with notched collar for guide shoe and 2 7/8" latch down baffle on top. Two 3 1/16" balls and one 2 7/8" latch down plug.
- C. Tubing: none
- D. Wellhead Equipment: Larkin wellhead (fig. 75)

V. Cementing:

- $8\ 5/8"$ surface casing 90 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (106 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing wellhead and BOP to 600#/30 minutes.
- 2 7/8" production 45 sks. 65/35 Class "B" Poz with 12% gel and 15.52 gallons water per sack followed by 50 sks.Class "B" neat cement (170cu.ft. slurry, 50% excess to cover Ojo Alamo). Run temperature survey after 12 hrs.