

April 1, 1977

Operations Plan
Fields Com #5A

I. Location: 1765'N, 1500'W, Section 28, T-32-N, R-11-W, San Juan County, NM

Field: Blanco Mesa Verde

Elevation: 6340'GL

II. Geology:

| | | | | |
|--------------------|------------|----------|---------------|-------|
| A. Formation Tops: | Surface | San Jose | Lewis | 3230' |
| | Ojo Alamo | 1160' | Mesa Verde | 4710' |
| | Kirtland | 1280' | Menefee | 4970' |
| | Fruitland | 2610' | Point Lookout | 5320' |
| | Pic.Cliffs | 3040' | Total Depth | 5720' |

B. Logging Program: GR-Ind. and GR-Density at Total Depth.

C. Coring Program: none

D. Natural Gauges: 4700', 4960', 5310' and at Total Depth.
Also gauge any noticeable increase in gas. Record all gauges in daily drilling report and on morning report.

III. Drilling:

A. Mud Program: mud from surface to 3430'. Gas from intermediate casing to Total Depth.

IV. Materials:

| | | | | |
|--------------------|------------------|--------------|--------------------|----------------------|
| A. Casing Program: | <u>Hole Size</u> | <u>Depth</u> | <u>Casing Size</u> | <u>Wt.&Grade</u> |
| | 13 3/4" | 200' | 9 5/8" | 32.3# H-40 |
| | 8 3/4" | 3430' | 7" | 20.0# K-55 |
| | 6 1/4" | 3280-5720' | 4 1/2" | 10.5# K-55 |

B. Float Equipment: 9 5/8" surface casing - Larkin guide shoe (fig. 102)
7" intermediate casing - Dowell guide shoe (fig. 50101) and Dowell self-fill insert float valve (fig. 53003), 5 B&W stabilizers (Prod. No. 637085) every other joint above shoe. Run float two joints above shoe.

4 1/2" liner - T.I.W. liner hanger with neoprene packoff. Larkin geyser shoe (fig. 222) and Larkin flapper type float collar (fig. 404 M&F).

C. Tubing: 5720' of 2 3/8", 4.7#, J-55 8rd EUE tubing with a common pump seating nipple above perforated pup joint with bull plugged full joint for mud anchor on bottom.

D. Wellhead Equipment: 10" 900 x 9 5/8" casing head. 10" 900 x 6" 900 xmas tree.

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V. Cementing:

9 5/8" surface casing - use 190 sks. of Class "B" cement with 1/4# gel-flake per sack and 3% calcium chloride (224 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600#/30 minutes.

7" intermediate casing - use 152 sks. of 65/35 Class "B" Poz with 12% gel (15.52 gallons of water per sack) followed by 100 sks. of Class "B" with 2% calcium chloride (512 cu.ft. of slurry, 50% excess to cover Ojo Alamo). Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1200#/30 minutes.

4 1/2" liner - precede cement with 20 barrels of gel water (2 sks. gel) Cement with 242 sks. of Class "B" cement with 4% gel, 1/4 cu.ft. of fine gilsonite per sack and 0.6% Halad-9 (426 cu.ft. of slurry, 70% excess to circulate liner).

DCW:pb