RE-ENTRY & PLUG & ABANDONMENT PROCEDURE

10-31-95

East Lindrith #4
Pictured Cliffs
NE Section 26, T-24-N, R-2-W
Rio Arriba Co., New Mexico

Note: All cement volumes use 100% excess outside pipe and 50' excess inside pipe. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures.

1. Install and test location rig anchors. Prepare blow pit. Comply to all NMOCD, BLM, and Merrion safety regulations. MOL and RU daylight pulling unit with drilling equipment. Conduct safety meeting for all personnel on location.

2. Dig out wellhead and weld a connection to the existing 3-1/2" casing. NU tubing head with outlets and NU BOP. Test BOP. Pick up a 2-7/8" bit and bit sub with 1-1/14" tubing or drill pipe; drill out Plug #2 from surface to 245'. Continue washing or cleaning out 3-1/2" casing to Plug #1 at approximately 2700'. Drill cement to 3240' and circulate well clean. POH and LD bit and sub. Pressure test casing to 500#.

3. **Plug #1 (Fruitland, Kirtland, Ojo Alamo tops, 3230' - 2990'):** Perforate 2 squeeze holes at 3230'. If casing pressure tested then attempt to establish rate into squeeze holes. Mix and pump 76 sxs Class B cement down 3-1/2" casing and squeeze 56 sxs outside casing from 3230' to 2990' and displace cement in casing to 2700' with water. WOC then tag cement. Pressure test casing to 500#.
If casing did not pressure test, then set a 3-1/2" wireline cement retainer at 3100'. PU stinger and RIH with 1-1/4" tubing; circulate well and pressure test casing to 500#; sting into CR and establish rate into squeeze holes. Mix and pump 76 sxs Class B cement, squeeze 56 sxs outside casing from 3230' to 2990' and leave 20 sxs cement inside casing to 2700'. POH with tubing.

4. **Plug #2 (Nacimiento top, 1700' - 1600'):** Perforate 2 squeeze holes at 1700'. If casing pressure tested then attempt to establish rate into squeeze holes. Mix and pump 45 sxs Class B cement down 3-1/2" casing and squeeze 24 sxs outside casing from 1700' to 1600' and displace cement in casing to 1200' with water. WOC then tag cement. Pressure test casing to 500#.
If casing did not pressure test, then set a 3-1/2" wireline cement retainer at 1650'. PU stinger and RIH with 1-1/4" tubing; circulate well and pressure test casing to 500#; sting into CR and establish rate into squeeze holes. Mix and pump 45 sxs Class B cement, squeeze 24 sxs outside casing from 1700' to 1600' and leave 21 sxs cement inside casing to 1200'. POH and LD tubing

5. **Plug #3 (Surface):** Perforate 2 holes at 250'. Establish circulation out bradenhead valve. Mix approximately 40 sxs Class B cement and pump down 3-1/2" casing, circulate good cement out bradenhead valve. Shut in well and WOC.

6. ND BOP and cut off wellhead below surface casing. Install P&A marker to comply with regulations. RD, MOL, cut off anchors, and restore location.