

Sec. 2, T25S, R37E
ELWYN C. HALE, Hale-State #3

The subject well is a combination quadruple completion under NMOCC Order No. MC-1492-A in the Justis Blinebry and North Justis Fusselman, Montoya and McKee Pools. This report covers remedial steps to repair leak in Fusselman casing (String No. 1) (See C-102 approved 12/11/64). The repair operation was conducted December 11 through December 28, 1964:

1. Loaded all four casing strings with lease oil. Also loaded Blinebry 2 7/8" casing with treated 9.4#/gal brine to kill same.
2. Pulled 1 1/2" IJ tubing from Fusselman and McKee 3 1/2" casing strings.
3. Using PGAC, ran gauge rings in all casing strings to 5000'; pushed Baker retrievable bridge plugs in Blinebry and Montoya 2 7/8" casing strings to 4950'.
4. Ran RBP in Fusselman 3 1/2" casing on tubing to 4976'. Capped all RBP's with frac sand.
5. PGAC collar locator indicated possible holes in Fusselman 3 1/2" casing 4267-70'. Placed one oriented jet hole at 4268' in Fusselman 3 1/2".
6. Unable to get RBP to 4950' in McKee 3 1/2" casing. Ran Baker casing scraper to 5000' in McKee 3 1/2". PGAC set Baker model N CIBP @ 4950' in McKee 3 1/2".
7. Dowell pressured casing strings as follows:
 - Blinebry 2 7/8" - 9.4# brine - 2000 psig - held OK.
 - McKee 3 1/2" - oil - 2025 psig - held OK.
 - Montoya 2 7/8" - oil - 2100 psig - held OK.
 - Fusselman 3 1/2" - took fresh water at 1 BPM @ 3200 psig.
8. Dowell Bradenhead squeezed Fusselman 3 1/2" with 35 sx Class C cement with 1.3% FIAC and 2% Calcium Chloride added. Staged cement to final pressure 3500 psig. Calculated top cement 4110'. Displaced cement with fresh water. Squeeze complete 9:00 P.M., 12/16/64. Pressures on other strings at end of squeeze on Fusselman:
 - Blinebry 1675; McKee 1925; Montoya 2000 psig. WOC 48 hours.
9. Released pressure on all strings (Fusselman SIP 750 psig). Washed soft cement 4208-4268' in Fusselman 3 1/2" casing. Drilled firm cement from 4268-4319'. Hole clean below 4319'. Pressured Fusselman 3 1/2" to 2120 psig using fresh water. No pressure loss in 45 minutes. Squeeze job deemed successful.
10. Drilled out Model N retainer in McKee 3 1/2" casing.
11. Retrieved bridge plugs from Blinebry, Fusselman and Montoya strings.
12. Ran 1 1/2" IJ N-80 tubing with PSI seating nipples on bottom to 8059' in McKee 3 1/2" and to 7102' in Fusselman 3 1/2" casing. Kicked off Blinebry and McKee zones.
13. Ran 2" X 1 3/16" X 1 3/16" Kobe pump on 1" Kobe tubing in Montoya 2 7/8" casing. Pump seated on Baker Model FA retainer production packer at 7180'. Kicked off Fusselman and Montoya zones.

All of the foregoing work was witnessed by L. O. Storm, agent for Elwyn C. Hale.

