

Doyle Hartman
ARNOTT RAMSAY NO. 10
Lea County, New Mexico

04-16-91 Set an American 80-119-64 pumping unit. Gearbox SN D80G-2816NA, Sampson Post SN T11F64-2-6084.

04-17-91 Rigged up Clarke Well Service unit. Pumped 25 bbls of 2% KCl water down annulus. Released Baker 5-1/2 X 2-3/8 Lokset packer set at 2623 feet. Pulled out of hole with 84 jts of 2-3/8 OD 4.7 lb/ft, J-55 tubing, 1 - 4' X 2-3/8" tubing sub, 1 - 8' X 2-3/8" tubing sub, Guiberson on/off tool, and Lokset packer. Ran into hole with tubing and found PBTD at 3170 feet. Shut down for night. SITP = 275 psig.

Note: Reported BP in well at 3287 RKB.

04-18-91 Killed well. Pulled out of hole with tubing. Ran into hole with 115 3/4-inch API Class-K rods. Pulled rods in triples and hung rods in derrick. Picked up 4-3/4 inch bit, bit sub and 4 - 3-1/2" drill collars (119.12 feet) and ran into hole along with 97 joints of 2-3/8" OD, 4.7 lb/ft, J-55, EUE tubing. Stack tubing on bottom and then backed off top joint. Removed flanged wellhead and then welded on a 5-1/2 inch bell nipple and installed a Larkin 5-1/2 X 2-3/8 X 2 type MR tubinghead. Screwed top joint back into tubing string, hung tubing in tubinghead, and buttoned up wellhead. Shutdown for night.

04-19-91 Rigged up Pool foam circulating unit and NOWSCO nitrogen truck. Commenced generating and pumping foam. Lowered tubing and cleaned out frac sand from 3170 to top of bridge plug at 3287 feet. Drilled up cast iron bridge plug set at 3287 feet RKB and then cleaned well out to the original PBTD of 3361' RKB. After reaching PBTD, circulated hole for an additional 45 minutes and then started out of hole with tubing, drill collars, and bit. Laid down drill collars and bit. Rigged up Halliburton Logging Services and logged well from 3361 back to 2400 feet with GR-DSN-CCL log. Ran into hole with wireline setting tool and Halliburton 5-1/2" EZ-drill cement retainer and set cement retainer at 3300 feet. Shut well in for night.

04-20-91 Killed well with 20 bbls of 2% KCl water. Ran into hole with 2-3/8" OD, 4.7 lb/ft, J-55, EUE tubing equipped with a stinger tool for an EZ-drill squeeze cement retainer. + stinger). Tested tubing to 3000 psig and tubing held pressure okay. Stung tubing into retainer set from 3296' to 3300' RKB. Established a pump rate down tubing. Pumped 250 gal of NEFE acid followed by 12.7 bbls of 2% KCl water at 1 BPM. Pressure dropped by 250 psi when acid hit perforations. After pumping KCl water, commenced mixing and pumping a total of 150 sx of API Class C cement containing 2% Calcium Chloride at a rate of 3 BPM. Washed up cementing equipment and lines to pit and then displaced tubing with 12.4 bbl of 2% KCl water at 1 BPM and 2100 psi. Under displaced tubing by 0.37 bbl or 1.6 sx. ISIP = 800 psig. Pulled out of retainer, laid down one joint of tubing, and stood back 4 stands of tubing. Rigged down Halliburton, removed BOP and rigged up foam circulating unit and NOWSCO nitrogen truck. Foamed well out to a solid PBTD of 3292' RKB. Circulated hole for an additional 20 minutes, killed tubing with 10 bbls of 2% KCl water, and then pulled out of hole with tubing. Start back into hole with tubing and landed bottom of tubing at 3251' RKB (104 jts X 31.01'/jt + 1.1' SN + 18' MA). Buttoned up wellhead. Well started flowing up tubing. Killed tubing with 5 bbls of 2% KCl water and ran a 2-3/8" X 1-1/4" X 12' RHAC pump on a 3/4-inch API Class KD rod string consisting of 128 - 3/4" KD rods + 1 - 2'3/4" pony rod + 16' polish rod and liner. Shut in casing at 5:55 PM MDT 4-19-91. Placed well to pumping at 9-1/2 X 64 X 1-1/4.

Turned well into separator for flow test. Flow test on a 64/64 choke at the rate of 276 MCFPD with a producing casing pressure of 24 psi.