

packer @ 844' RKB and load backside. Pressure csg-tbg annulus to 1500 psig and held 10 mins. - no leak off. POOH with tbg, SN and packer. Pick up pulling unit floor and dig out cellar to find 7-5/8 X 5-1/2" annulus valves to replace with new piping.

02-06-91 Rigged up Western-Atlas and logged well with Variable Density Acoustic Cement Bond Log from 2200' back to the surface. Located one point of possible bonding and bridging at approximately 1484' RKB. Another anomalous point on the bond log occurred at 843' RKB inside of the 7-5/8" intermediate casing. After rigging down Western Atlas, ran into the hole with the 2-3/8" OD, 4.7 lb/ft, 8 RD tubing, buttoned up wellhead, and rigged down well service unit. Moved in a backhoe and dug out cellar around wellhead. Changed out valves and nipples on both the 10-3/4" X 7-5/8" annulus as well as valve and nipples on 7-5/8 X 5-1/2" annulus. Installed tubing risers back to surface. Shutdown for night.

02-07-91 Rig up Clark Well Service. Pickup 1 jt of tubing and tag PBTD with all but 10' of Jt. No. 114 down. POOH with 2-7/8" EUE tubing. Rig up Capitan and GIH with collar locator and 3-1/8" gun with 120° phasing with 3 shots spaced over 9". Perforate 5-1/2" casing at 2130' RKB. (Top hole at 2130' RKB, bottom hole 2130.95') POOH with wireline. Pick up Halliburton 5-1/2" E-Z Drill squeeze retainer and setting tool, 6.3' total. GIH with retainer and 67 jts 2-3/8" tubing. Set retainer @ 2079' RKB with 67 jts tubing, tool and 10' above GL. Rig up flow/pump lines. Pump down tubing through 3 squeeze holes at 1650 psig at 4-1/2 BPM. Could get no returns out 7-5/8" X 5-1/2" annulus. Pump down backside 7-5/8" X 5-1/2". After 14 bbls (786') pressure up to 1000 psig. If annulus was dry, block is at 786' FS. Rig HOWCO back up on tubing and start in hole with 2200 sx X .9 = 1800 sx. Pump 1800 sx HOWCO lite + 350 sx Class "C" with 2% CaCl. Pump at 7 BPM @ 2100-2200 psig. Maximum pressure 2400, average pressure 2150, average rate 6.5, maximum rate 9.0. Dropped bar and displaced w/FW. Pumped 6 bbls and bar seated in setting tool. Tubing pressure 3000+ psig. Bled off tubing. Start pumping down backside to reverse out cement. No blow on tubing. Flow back backside approximately 6 bbls to pit. Retainer not holding, dart bar not in retainer. Cement flowing up backside and equalizing. Displace down 5-1/2 X 2-7/8" annulus with 20 bbls water to move cement back into formation. Shut in backside and wait on cement for 2-1/2 hrs. Check for flow up backside-no flow. POOH w/67 jts of 2-7/8" tubing Found cement after POOH w/30 jts + 20' in Jt. #31. Found dart bar had sheared and jammed in setting tool. After out of hole install flange and BOP. Close blind rams. Shut down for night.

02-08-91 NU BOPE. PU and RIH with BHA consisting of 4 - 3/4" bit, 2-7/8 X 2-3/8" XO, 6 jts of 3-1/2" DC and 2-7/8" IF X 2-7/8" EUE - XO, (total 185.79' BHA). RIH with 62 jts 2-7/8" tubing and tag top of cement @ 2048' (MD)/2059' RKB. With power swivel, drill 16' cement and tag top of Halliburton E-Z Drill @ 2065' (MD)/2075' (RKB). Drill cement and work through setting point. RD power swivel and continue RIH with 2-7/8" tubing until 74 joints of tubing in hole. Pressure casing to 940 psi and had a gradual drop-off in pressure to 830 psi. Part of pressure decrease in pressure attributable to slight leak in BOP. Pulled work string.