- information digitally. Continue recording pressure for at least 30 minutes after shutdown. (communicate the step rate test information to Houston)
- A decision will be made at this point as to whether the Point Lookout and lower Menefee will be stimulated prior to perforating the remainder of the Menefee and Cliffhouse. If the well requires stimulation, a stimulation procedure will be developed.
- 10. If stimulation is not required continue perforating the remainder of the Mesa Verde perforations with 4 shots per foot. If stimulation is required, the stimulation procedure will address isolation of the Point Lookout and lower Menefee poststimulation, prior to perforating the Cliffhouse and upper Menefee.
- 11. Perforate the remainder of the Menefee and the Cliffhouse Interval of the Mesa Verde with 4 shots per foot.
- 12. Rig up a pump truck for a second step rate test on the entire Mesa Verde. Begin pumping clean produced water into the perforations at ¼ BPM, continue increasing injection rate in 1/8 BPM increments (with each step being at least 5 minutes in duration or longer if necessary to get a stabilized rate and pressure) until a clear change in slope of the pressure rate curve occurs. Take at least two step beyond the break point before concluding the test. (communicate the step rate test information to Houston)
- 13. Run in hole with tubing and a Baker Model AD-1 retrievable tension set injection packer to 4630' (must be deeper than 4597' GLM as per EPA) and set the packer. Note: It will take a minimum of 5000 lbs tension to set the packer, so set with the tubing in 10,000 lbs tension. Packer shear rings should be set for >35,000 lbs and <45,000 lbs. Top off annulus with sufficient mineral oil so as to prevent the packer fluid from freezing.
- 14. Nipple down BOP and nipple up wellhead. Well head needs to be equipped with cut-off valves and female fittings on both the tubing and tubing/casing annulus so that the injection pressure and annulus pressure may be measured by an EPA representative by attaching a gauge have a standard male fitting. Place 100 psi on the annulus.
- 15. Connect injection line to the wellhead for injection. Do not commence injection until all approvals are received.

Prepared by : Pat Bergman April 9, 2001