

MIDLAND E & P DIVISION

WELL WORK RECOMMENDATIONS

Proposals for Well Reconditioning and Subsurface Maintenance  
Workovers, Expense DB's, PB's, and Conversions

Lease: Langlie-Mattix Queen Unit Well No. 19  
Field: Langlie-Mattix (Queen)  
County: Lea State: New Mexico

RECOMMENDED PROCEDURE:

1. Run Well Analysis Co., Inc.'s (WACO) radioactive survey to determine current injection distribution.
2. Pull the injection equipment.
3. Clean the well out to TD of 3,560'.
4. Run tubing to a squeeze depth of 3,380'. Squeeze interval will be 3,380-3,560' - 180'.
5. Inject radioactive tagged water down the tubing-casing annulus and Halliburton's Injectrol L down the tubing. Inject 100 bbls of Injectrol L over the interval to be plugged. Shut the well in for 2 hrs. Inject 50 bbls of Injectrol L over the interval to be plugged.
6. Shut the well in for 24 hrs.
7. Clean the well out to TD of 3,560'.
8. Plug the well back to 3,380' with sand and a 10' hydromite cap.
9. Run 2' cement-lined tubing and an injection packer. Load the tubing-casing annulus with fresh water treated with 10 gals of Cortron 2207 per 1,000 gals of water. Set the packer approximately 50' above the top of the injection interval.
10. Put the well on injection.

NOTE: This workover has been discussed with WACO and Halliburton, and both companies are thoroughly familiar with the procedures to be employed.