

# USA #2

## Plug and Abandonment

Fruitland Coal Formation, AIN: 3320900

930' FSL, 1050' FWL

Unit M, Section 24, T-32-N, R-13-W

Latitude: 36° 58.7', Longitude: 108° 9.57'

### Recommendation

The USA #2, a Fruitland Coal well, was drilled as a Dakota well in 1980. In 1990, the well was completed in the FTC formation and restimulated in the FTC in 1993. The well currently produces 140 bpd of water and does not produce enough gas to operate the pumping unit or compressor.

The production from offsetting wells operated by Burlington and Hallwood support the potential for commercial production from the USA #2. A concerted effort was made to dewater the USA #2 for three months commencing in 8/00. The well produced 140 bpd of water in August and continued to produce that quantity in November.

Analysis of the CBL obtained in 1993, during the restimulation of the well indicate that channeling above the FTC is possible. Prior to plugging the well the casing will be pressure tested and a noise log will be obtained in an effort to locate the water source and quantify the volume of water currently being produced in the well. If successful quantifying the water source, an attempt will be made to squeeze the water source and continue gas production from the USA #2.

It is recommended that the USA #2 wellbore be entered for plugging procedures.

### Water Identification

Water analyses were performed on the water produced from the USA #2 and offsetting wells, Culpepper Martin #103 and #109. The water produced from the USA #2 was substantially lower in total TDS and the major cations and anions than in the CPM #103 and #109. The water sample from the USA #2 did not matched analyses from water obtained from PC wells in the area. The bicarbonate in the PC wells are similar to those in the USA #2, however, the TDS in the PC wells are much higher than in the USA #2 and the TDS in the USA #2 is closer to the TDS in the CPM #103 and #109 water samples. Consequently the water from the USA #2 cannot be identified as PC water.

An RA-Tracer log was obtained after the stimulation of the USA #2, however, the depth on the log is 1842'. The bottom perforation in the coal was 1845'. Possible communication between the wet PC zone and the FTC has not been dismissed.

### Plug and Abandonment Procedure

H2S may be encountered. USA #2 has tested 400 PPM in the water produced in this well.

Note: All cement volumes use 100% excess outside pipe and 50' excess inside pipe. The stabilizing wellbore fluid will be at 8.3 ppg, sufficient to balance all exposed formation pressures.

1. Hook up H2S monitoring equipment.
2. Comply with all NMOCD, BLM and Burlington safety and environmental regulations.
3. MOL and RU rig. Conduct safety meeting for all personnel on location. ND wellhead. NU BOP. NU two 2" steel relief lines to pit. TOOH with 2-3/8" tubing.