Bates 5W-02

Feb 4

March 6, 1985

INTER-OFFICE CORRESPONDENCE / SUBJECT:
BARTLESVILLE, OKLAHOMA

Bates Unit HE Polymer NWPM Treatments

TO: R. A. Easterly

FROM: A. J. Cornelius ajc 3/6/85

The injection of HE polymer into wells 5W2 and 4W3 at the Bates Unit has undergone many design changes and delays in the past several months. The attached letter summarizes the final treatment parameters and responsibilities of the various groups involved in the treatments. An injection timetable and cost estimates for E&P and R&D are also included. The NWPM treatments are scheduled to begin March 18, 1985 and site preparation is already underway.

Please notify me if additional information is required.

AJC:PLW:jk
Attachments

cc: J. F. Griggs
J. C. Mihm (r) D. R. Wier
R. L. Clampitt
T. D. Brown (r) G. A. Stahl
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INTER-OFFICE CORRESPONDENCE / SUBJECT:
BARTLESVILLE, OKLAHOMA

Bates Unit HE Polymer NWPM Treatments
(PLW-N1-85)

TO: A. J. Cornelius

FROM: P. L. Woods PLW

The treatment parameters, responsibilities of the groups involved, cost estimate, and projected timetable for the injection of HE polymer in wells 5W2 and 4W3 at the Bates Unit are as follows:

HE Polymer Injection

The HE polymer will be injected at a concentration of 10000ppm (3.5 lb/bbl) and at a rate of .25-1.0 bpm. Polymer viscosity will be reduced from 50 cp to 40 cp after the addition of the crosslinking chemical. The treatments of Well 5W2 and Well 4W3 have been sized to 1535 bbls of gel (5373 lbs active polymer) and 3111 bbls of gel (9799 lbs active polymer), respectively. The low capacity well, Well 5W2, should be treated first. If Well 5W2 will not take the designated amount of polymer, the excess can then be disposed of in the high capacity well.

Crosslinking Chemical Injection

The crosslinking chemical, chromium propionate, will be brought on location at a concentration of 20000 ppm. It will be injected into the polymer flow stream by R&D's chemical injection skid at a rate of 5-25 gal/hr. The chemical concentration in the polymer solution should be maintained at 150 ppm.

Responsibilities of Production Research

Production Research is responsible for 1) providing the crosslinking chemical injection skid, 2) supplying the crosslinking chemical solution, 3) sampling the polymer solutions, and 4) monitoring injection.

The chemical injection skid will consist of a Milroyal C duplex pump (a spare will also be provided), prover tubes for chemical injection rate measurements, a 30 cubic inch pulsation dampener, a 2" Komax static mixer, sampling ports, and a Fischer-Porter magnetic meter to measure polymer flow rate. Production Research has also purchased a pH meter probe and alarm box to detect chromium propionate injection failure. The skid has been assembled and tested and will be transported to the injection site in a pickup bed by R&D on March 12.

Production of the chromium propionate was completed on Janaury 25, 1985 and the solution has been diluted to 2%. Samples of the solution have produced stable gels with the HE polymer in the Bates produced brine.