

Case Study



CDG Technology in North America

The Adon Road - An In-Depth Gel Case History (SPE 35352)

Situation

Because of the high permeability variation, in-depth colloidal dispersion gels (CDG's) were used to initially sweep and block the high permeability rock to subsequent water and polymer injection.

Program

The primary objective of the the A total of 564,948 barrels, or 8.03% PV, of CDG were injected at an average polymer concentration of 268 mg/L over 20 months. The CDG was followed by 556,800 barrels, or 7.91% PV, of uncrosslinked polymer at an average concentration of 150 mg/L, injected over 17 months. Following the gel and polymer program, straight water was injected. Polymer has not been produced at the nearest offset producer 1180 feet away, suggesting the gel remained in the formation.

Results

The Adon Road Unit is an efficient polymer-augmented flood, recovering 39.5% STBOOIP after 32.3% PV total injection. The current water-oil-ratio at the time of the paper was 4.

8.03% PV of colloidal dispersion gel was injected at Adon Road, over 20 months.

Diversion from the gel appears to be in-depth due to the slow increase of Hall slope at the Prairie #1 injection well.

It is unlikely chemical injectants were lost out of zone because the input-output ratio was 1.0 during chemical injection.

There is evidence of limited water injection moving to the south from the Adon #1 injector. Since initiating injection at that well, the input-output ratio has increased to 1.2 to 1.3.

