

Using Analogs to Reality Check Enhanced Oil Recovery Plans

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ABSTRACT

The NB Field has produced oil for nearly 20 years from an onshore clastic reservoir. Despite a continuous water injection program, only 2% of the in-place oil has been produced, due to high oil viscosity. An enhanced oil recovery (EOR) plan involving hot water injection and a 60-acre infill drilling program was proposed to recover an estimated incremental 20% of in-place resources. Before implementing this plan, a rigorous benchmarking of the NB Field against a commercial database of proven EOR projects in similar high-viscosity reservoirs was performed in order to examine development plan options and to propose new methods to further increase recovery factor. This benchmarking established that steam flooding would likely be a much more viable option than hot water injection, and that incremental recovery might be increased to 50%, depending on the final spacing of the infill wells.