Using Analogs to Reality Check Enhanced Oil Recovery Plans

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GCAGS Explore & Discover Article #00136*
http://www.gcags.org/exploreanddiscover/2016/00136_kimiagar.pdf
Posted September 13, 2016.

*Abstract published in the *GCAGS Transactions* (see footnote reference below) and delivered as an oral presentation at the 66th Annual GCAGS Convention and 63rd Annual GCSSEPM Meeting in Corpus Christi, Texas, September 18–20, 2016.

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.

Originally published as: Kimiagar, S., 2016, Using analogs to reality check enhanced oil recovery plans: Gulf Coast Association of Geological Societies Transactions, v. 66, p. 991.