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FINAL MASTER'S EXAM DEFENSE
PETROLEUM ENGINEERING

Evaluating Enhanced Oil Recovery (EOR) Techniques for Depleted Otis-Albert Field in Kansas

Wednesday, May 10, 2023

Presentations starts @ 11:00AM

298 Slawson

[ABSTRACT]

Enhanced oil recovery is a groundbreaking technology, considering the new world into which we are emerging. The increase in population has led to the need for more energy to support countries' development, and enhanced oil recovery provides a solution. In order to promote the growth and advancement of this technology and increase productivity, simulation studies are necessary to evaluate enhanced oil recovery techniques.

In this study, we investigated the waterflooding enhanced oil recovery technique to assess its performance in a depleted Otis-Albert oil and gas reservoir by building a geological and reservoir model, performing history matching, and running simulations using waterflooding. Additionally, an economic study was conducted to determine the feasibility of implementing this technique.

The study generated the first fully comprehensive geological and reservoir model for the focus reservoir, which improved original oil and gas in place and estimated ultimate recovery. Moreover, the proposed study has significant implications for the field of enhanced oil recovery. By demonstrating the effectiveness of waterflooding, this study has the potential to improve production rates and reduce costs associated with oil and gas extraction.

Research Advisor

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