

Literature Review: Application of Artificial Intelligence in EOR

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Abstract : Higher oil prices and increasing oil demand are main reasons for great attention to Enhanced Oil Recovery (EOR). Comprehensive researches have been accomplished to develop, appraise and improve EOR methods and their application. Recently Artificial Intelligence (AI) gained popularity in petroleum industry that can help petroleum engineers to solve some fundamental petroleum engineering problems such as reservoir simulation, EOR project risk analysis, well log interpretation and well test model selection. This study presents a historical overview of most popular AI tools including neural networks, genetic algorithms, fuzzy logic and expert systems in petroleum industry and discusses two case studies to represent the application of two mentioned AI methods for selecting an appropriate EOR method based on reservoir characterization in feasible and effective way.

Keywords : artificial intelligence, EOR, neural networks, expert systems

Conference Title : ICBB 2015 : International Conference on Bioinformatics and Biomedicine

Conference Location : Istanbul, Türkiye

Conference Dates : May 21-22, 2015