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Extended Abstract

Investigating on the Enhanced Oil Recovery Methods in one of the wells of the "Koh Rig" oil field, by creating an artificial reservoir model

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Abstract

As oil production begins in a reservoir, extraction becomes increasingly challenging over time; this is due to pressure depletion and, in most cases, relatively weak natural driving mechanisms, resulting in ultimately producing less than the recoverable volume of oil. Moreover, extending the production life of reservoirs is always a primary concern in the global oil industry, and reservoir owners strive to maximize their resources by employing various cost-effective and efficient methods to produce more oil from their reserves, thereby increasing their income and profits. Most of Iran's reservoirs are also in the latter half of their lifespan and face such challenges. Therefore, it seems that, considering the urgency of the matter, relying solely on conventional (primary and secondary) recovery methods should be avoided to prevent resource wastage and maximize reservoir recovery. Because a significant portion of reservoir hydrocarbons are considered unrecoverable under conventional extraction. To address this issue, effective solutions known as Enhanced Oil Recovery (EOR) methods can be employed. These methods can increase the ultimate recovery factor and reservoir production life by altering the properties of the reservoir rock and fluid. For this purpose, in present research, the effect of different methods of EOR was investigated in one of the wells in one of the country's fields called " Kooh-Rig ". The results showed that the steam injection scenario can be the most suitable method for implementation in the studied field. Of course, more parameters need to be examined for the operational phase. This research has only compared the methods of EOR to show that in the first step, determining the appropriate method of EOR is of particular importance.

1. Introduction

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