

Fast Track Development of a Carbonate Field in North of Oman

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Abstract

The topic of the abstract is a carbonate field located in the southern region of Block 9 in North Oman, and stands as a noteworthy testament to exceptional technical excellence. Discovered in January 2020, this field has seen remarkable progress in its development, showcasing the capabilities of advanced reservoir management and engineering strategies.

The development of this carbonate field has been underpinned by a robust strategy. Building on pilot hole findings, a fast-track development approach was adopted, which involved deploying 17 producers and 12 injectors from January 2020 to the current date. One of the standout features of this development program is the approach taken in the placement of injectors and producers. Injectors were positioned as deep as possible, while producers were strategically located at the top of the reservoir. This strategy has yielded exceptional results, with a notably positive waterflood response.

In areas with substantial reservoir thickness, a tight spacing strategy was employed between injectors and producers. The vertical separation played a crucial role in optimizing reservoir performance, ensuring efficient oil recovery.

However, the development of this field presented its own set of unique challenges. Predicting Natih A truncation, a key aspect of the development process, proved to be a complex task. To address this, a combination of vertical pilots and lateral geosteering techniques were employed to appraise reservoir continuity. The lateral variations in reservoir characteristics and the intricate faulting patterns in the field added a layer of complexity, further highlighting the technical excellence required to navigate such intricacies.

Innovative reservoir management, including strategic positioning of injectors and producers within the Natih A reservoir, created an outstanding field development success story for Oxy Oman. It exemplifies the remarkable capabilities of technology and reservoir management practices in optimizing hydrocarbon recovery.