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Practical Challenges & Recommended Solutions

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SUMMARY

This research shows the experience gained from characterizing and modeling 31 oil and gas fields located within the Middle East and North Africa regions. Analyzing and interpreting the results of these studies showed that five factors are affecting to a great extent the field development scenario(s).

Regardless of the reservoir's type, depth, depositional environment or the diagenetic history; the trap's geometry, type or mechanism; the fluid's type, properties or composition; the recovery method's type or period; and the production history length, it is proved that three major technical and two non-technical factors are controlling the success of any field development plan. These are: reservoir heterogeneity, fault transmissibility, fracture effect, integration of people, data and managers and human resources.

The targets of this paper are to highlight the major challenges modelers will face while characterizing and modeling their reservoirs and recommending the best solutions to overcome these challenges. Understanding these challenges benefits an integrated system for assisting in management of reservoir assets and demonstrates the latest appropriate technologies to increase productivity of any asset team.

Practical Challenges & Recommended Solutions in Characterizing and Modeling Our Reservoir

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