

Identifying Opportunities and Effective Workslope through Integrated Data Analysis - Case Study for a Large Rich Gas Condensate Field in the Sultanate Of Oman

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ABSTRACT

The re-development of an aging depleted gas field in the Sultanate of Oman has been investigated by a multi-disciplinary integrated study team. In the first phase of the project, a detailed analysis of all data collected over years of field development have been used to achieve a step enhancement in the understanding of the current subsurface and surface situation. The three months spent by the team on an integrated analysis of seismic, petrophysical, core, PVT, reservoir pressure, production, pressure transient, wells and surface facilities data provided clarity on the plumbing of the field and on its current status. This information was then used to highlight data gaps for further gathering and to identify target volumes for short term and long term development opportunities. Particularly, the detailed data analysis revealed that aiming for additional condensate recovery should be considered the primary project objective contrarily to the original project focus on further gas development. Once this new objective was well understood by the team, the performed analysis was used to support the definition of a workplan and modeling activities required to mature the opportunity.

The case study presented here highlights the criticality of the data analysis phase of a project. Dedicated resources and significant project time allocation for this phase are necessary to ensure clarity on the opportunity at hand and to provide the framework necessary to define an effective workslope allowing the maturation of this opportunity.