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Effective Cross Discipline Well Planning and Real Time Integrated Drilling Operations on the Woodside Enfield Asset

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Abstract

This paper will present Woodside's initial experience of introducing a collaborative approach to well planning and integrated real time drilling operations. The objective was to demonstrate time savings and reduced iterations in the planning stage, and to facilitate key decisions during drilling operations. It will be explained how the biggest challenge to a team approach is the cultural aspects, and how by using a shared toolset and environment, this can be overcome. The future plans for this approach within Woodside are discussed.

This technique and approach is being applied to the planning and operations of Woodside exploration and development wells in 2008. Key disciplines involved are subsurface, geohazards, drilling, geopressure and data management teams.

From previous baselines it was estimated that the collaborative approach reduced planning time from 4 weeks to 5 days. By integrating real time data into the geoscience database, the geoscientist was able to rapidly identify that the well had landed correctly and made the call to TD - approximate time saving of 2 hours.

Key learnings

By presenting drilling based data in the same canvas as the subsurface data – a clear objective and understanding is formed across the disciplines.

Substantial time and efficiency savings can be generated by having the right people, looking at the right data with the right tools working towards the clear objective.

Integrated real time data is more than just autoloading of data. It is a key enabler for shared decision making.

Improvement in business efficiency was directly impacted by the new redesigned collaborative workflow and a well planning facilitator

A collaborative visualization tool greatly enhances cross disciplinary understanding.