W-5 The pearls and perils of interactive geomodelling tookits; the global deployment of PETREL in Shell E&P

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Abstract

Shell has traditionally developed its own high-end geo-modelling tools for detailed reservoir geological analysis, from the introduction of the IPGW (Interactive Production Geology Workbench) in the late 1980s, through to its GEOCAP-2 and DEPSIM packages of the mid to late 1990s.

However, early in 2000, several Shell Operating Units saw opportunity to implement the Technoguide (now Schlumberger) geo-modelling package PETREL. Growth in the use of the package throughout Shell's Operating Units was rapid; the interactive graphics, user-friendly (windows-based) interface and excellent visualization just some of the features that led to its uptake. However, such rapid growth also lead to many issues relating to consistency of use, interfacing with software from other disciplines, appropriateness of existing reservoir modelling training and perhaps most importantly, the effective quality assurance of the models being produced.

In order to better manage these issues and also co-ordinate system improvements, a number of global strategies have been implemented to define the modelling process, enhance training, ensure effective model QA/QC and collate product enhancement requirements.

Looking forward, Shell are working with Schlumberger as early adopters of the Ocean software development environment. If this passes a quality tollgate later in 2005, Shell plan to use Ocean to "plug-in" technology "pearls" to PETREL, either to bridge gaps in the existing PETREL workflow capabilities or apply Shell developed algorithms that are considered more advanced than those available in the standard Schlumberger product.

This talk will review the deployment history to date, provide an overview of the current environment in Shell, and will look forward to anticipate the needs of the coming years from both the software development and deployment perspectives.