AAPG International Conference: October 24-27, 2004; Cancun, Mexico

Process Based Knowledge Management – Overview and Application Iterative 3D Modelling Workflows

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As 3D modelling is taking more centre stage in many multi-disciplinary reservoir management efforts, the need for effective knowledge management is paramount to ensure: • Inclusion of pre-existing knowledge, including absent (or controversial) knowledge reflected in uncertainties • Defining a modelling process that comprehensively covers the reservoirs issues while leading to “fit-for-purpose” results in a defined time span. • Storing knowledge generated during the modelling process to ensure adequate and efficient model updates. Current 3D modelling methods and tools allow for creation/storing of models and specific workflows. Additionally, various efforts are undertaken to store modelling best practices. During a specific 3D modelling project, however, considerable knowledge is generated about what makes models work and fail. Such knowledge is essential for systematic uncertainty assessment requires management. This paper focuses on knowledge management in the EP industry, particularly on how process-based approaches add value to a 3D modelling projects in a multidisciplinary reservoir team Such projects are the basis for significant investment decisions that can result in considerable technical, financial, commercial and often environmental risk exposure. Especially with respect to concepts behind a 3D model, it is important to achieve the proper conceptual model or conceptual uncertainty scenario during the earliest phases. It is also important, at this early stage of 3D modelling, to develop models that are not large and unwieldy. This paper will show an iterative modelling approach in combination with process-based knowledge management as a powerful tool to efficiently use 3D modelling for uncertainty delineation and risk assessment.