

**AAPG International Conference
Barcelona, Spain
September 21-24, 2003**

Lorraine E. Beacom¹, Stephen M. Lewis², Roald Aspeli³ (1) BP Exploration, Sunbury upon Thames, United Kingdom (2) BP Norge, Stavanger, Norway (3) Landmark, Stavanger, Norway

Improving 3D Well Planning Methods and Subsurface Understanding Through Developing Technology that Integrates Geological and Drilling Databases

Using 3D modeling technology, multi-disciplinary teams of geologists, geophysicists and drilling engineers can plan and deliver wells with a greater appreciation of the subsurface risks involved. However, the model building process can be time consuming when information has to be manually extracted from daily drilling reports, seismic surveys and well logs, then converted into a format that can be displayed in the 3D model. Also as fields are developed, databases grow significantly and keeping a model up-to-date can be difficult, especially when numerous drilling rigs operate concurrently. New technology has been developed that directly links the visualization platform to the drilling and geological databases, so multidisciplinary teams can select and analyse all relevant subsurface data efficiently. The software, called 3D Drillview KM (Landmark TM) has been developed and successfully tested on the Valhall field in Norway where 20 years of development history resides in numerous, large databases that are being used for present well planning and new waterflood and flank developments. With this technology there is no need to duplicate or reformat data to incorporate it into the 3D model. New rig and seismic data are loaded to the central databases so are accessible to any team building separate 3D models so information sharing and model updating is easy. The technology helps reduce the time needed to build a 3D well planning model, improves communication within multidisciplinary teams and there is confidence that all the relevant database information is included.