KN02

Keynote Presentation: Global Exploration Methods Applied to and Refined by Discovery of Giant Gas Resource in Tanzania

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SUMMARY

For more than the last decade, Statoil has actively engaged in regional exploration activities in Tanzania. This has culminated in the last years with substantial exploration success in Block 2 offshore, where multi-TCF resources of gas have been discovered within the Cretaceous and Cenozoic successions. The success has come initially from a global geologically-based search for prolific hydrocarbon resources, highlighting the East African margin and Tanzania in particular as a sweet spot for new discoveries. The technical decision basis for access to the prolific offshore basins was driven by Statoil's in-depth focus on globally applicable exploration concepts founded on the company's strong insight into geological and geophysical technology and methods for exploration.

Since access into Block 2, the geological and geophysical methods and technologies have been extensively refined. This includes improvement of geophysical methods such as seismic imaging and interpretation and lithology and fluid prediction (LFP), and geological evaluations including reservoir, trap and source analysis. New and existing methods for exploration have been developed and refined using the Tanzania data sets, such as Source-to-Sink analysis, recalibration of sequence stratigraphic methods and understanding deep-water reservoir sandstones with varying quality. New geological findings of global interest have also emerged, such as the understanding of large deepwater drift deposits that have a profound influence on both reservoir distribution and trap formation in particular. Such drift deposits were, previous to the Tanzania Block 2 work, seen as unlikely to develop during the Cretaceous and early Cenozoic, periods on Earth that were much warmer than presently and are also more commonly found for example on Arctic margins in very different climatic zones.

In summary, the Tanzania Block 2 work has, in addition to be very rewarding in terms of large discoveries, improved and refined the technical insight, methods and technologies that are used in Block 2 and also in global exploration activities. The Block 2 dataset is world-class quality and an important asset in itself for the development of globally-applicable geological concepts.