

NORWAY

Operator	Wintershall Dea GmbH
Lithology	Interbedded stacked sands separated by thin shale layers
Borehole diameter	6 in
Drilling fluid	Nonconductive mud (NCM)

Background

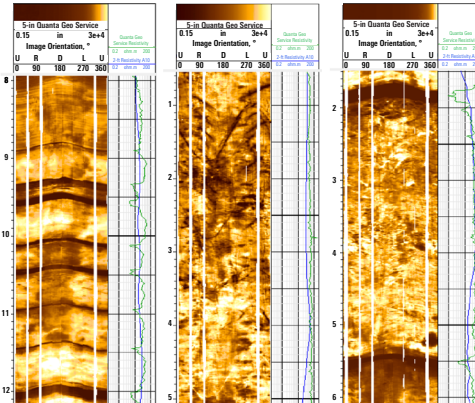
Wintershall Dea, Europe's leading independent gas and oil company, faced numerous challenges in understanding the structural and stratigraphic features of a formation penetrated by a 6-in borehole. These could be resolved through microresistivity logging with Quanta Geo* photorealistic reservoir geology service to acquire high-resolution images with nearly total borehole coverage and accurate dip measurements in NCM. With the introduction of a 5-in version of Quanta Geo service, the borehole was now accessible despite its slim diameter limitation.

Technologies

- 5-in Quanta Geo photorealistic reservoir geology service

Wintershall Dea Captures Photorealistic Images in 6-in Borehole Drilled with NCM

First Norway deployment of 5-in Quanta Geo service brings high-resolution corelike imaging to slim wells



Acquiring very good image logs in OBM has always been very challenging and the reduced hole size makes it even more challenging. The high-resolution slim image tool from Schlumberger proved to provide very high quality images for a better understanding of the formation lithology features.

Tarek Swedan
Senior Petrophysicist
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The corelike images with 90% borehole coverage reveal detailed insight to the stratigraphic distribution of sand and shale layers in the logged interval. Thin shale breaks separate the stacked sand packages. The internal architecture of the sands varies from highly laminated parallel beds to chaotic texture. Structural elements, such as bed boundaries and natural and induced fractures, are also clearly identifiable. This information enabled a high-confidence structural and stratigraphic dip interpretation, with further studies planned to integrate images and core data.

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