

Lithology	Carbonates and claystone; hard, plastic formation
Local dip variations	9–11°
Section length	1,000 m [3,281 ft]
NPT	0 h

Background

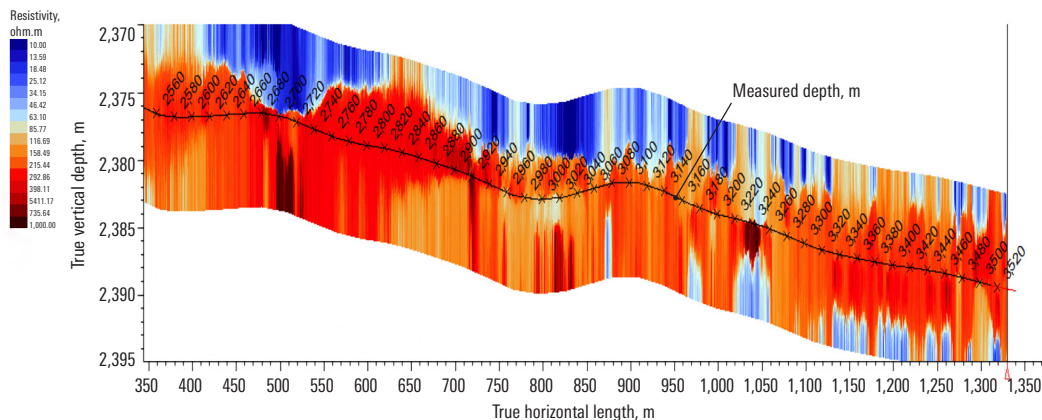
CNPC AktobeMunaiGas (CNPC AMG)—with Vostokneft and Anton Oilfield Services Group—planned to place a long horizontal section in a target layer with an undulated reservoir cap resulting from formation erosion. The extended lateral length and limited rotating speed indicated a high risk of packoff. The operator was also challenged by ineffective WOB transfer because of potential drillstring buckling in the curve interval. Throughout drilling, abrasive dolomite intervals negatively impacted bit lifecycle and ROP. CNPC sought to overcome these challenges by mapping the reservoir and placing the well precisely, achieving continuous WOB transfer and increasing ROP and bit life.

Technologies

- PeriScope HD* multilayer bed boundary detection service
- PowerDrive X6* RSS
- StingBlade* conical diamond element bit
- IDEAS* integrated dynamic design and analysis platform

CNPC AktobeMunaiGas Maps Reservoir and Exceeds Production Expectations with PeriScope HD Service

Multilayer bed boundary detection service enables precise placement of longest geosteered horizontal section in western Kazakhstan



During the first PeriScope HD service deployment in Kazakhstan, CNPC mapped the surface of the undulated reservoir cap in real time to remain 100% within the target layer and achieve 73% contact with the target reservoir. Throughout the operation, real-time petrophysics enabled rapid formation evaluation.

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