

Halliburton Performance Review

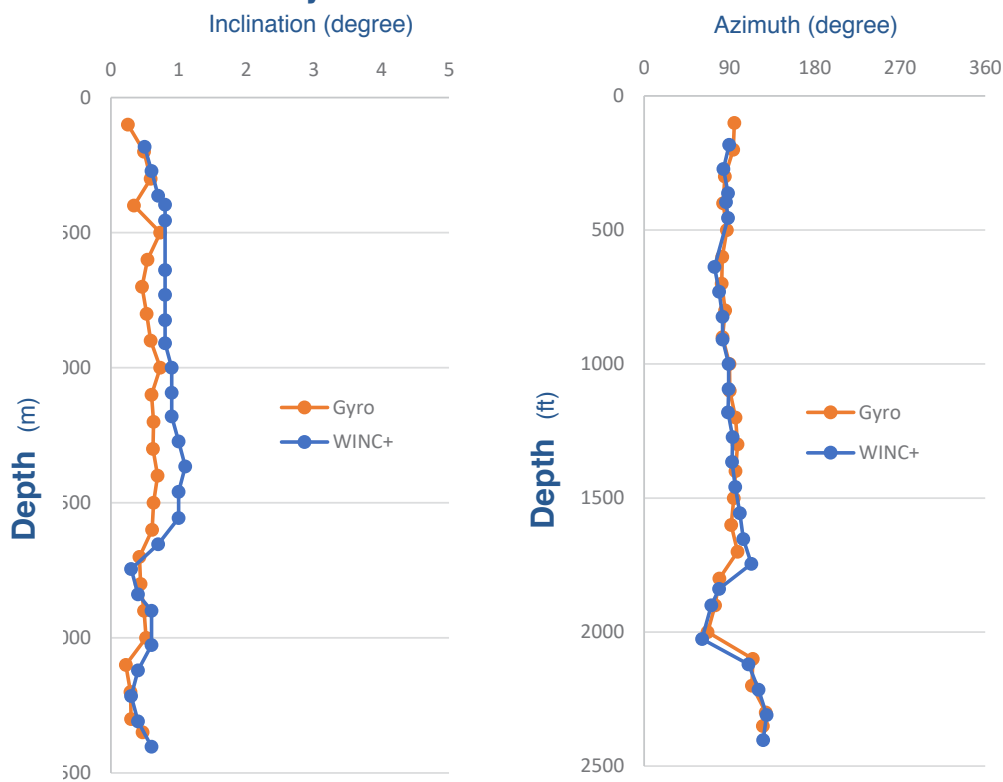
Objective: Provide real time directional surveys with limited down time while minimizing operational footprint.

Performance: On August 23, 2018, HPC Middle East completed the final of 3 trial runs for the WINC+ unmanned survey system. The tool demonstrated strategic advantages in operational footprint and ease of use while providing real-time wellbore surveys over the course of the trial runs with Halliburton in the Khurais field of Saudi Arabia.

The system was able to continue working through total losses observed in both the 22" and 17.5" hole sections and was able to continue decoding survey transmission while tagging bottom and drilling ahead.

The survey accuracy was verified through comparison to independent third- party wireline drop gyro after the run was completed. The survey data provided by the WINC+ allowed for real-time monitoring of wellbore deviation.

WINC + vs. Gyro KHRS 798



Country:	Saudi Arabia
Well Name:	KHRS 798
Operator:	Saudi Aramco
Field:	Khurais
Well Profile:	Horizontal
Hole Size:	22", 17.5"
Tool Size:	9.5"
Start Depth:	182 ft
End Depth:	2043 ft
Flow Rate:	700-1000 gpm
Circulating Time:	58 Hours

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