

CASE HISTORY

ACCURACY AND PEACE OF MIND IN RISER-LESS DRILLING OPERATIONS

APPLICATION

Wireline Surveying
Riser-less Drilling

TECHNOLOGY

Sightline Keeper Gyro,
and gyroMWD Module

LOCATION

United Kingdom
(North Sea)

CUSTOMER CHALLENGE

The customer was drilling on an offshore platform where weather and riser-less drilling caused substantial movement, making high accuracy gyrocompass surveying challenging. They lost confidence in the surveys conducted prior to Scientific Drilling's arrival after a previous well was kicked off in the incorrect direction leading to a possible collision. The well path had to be radically modified from the well plan to avoid nearby wells. To continue operations and minimize risk the customer required high accuracy survey to be collected quickly to minimize the risk of the BHA becoming stuck in the hole.

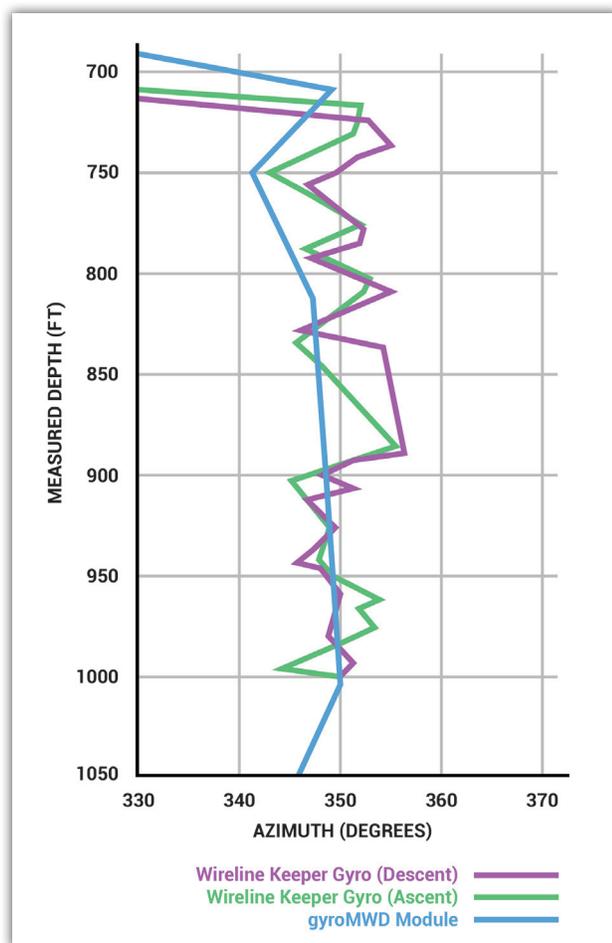
SCIENTIFIC SOLUTION

Due to the rig movement, SDI provided wireline surveys utilizing the unique Sightline mode of the Keeper gyro survey system. This mode allowed a foresight reference to be used to establish the initial heading of the tool. In this mode gyrocompass readings are not required and thus the tool did not have to be held perfectly still as is typically required. Tool initialization time was less than 30 seconds before the tool was run in the hole. Downhole time was minimized by using the Keeper's Low Angle High Speed mode for continuous surveys and toolfaces while orienting the mud motor. Five runs were conducted in both the 36" and 26" top hole sections with each confirming the azimuth within 1°.

The 16" hole section was completed by integrating SDI's gyroMWD Module seamlessly with the existing MWD provider. At this point the tool could be held stationary enough to collect high accuracy gyrocompass surveys confirming the previous Sightline survey runs. The gyroMWD module collected 28 surveys over the next five days before completing the hole section.

CUSTOMER VALUE

The accuracy provided by SDI's Sightline Keeper Gyro and gyroMWD Module allowed the well to be steered safely away from the offset wells in a congested drilling environment. The versatility of the Keeper survey system allowed the tool to be run in either Sightline mode or gyroMWD mode, selecting the best one for the particular environment.



gyroMWD MODULE & WIRELINE SURVEYS

SDI's surveys provided consistently accurate surveys, staying within 1° of azimuth on all 5 runs in the 36" and 26" top hole sections

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