

CASE HISTORY

MagTraC MWD RANGING™ INTERCEPTS AND KILLS BLOW OUT WELL

APPLICATION

Wellbore Intercept/Relief Well

TECHNOLOGY

MagTraC MWD Ranging™ and EM gyroMWD

LOCATION

North Africa

CUSTOMER CHALLENGE

A gas injection well, located in a remote area of a politically unstable country, experienced casing issues and resulted in a wellhead blowout and fire. A relief well was to be drilled to kill the well. The blowout well had a gyro survey (1980) down to 6,720 ft MD with a resultant EOU of 30 ft.

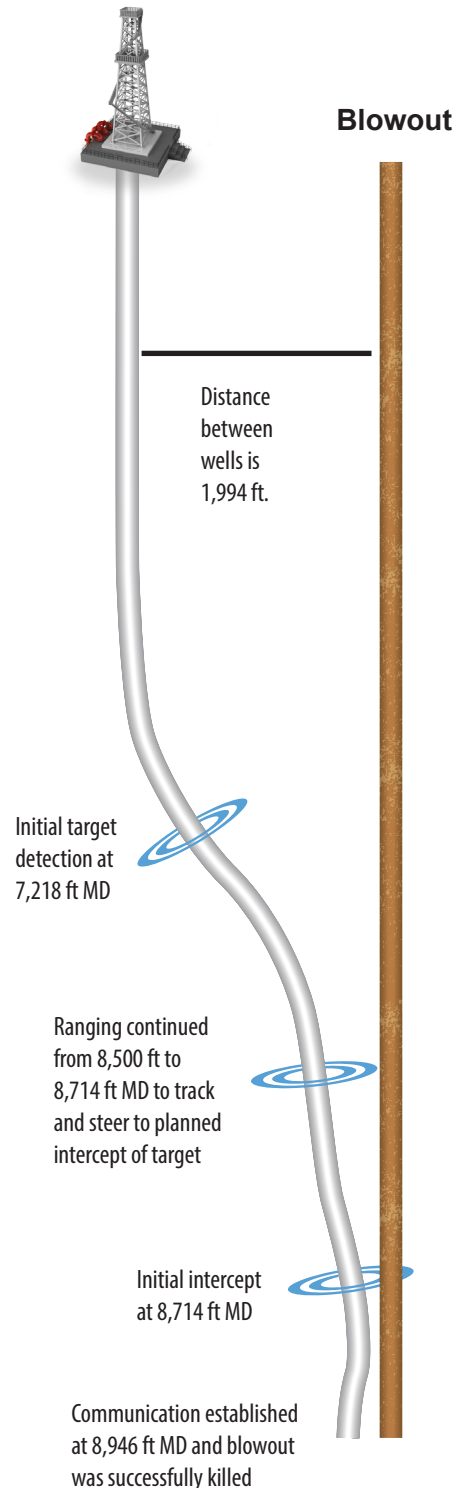
SCIENTIFIC SOLUTION

MagTraC MWD Ranging™ was selected to “guide” a 3rd party rotary steerable system for a relief well. The relief well was spudded and drilled directionally toward the target well. Ranging began at approximately 6,800 ft MD and the target well was initially detected at 7,218 ft MD. Ranging continued as the relief well was guided closer to the target well. 9-5/8” casing was set on the relief well at 8,500 ft MD (approximately 200 ft above planned intercept depth). Ranging continued in the 8-1/2” hole section to 8,714 ft MD, and a sharp increase in torque and motor stall was noted. Contact with the target casing was confirmed (slick run) and milling began.

After milling and perforating attempts failed to establish communication at this depth, the decision was made to drill deeper for a second intercept below a casing packer in the target well. MagTraC was used to guide the relief well to 9,040 ft MD. A TCP gun was run, and after firing became stuck in hole. It was decided to cut the pipe and sidetrack. The top of the fish was at 8,887 ft MD. Shortly after sidetracking the fish, hydraulic communication with the target was established at 8,946 ft MD. The mud was weighted up and the well was successfully killed.

CUSTOMER VALUE

MagTraC MWD Ranging™ service successfully detected the target wellbore and provided good positional data enabling the target to be contacted efficiently at the planned intercept depth and the uncontrolled well to be killed. All MagTraC data was provided by the 3rd party MWD system. The ability to perform the service remotely minimized the number of personnel necessary on location.



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