CASE HISTORY

MagTraC UTILIZED FOR GEOTHERMAL RELIEF WELL

APPLICATION

Geothermal Relief Well

TECHNOLOGY

MagTraC MWD Ranging™ and Electromagnetic (EM) gyroMWD

LOCATION

Japan

After initial detection, target

location was adjusted from earlier gyro survey in the well.

CUSTOMER CHALLENGE

The customer's well was venting acidic steam and H₂S gases at surface. It is known that this shallow zone is acidic; containing gases and fluids, but the lower zone contains natural steam.

The customer's objective was to drill a relief well with a targeted interception near the bottom of the zone at approximately 700 m TVD, thereby bypassing the acidic zone and tapping directly back into the natural steam.

SCIENTIFIC SOLUTION

Scientific Drilling's office provided 24/7 support with a truly international team from the Philippines, Norway, Thailand, Canada, US and UK. After the 17 1/2" hole section was completed within 21 hours, SDI used our EM gyroMWD technology in the high angle mode along with our proprietary MagTraC MWD Ranging™ service, to confirm the position of the target well and complete the 12 1/4" hole section to 618 m. The 8 ½" hole section was successfully intercepted at 714 m. After additional magnetic ranging, the customer was confident the relief well was successful.

CUSTOMER VALUE

MagTraC MWD Ranging™ service successfully detected the target wellbore and provided accurate positional data enabling the planned interception. The customer's successful relief well eliminated the risk of additional gas leaks and safely resumed production from the steam reservoir.

Continued ranging to casing point at 5,012 ft Final well intercept at 5,027 ft

Drill out 7" shoe, first attempt to mill into target failed, plug back to shoe, run in hole with slick gMWD to get precise ranging data to target. Revised plan, milled into target and killed well.

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