

CASE HISTORY

MagTraC MWD RANGING™ SUCCESSFULLY RECOVERS LOST PRODUCTION

APPLICATION

Close Proximity Drilling and Replacement Well

TECHNOLOGY

MagTraC MWD Ranging™, EM gyroMWD and Continuous Btotal™

LOCATION

California

CUSTOMER CHALLENGE

Because of the downhole mechanical failure of the original wellbore and the subsequent lost production, a replacement well was to be drilled close to the damaged well where geologists had identified a sand/gas production zone. The replacement well was required to be within 5 ft of the damaged well at three specific depths between 2,250 ft and 4,050 ft.

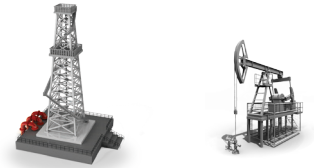
SCIENTIFIC SOLUTION

Using Scientific Drilling's MagTraC MWD Ranging™, the replacement well was spudded approximately 40 ft from the surface location of the target well. The well was kicked off at approximately 300 ft MD, angle built to approximately 3°.

The target was ranged on and steered to intercept Target #1 at 2,251 ft TVD (5 ft radius). Ranging continued to keep the well position on track for interception of Target #2 at 3,917 ft TVD (5 ft radius). Ranging continued to the intercept point at the top of the final Target #3 at 4,040 ft TVD (rectangle 50 ft by 40 ft). The position within this final target was maintained to 4,325 ft.

CUSTOMER VALUE

MagTraC MWD Ranging™, coupled with gyroMWD and Continuous Btotal™, was used to detect the target after avoiding shallow gas zones and, because of the three target location positions relative to the target well, maintain a close proximity to it. Ranging enabled efficient twinning of the target well and successfully acquired three targets along the well path. The replacement well accessed the identified target zones and production was restored.



Surface location of replacement well was approximately 40 ft from surface location of target well

Intercepted Target #1 at 2,251 ft TVD

Ranging continued to Target #2 and intercepted at 3,917 ft TVD

Ranging continued to the top of Target #3 and intercepted at 4,040 ft TVD

