

CASE HISTORY

MagTraC MWD RANGING™ NAVIGATES WEDGE WELL TO OPTIMAL LOCATION

APPLICATION

Close Proximity Drilling
Wedge Well

LOCATION

Canada

TECHNOLOGY

- MagTraC MWD Ranging™
Continuous Btotal™
Logging While Drilling (LWD)
- **Sci-Gain™** Gamma and Inclination
 - **Sci-Driver™** Near Bit Instrumented Motor Measurement While Drilling (MWD)
 - Electromagnetic (EM)

CUSTOMER CHALLENGE

The objective was to gain additional production from the zone by inserting a sidetracked leg off the target well yet requiring it to be within a tight corridor no more than 4.0–5.5 m to the left of the target well (4.5" slotted liner). A whipstock was to be set and a window milled to enable the sidetrack. The target wellbore was originally drilled as a drainage producer between a SAGD pair, therefore it was critical to ensure proper well placement in order to optimize well productivity.

SCIENTIFIC SOLUTION

MagTraC MWD Ranging™, in conjunction with enhanced geosteering using SDI's Sci-Driver™ and Sci-Gain™ was used to address this exacting wellplan. The sidetrack was done at approximately 610 m and the initial ranging performed to line up the well for the twinning run to TD. Multiple ranging shots were taken and the 4.5" slotted liner couplings were detected by MagTraC every 13 m. The excellent markers enabled efficient ranging until successfully reaching TD at 1440 m.

CUSTOMER VALUE

MagTraC MWD Ranging™, coupled with Continuous Btotal™ monitoring, ensured the tight target corridor was efficiently maintained. SDI's Sci-Driver™, EM MWD and Sci-Gain™ module optimized the ability to geosteer.

This unique combination of technologies enabled close control for both lateral and vertical positioning, and resulted in this challenging project being safely completed according to plan in a very efficient manner (47 hours).

Whipstock set and window milled at 607 m

Ranging from 640 to 1440 m using Sci-Driver™/EM MWD/Sci-Gain™ combination; maintained a 4.0–5.5 m separation from the target well

Ranging run completed at TD of 1440 m

