

CASE HISTORY

THERMAL EOR WELL INTEGRITY EVALUATION

APPLICATION

Wellbore Integrity

TECHNOLOGY

Vulcan MFT-24

LOCATION

Oil Sands,
Canada

CUSTOMER CHALLENGE

The operator of a steam-assisted gravity drainage field sought to obtain comprehensive information on the condition of its wellbore tubulars (6⁵/₈" liner). This included the determination of metal loss and deposition across blank liner joints and flow control devices (FCD), as well as identifying any tubing/liner anomalies such as buckling.

Because of the high deviation, the mode of deployment would be coiled tubing. Another major challenge was an anticipated downhole temperature in the region of 200°C. In addition, each FCD Joint had 4 perforated holes 90° apart, and the operator wanted to verify corrosion over each joint with a high-resolution Caliper.

SCIENTIFIC SOLUTION

The option available to the client was Scientific Drilling's Vulcan MFT-24, a memory multi-finger caliper with a temperature rating of 220°C.

The log was performed at a speed of 10m/min and sample rate of 0.02 seconds, giving a vertical resolution of 0.12".

Upon retrieval of the tool at surface, complete data was downloaded and subsequently processed by SDI's on standby log analyst.

CUSTOMER VALUE

The processed data revealed several anomalies including deposition (figure 1), buckling (figure 2), and flow control ports were also successfully identified (figure 3).

The data and images provided the operator with an understanding of the condition of the wellbore that enabled subsequent remedial well interventions to be planned with accuracy, reducing risk whilst saving time and money.

