CASE HISTORY
PARTED TUBING IN SAGD WELL CAPTURED IN 3D IMAGES

APPLICATION
Well Integrity
Cased Hole Services
SAGD

TECHNOLOGY
Vulcan™ MFT-24

LOCATION
North America

CLIENT CHALLENGE
An operator had performed milling of the 5-1/2" liner of its steam assisted gravity drainage (SAGD) well and had doubts about the status of the wellbore upon completion of the remedial activities. Consequently, the operator sought to ascertain an accurate picture of the condition of the downhole tubulars within the zone of the milling and along the wellbore in general. The horizontal well section in the milling zone necessitated coiled tubing conveyance, and uncertainty over the bottom hole temperature at the time of the well intervention increased risk factors pertaining to the selection of the most appropriate cased hole evaluation technology for this case.

SCIENTIFIC SOLUTION
Scientific Drilling's Vulcan™ MFT-24 multi-finger caliper was selected to provide the answers that the operator needed. The memory caliper is a high-resolution, high-accuracy wellbore inspection technology rated to 220°C (428°F). In combination with gamma-ray, CCL, pressure and temperature sensors, the tool was conveyed to the bottom of the log interval and, upon the fingers opening, logging was conducted to surface at a speed of 10m/min and sample rate of 0.02 s. Upon retrieval of the data on surface, a maximum downhole temperature of 160°C was revealed.

As figure 1 shows, a parting of the 5-1/2" tubing was identified with a gap of 40cm between the tubing and tubing fish. Other notable features of interest include low-side deposition (figure 2) and an enlarged limited entry perforation (LEP) (figure 3).

Figure 1

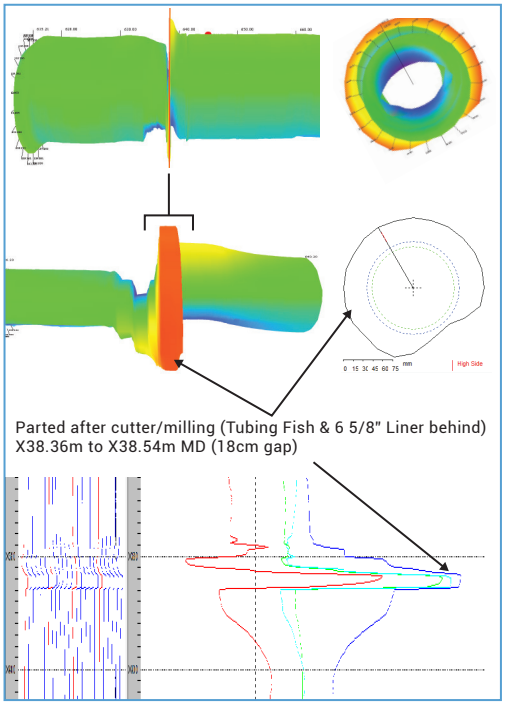


Figure 2

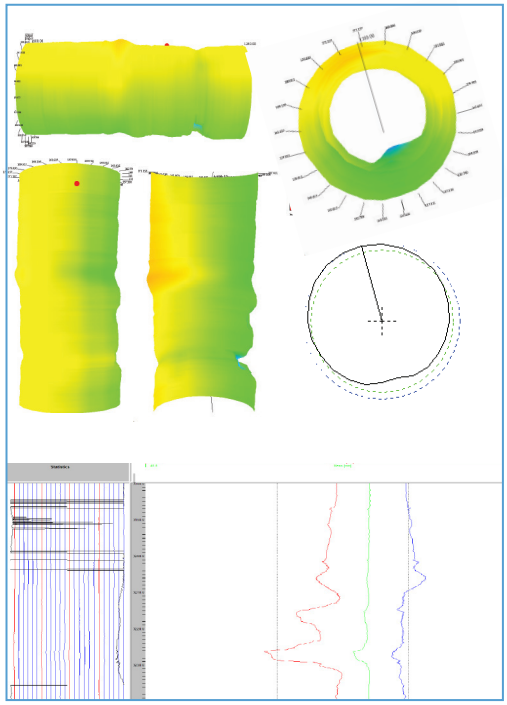
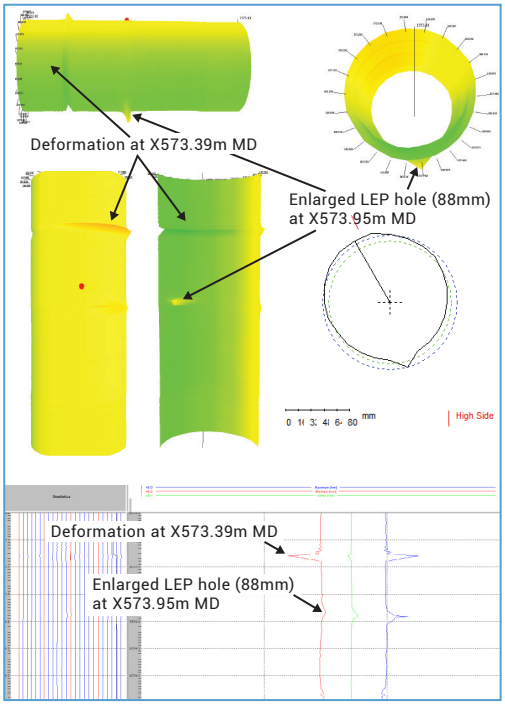


Figure 3



CLIENT VALUE
The precise identification of the tubing fish provided the necessary information for the operator to conduct further remedial operations to return the well to its online status. The high-temperature rating of the Vulcan™ MFT-24 multi-finger caliper negated any need for comprehensive cooling of the wellbore, resulting in cost and time savings for the operator.

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