

# CASE HISTORY

## RADICAL DEPLOYMENT OF MULTI-FINGER CALIPER

### APPLICATION

Well Integrity  
SAGD

### TECHNOLOGY

Vulcan MFT-24

### LOCATION

North America

### CLIENT CHALLENGE

The operator of a steam assisted gravity drainage (SAGD) field wished to devise a method of deploying a multi-finger caliper (MFC) in the lateral section of its well without having to resort to coiled tubing (CT) or wireline tractor to reach the target depth. A workover rig with drill-pipe conveyance was the favored solution. The objective of the MFC survey was to identify gaps in the top and bottom connection of cross-overs in the 7" x 5.5" liner screens and to evaluate the condition of the limited entry perforations (LEP).

### SCIENTIFIC SOLUTION

The challenge of reaching the desired depth in the lateral would require a unique deployment. In close collaboration with the client, it was determined that a pump-down mode of tool conveyance would be the optimal solution. Subsequently, an appropriate tool-string configuration was designed to enable it to be dropped inside the drill pipe and pumped down while ensuring that the shock of the impact would be minimized.

The memory Vulcan MFT-24 caliper fingers were programmed with a 0.02 second sample rate (50 samples per second) for the full duration of the operation. The fingers were programmed to open at the bottom of the logging interval and to close at surface after logging. The Vulcan MFT-24 was dropped inside the drill pipe and pumped down to exit into the liner at approx X597m MD (top of tool latched securely at the end of the drill-pipe). When the Vulcan MFT-24 fingers opened to schedule, the tool string was pulled out of hole at approx. 10m/min. The fingers closed before reaching surface at approx X95m MD.

The data was uploaded at surface and the quality checked. All fingers provided data for analysis.

### CLIENT VALUE

The elimination of coiled tubing and wireline tractor saved the client tens of thousands of dollars. All job objectives were met and several gaps were identified, including a maximum of 27.4cm.

