Cement Evaluation

The basic reasons for casing a well are to provide wellbore stability, zonal isolation and control of well fluids. Cement provides mechanical support for the casing and the isolation seal between the casing and the formation. Without effective isolation there is a risk of communication between zones, water infiltration and leakage to the surface.

A traditional Cement Bond Log (CBL) measures the amplitude of a sonic signal passing along the casing; this signal is reduced where the casing is bonded to the cement. While cement bonds that are either complete or totally absent can be clearly identified, signals showing partial bonds provide insufficient data to determine hydraulic isolation. A Radial Bond Tool (RBT) overcomes this problem by using multiple receivers positioned circumferentially around the tool. Each provides bond data covering a sector of the casing so that a map of the cement can be generated in addition to a conventional CBL log.

Currently Sondex offers RBT tools at 1 11/16” & 3 1/8” rated at temperatures up to 204°C (400°F) and pressure up to 25000psi. New versions of these tools are under development to provide Ultrawire compatibility and significantly the first memory RBT. A RBT specific acquisition system is available.