



Wireline logging: cost effective methods for new water bore certification and old leaky bore rehabilitation assessment

Duncan Cogswell*

Borehole Wireline

dcogswell@borehole-wireline.com.au

SUMMARY

Water bores in Australia are important capital assets used for local town water supply, agricultural stock supply and irrigation or simply as an indicator of the region's aquifer health. Water bore construction methods used in previous decades has led to a pervasive problem of surface leakage and/or sub surface leakage and aquifer contamination particularly in relation to the Great Artesian Basin. Wireline logging methods are available to assess if a new water bore meets current design requirements to prevent leakage/contamination issues (hence certification) or to assess the current internal and "in situ" condition of old water bores. Knowledge of the current "in situ" condition of the water bore will be able to direct a rehabilitation workover programme. Methods range from a simple 3 arm caliper for internal casing inspection and full wave sonic logging is assess the presence/absence of cement in the annulus of the casing through to high resolution acoustic (multi-fingered caliper) and optical imaging of the internal casing. Methods are discussed and examples provided.