Critical for structural assessment over the life of the dam

CASE STUDY

The use of geophysical logging techniques for dam inspection and monitoring has long been recognised as critical for structural assessment over the life of a dam.

Subsurface investigation provides detailed insight into the fabric and condition of dam walls, buttresses, foundations, and adjacent infrastructure such as spillways and bypass waterways.

Robertson Geo logging technology, developed over 40 years, provides consistent, fully calibrated data that is essential for the planning, construction, monitoring and remediation of dam structures. The technology is supported by a highly experienced personnel team, specialising in reliable tool production, quality control, accurate calibration, and data acquisition with innovative engineering solutions.

A range of proprietary logging tools can be used to investigate geotechnical, hydrogeological, and structural properties to characterize geological conditions, groundwater scenarios and any impairment of the existing hard structures. These include the use of:

- *Acoustic/optical televiewers and borehole cameras for imaging, fracture detection and lithological bed modelling*
- *Borehole calipers for hole condition quality control*
- *Probes for determining electrical resistivity characteristics, flow gradients, formation porosities, temperature, and conductivity indicators. These are essential tools for groundwater assessment and examination of near-borehole lithological characteristics*
- *PS Logger® and Formation Density probes for analysis of velocities, small strain moduli and density (FD)*

Robertson Geo borehole logging tools can be accessed internationally through onsite service, full system sales and equipment rental.

Wireline Borehole Logging

- *Characterize ground conditions in terms of condition, stiffness, fractures and lithology*
- *Gain an understanding of the groundwater conditions*
- *Investigate the condition of existing structures associated with dams*