Gap GeoPhysics
Exploration Services

Tailings Dams

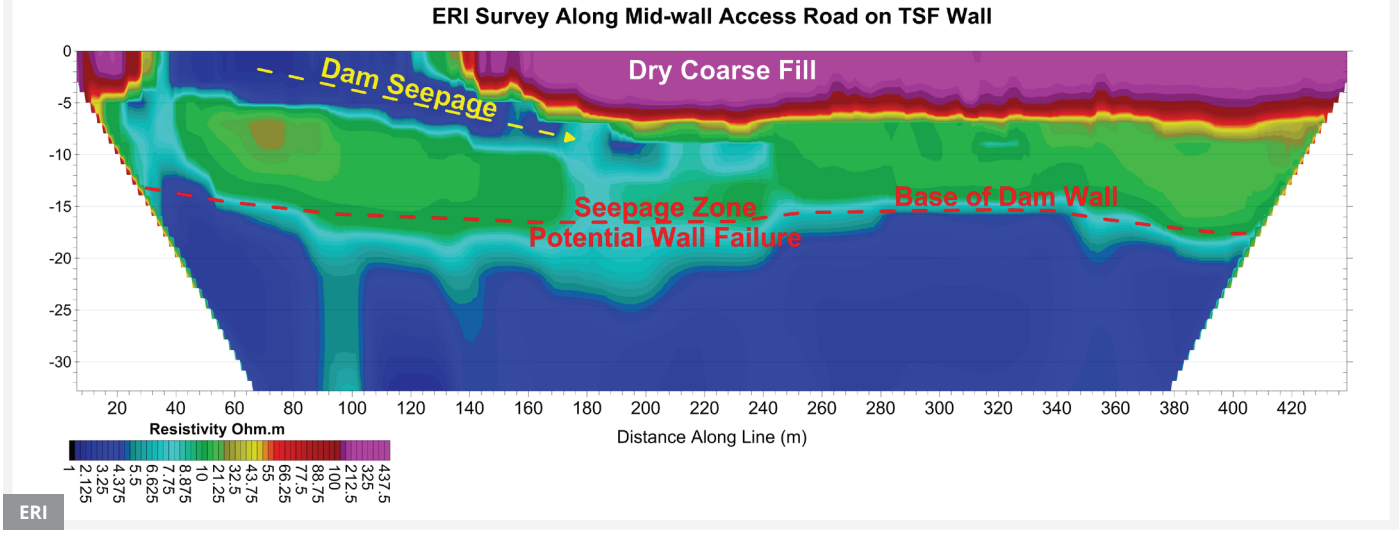
Near Surface Geophysics

Identify seepage from Dams before it becomes an environmental incident.

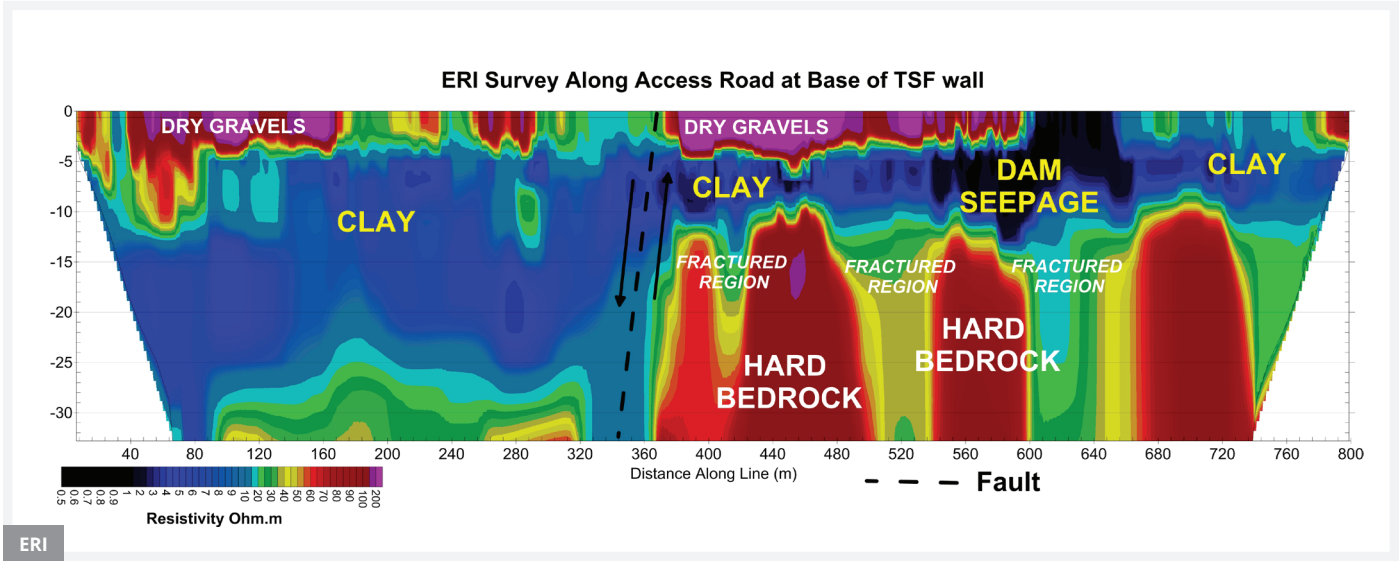
Gap Geophysics has a suite of geophysical techniques to identify potential seepage zones from your Tailings Storage Facilities (TSFs). Gap's proprietary Sub-Audio Magnetics (SAM) technique, Electrical Resistivity Imaging (ERI) and Seismic surveys combined can be used to target seepage structures.

Features & Benefits

- SAM identifies electrically conductive structures typical of dam seepage along faults or palaeochannels.
- ERI can identify the resistivity contrast between seepage fluids and natural groundwater.
- ERI provides 2D depth sections of electrical resistivity that can be acquired as "fence" around a TSF to identify seepage plumes.
- SAM maps and ERI sections provide complementary data sets to precisely target further invasive investigation.
- ERI models can help provide early identification of unstable TSF walls.
- Gap's techniques minimise surface environmental disturbance.
- Continuous sampling with SAM enables cost-effective, high spatial resolution surveys.



ERI Depth Section Resistivity Model (above) was acquired along an access road near the crest of a Tailing Storage. The identified region of potential wall failure hosted a seep which was intercepted by a recovery trench. The ERI Depth Section (below) was part of the same study and details a seepage plume for interception.



Gap Geophysics Australia

Gap Geophysics Australia offers a range of proprietary exploration techniques, with advanced instrumentation and high performance transmitters that enable greater depth of exploration and higher resolution surveys.