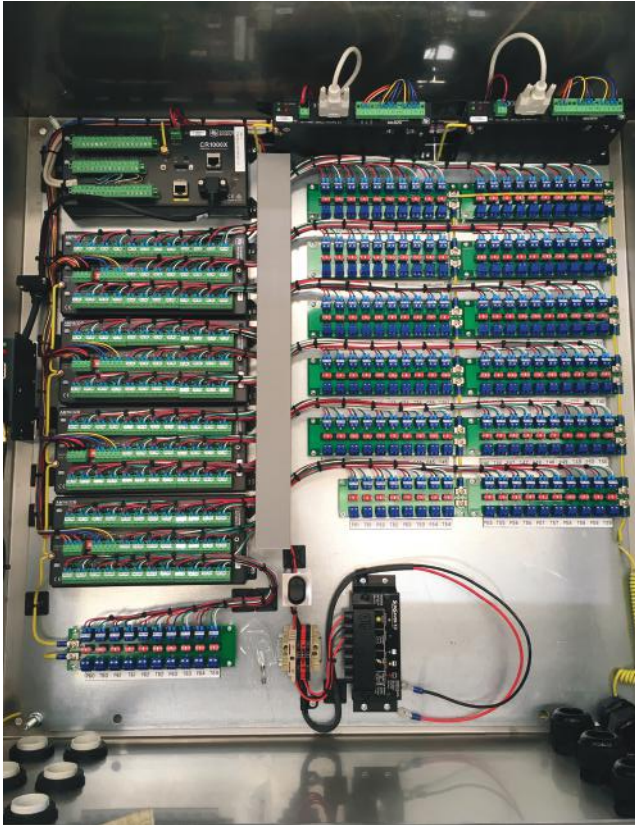


TAILINGS DAM SAFETY MONITORING – VALE NEW CALEDONIA



BACKGROUND

Vale New Caledonia (Nouvelle Calédonie) operate a large nickel and cobalt mine, with pre-installed Geotechnical Instrumentation. HMA Geotechnical in conjunction with Campbell Scientific Australia (CSA) were contracted to supply a datalogging system that met the safety monitoring requirements of the end user, to monitor all existing vibrating wire piezometers and provide timely access to calculated data.

PROJECT OBJECTIVE

- Design and supply a datalogging system capable of reading all instruments remotely
- Integrating with the existing historian data server on site
- All dataloggers must be able to function with minimal downtime

- Supply new vibrating wire barometers (Geokon Model 4580-1)
- Provide training for all Vale staff involved with the project

CHALLENGES

- COVID-19 influencing project timeline and site access
- Instrumentation supplied by multiple manufacturers already existing on site
- Highly sensitive project area – Data to be kept on site
- Radio communication requires routing around static objects
- Integration with the on-site system for data presentation
- Training to be provided for multiple personnel across different time zones



SOLUTION AND OUTCOME

HMA Geotechnical remotely supported the installation of the new datalogger enclosures, ensuring project timelines were met despite travel restrictions and supply constraints influenced by COVID-19.

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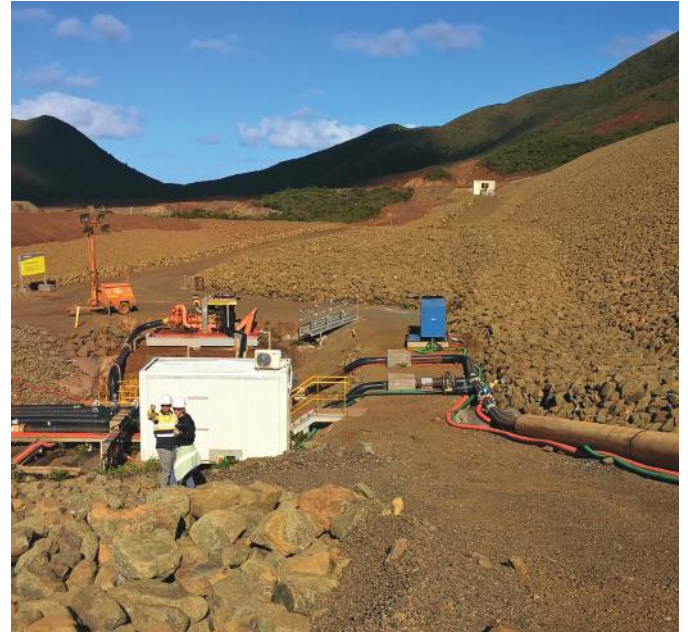
Enclosures fabricated from stainless steel were installed on site, utilising Campbell Scientific dataloggers to measure all existing instrumentation. All programming was performed remotely, without the need for extra staff on site as support.

All remote stations are powered by solar panels, allowing for constant uninterrupted data to be provided without battery changeovers.

Data from each datalogger is routed via a Pakbus radio network, providing reliable transmission of site data. The final data is presented to the on-site SCADA system, allowing engineers access to hourly readings without requiring the adoption of a new data presentation system.

All dataloggers in the system are remotely accessible by site engineers without the use of a third-party modem or satellite, ensuring that in critical weather events all dataloggers can be monitored without interruption.

Training was provided by experienced HMA Geotechnical staff, allowing for a quick skills transfer for all personnel across different time zones to be involved with the final system.



HMA GEOTECHNICAL STATEMENT

HMA Geotechnical have supplied bespoke monitoring systems and instrumentation to over 100 mines across the world. The Team at HMA combine over 120 years of Geotechnical experience and have delivered the right solution for our customers for over 35 years.

As an Australian employee-owned company, we take pride in our work.

Given our experience, workshop facilities and product range, we can supply the following options:

- Custom enclosures and frames to suit any application or condition manufactured in Australia where possible to decrease lead-times.
- Integration with multiple software packages/protocols to suit any on-site requirement. Output can be via a range of industrial protocols (Modbus, DNP3, SFTP, others).
- Flexibility to supply and install globally.



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