

Monitoring water wells around a mine in Chile

COUNTRY

CHILE

PROJECT TYPE

WATER MONITORING

SECTOR

MINING

MAIN PRODUCT

LOADSENSING

Challenge

A mining operator wanted to increase the hydrogeological control of a mine located at 3,000 meters above sea level in the Atacama Desert of northern Chile. The mining and hydrometallurgical operation of the mine was 2.5 miles away from the mine and smelter and traditionally piezometers around the pit had been monitored by isolated standalone data loggers which stored information on an internal memory. Data was collected manually every month, but the operator wanted to automate the process and gather more data from additional well points on the deepest open pit levels. With more than 60 wells in an area of 7.5 by 3 miles, the challenge of doing this cost effectively was enormous.

Solution

Worldsensing partnered with Geosinergia and replaced the old data loggers with 60 Loadsensing 5-channel wireless units which monitor pore water pressure measured by the old piezometers. The pore water pressure can be easily surveyed in real time via a web browser using Loadsensing's visualization software. Due to the mine's highly complex orography, four Loadsensing gateways were needed.

Benefits

The Loadsensing remote monitoring system now enables automatic and wireless data gathering on a daily basis, improving information quality and frequency. The mining operator can now optimize copper production in a safer way. The Loadsensing system was selected due to its long-range radio, low-power consumption, easy implementation and compatibility with existing sensors.

Advantages

- Optimized production as a result of improved monitoring data
- Simplified data visualization through Loadsensing software
- Safer operations because of real-time data acquisition



Loadsensing VW 5 channel data logger