

Bore Water Level Monitoring System Assists with Environmental Compliance

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Operational Responsibility

There is a two-way relationship between mining companies and the environment in which they operate.

Poorly managed operations can have long-term negative effects which is why Australian Local, State and Federal Governments have developed stringent environmental regulations to minimise the impact on the environment and surrounding communities.

To ensure responsibility and visibility is sustained, regular recording and reporting of data forms part of the compliance regulations placed by the EPA (Environmental Protection Authority) upon mining companies and the works they conduct onsite.

Providing Visibility

Pacific Data Systems were approached by one such mining company who were maintaining a series of groundwater (or bore) observation wells, and were looking to improve their data reporting practices.

The bore wells were in place to allow ease of access to underground water tables to ensure that excessive pumping was not contributing to the long-term depletion of this groundwater storage resource.

Such activities could be detrimental to the surrounding environment, not to mention costly to the company if found to be employing unregulated practices.

A reduction in operational costs was also a primary driving factor - with the bore wells being located in remote locations, it was cost-prohibitive to regularly conduct an extensive round trip to manually retrieve data from the various sites.



Technology that delivers - remotely!

With this sort of application in mind, Pacific Data Systems developed an off-the-shelf solution that automates this process of recording and reporting data.

Known as SatVUE, this satellite based data acquisition system was mounted on top of the bore well and with a level / pressure sensor attached - and running on internal battery power (solar also available), the system was easily up and running in 3 minutes.

A reading of the bore level is taken at pre-configured intervals and the data sent daily via the Inmarsat IsatData Pro satellite network to a dedicated web portal, allowing the client access to the data at any given time.

Alert capabilities ensure timely response

Alarms have also been programmed into the SatVUE system enabling email alerts to be sent to site staff should any pre-determined should any thresholds be breached.

The Benefits

Since the SatVUE system was installed, the client has highlighted a number of key

benefits including:

- low CAPEX, low OPEX
- improve operational efficiency and provide greater visibility
- custody of data and minimisation of data transposition errors
- monitor in remote areas inside or outside of 3G / 4G infrastructure
- ease of installation



Submersible Level / Pressure sensor attached and lowered into the bore well.

Have other applications? Due to its flexible sensor integration the SatVUE solution is ideal for monitoring

Water - ground, surface, waste, irrigation, bores, tanks, turkey's nests, pipelines, channels, streams or dams for levels, quality, evaporation, flow & pressure; seawater for quality, currents & tides

Air - for dust, gases, temperature, humidity, pressure, solar radiation, wind speed & direction

Soil - for moisture & contaminants

Oil, gas, & other fluids - in pipelines and tanks for levels and pumps for status & control & more!



Monitor Multiple Sites via a single Remote Web Portal



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