

## Project Experience

### SCADA System Expansion Design and Construction Support Services

Barrick Goldstrike Mines, Inc., Elko, NV

Timberline was contracted to Barrick Goldstrike Mines, Inc. to provide engineering design and construction support services to expand an existing electric and water SCADA system for Barrick's open-pit and underground mines in north-central Nevada. The expansion was needed to support mine dewatering, water treatment and canal/pipeline conveyance systems.

This project involved evaluation of existing systems; selection of a SCADA system configuration that met new control and monitoring requirements for 15 wells, treatment plant, transmission pipelines, booster stations, canal and river outfall; expansion of the radio telemetry system; and



TYPICAL SOLAR RTU/RADIO

additional workstations for operations and maintenance personnel. The project included interfacing to Water Treatment Plant process control systems that employed Wonderware SCADA software and Allen-Bradley PLC5s.

The existing electric SCADA system had RTUs at 16 electrical substations, including 9 DC rectifier substations for mine trolley systems. This system used Wonderware SCADA software, Pentium computers, MOSCAD RTUs, and Motorola 900 MHz MAS radio telemetry. Under this project, the Wonderware implementation was upgraded to the Windows NT operating system and 24 additional RTUs were added for water production, treatment and conveyance systems. The primary and secondary computers were specified to have the same real-time database. There were multiple workstations with password-protected access to the central database for purposes of generating reports, recording trends and building screens.

Other system features included dial-up interrogation of the Palisades gauging station on the Humboldt River, report generation for state agencies, and daily tape backup. Timberline also contributed to a special SCADA report to help guide corporate management in the future use and expansion of this joint water/electric utility SCADA system.

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