

## SMALL TOWN GOES HIGH-TECH!

Pine Bluffs, WY- (pop.1153): Government funding, and the willingness to adopt new technology, recently allowed the Pine Bluffs Utility Department to commission a new computerized telemetry system for control and maintenance of the water supply.

Pine Bluffs relies on four wells in the Brule Formation aquifer to supply the town's water needs. During the 1980's and 90's utility personnel were required to drive out to each well on a daily basis to check static water levels, read flow rates and to rotate pumping cycles. Usually two wells would be run simultaneously which meant two trips to turn wells on, and another two trips to cycle them off after the tank was full. During this labor-intensive process, operators began to notice problems with drawdown of the static water levels and with high nitrate levels.

To address these issues, the town turned to the Department of Environmental Quality (DEQ), the Wyoming Water Development Commission (WWDC), as well as Lidstone and Associates, a consulting engineering firm. Armed with approval from DEQ, matching funds from WWDC, and a comprehensive system specification from Lidstone, the town received bids on automating the water system with radio telemetry and computerization.

A Motorola Moscad L radio telemetry system was selected in conjunction with Intellution control software. Timber Line Electric and Control was chosen as the system integrators.

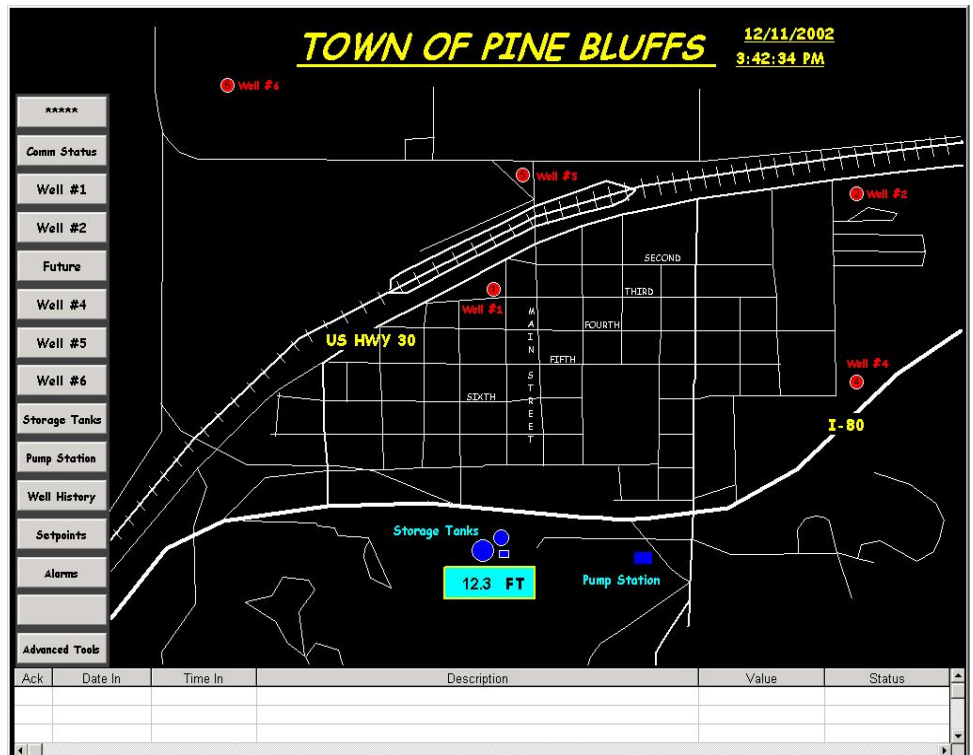
In October 2002, the new system began monitoring well pumps, static well levels, combined flows, tank level, and other data points throughout the system. Radio based on/off control commands to the well pumps now consist of

a click of the mouse instead of a trip by truck. Rory McNamara P.E. of Lidstone says, "The ease of pump control allows for careful management of well drawdown levels. The co-mingling of water from several wells helps to keep nitrate levels within safe parameters."

As the system matures, historical information on static water levels and nitrate levels will be collected and shared with the DEQ and WWDC. Tom McDonough from the town of Pine Bluffs noted that the real-time and historical information of the telemetry is, "...an invaluable tool when it comes to monitoring and managing static levels in our municipal wells. The possibilities are endless!"

The town already has plans to expand the capabilities of the radio telemetry system by adding flow metering to individual wellheads and chlorine monitoring.

The investment by Pine Bluffs and WWDC will help to preserve the quality of water on the high plains.



**Overview screen from iFix software showing well status and tank level**