



# Application Note

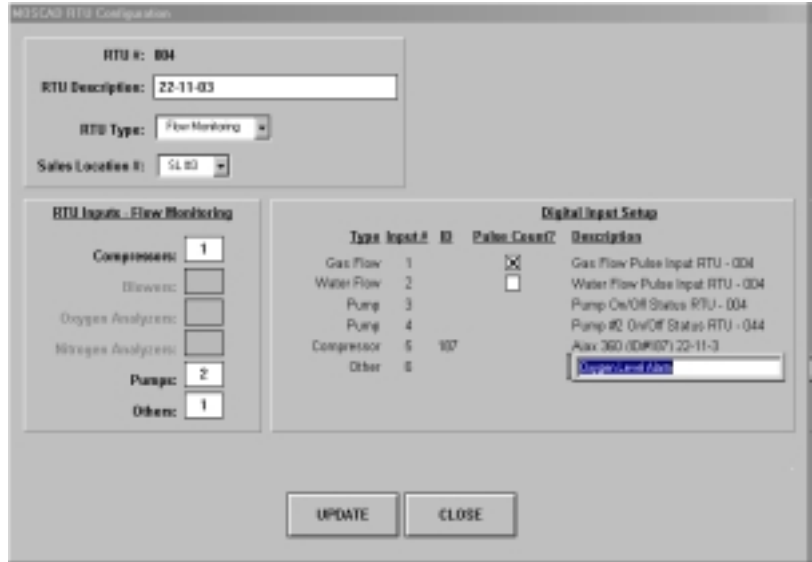


## Methane Extraction Company Upgrades SCADA System, Minimizes Cost of Ownership, Receives Reporting and Increased Efficiency

BROOKWOOD, AL -- Black Warrior Methane Corp. (BWM) is a commercial company that provides over 50 million cubic feet of natural gas per day to its sole customer, Southern Natural Gas. BWM encompasses over 100 square miles of tough Alabama wilderness and is currently running over 360 methane extracting wells with over 130 currently being monitored by a combination of older Motorola INTRAC RTU's and newer Motorola MOSCAD RTU's. Since the cost of running phone lines to all remotely monitored locations was extremely high and physically impossible at most locations, BWM chose to utilize Motorola's data radio infrastructure, MDLC.

When BWM approached ITS to update its system, the system had 50 Motorola INTRAC RTUs and 5 MOSCAD RTUs whose data was being broadcast to a centralized location via the Motorola radio infrastructure and being graphically displayed at a central computer running Wonderware's HMI, InTouch. The I/O points being transmitted by the RTUs to the central were primarily used to notify the maintenance staff of wells that were currently not producing gas, helping them to optimize their time out in the "field" and minimize the downtime of the gas wells.

BWM desired to aggressively increase the number of sites being monitored and to accurately and efficiently store and report billing information, equipment runtimes, gas flows and gas production rates being retrieved from those sites. The need to minimize additional system programming



during this expansion was the driving factor in the desired system update.

### Minimizing System Programming for New Sites

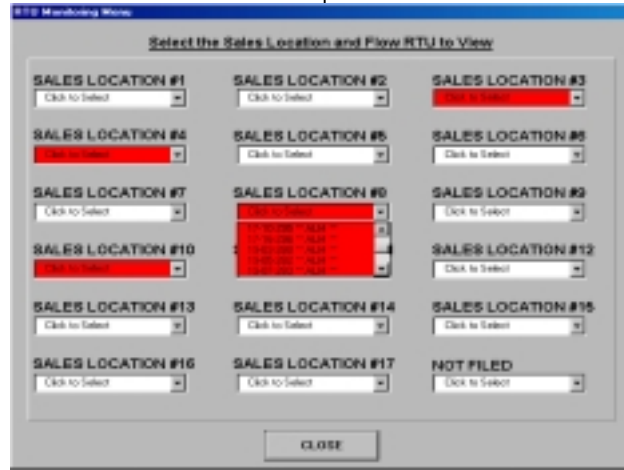
BWM was able to categorize its existing sites to four types and ITS was able to provide a "generic" RTU application which corresponded to each of these four site types. These "generic" applications allowed for **NO** RTU specific programming as new sites were added. ITS also provided a complete overhaul of the centralized SCADA computer running InTouch. Each of the four site types had a screen designed to provide the operator with a view of equipment status, set points and any alarm information that may cause a production slowdown in the field. Although each site type had its own generic RTU application, each site could also have a slight variation on the I/O located at the site. The InTouch system needed to be flexible enough to accommodate multiple I/O templates for each site. To accomplish this, ITS designed an RTU Configuration screen. From this



screen, authorized BWM employees can select the RTU site type, select the number of inputs at the site and configure specific alarm descriptions for each input. This configuration screen makes it possible for personnel to add RTUs to the SCADA system in real-time, reducing development time and system downtime thus minimizing system programming for new sites.

## Application Usability

As a result of the SCADA upgrade, BWM has support for 384 remote sites of which there are currently over 135 active. With so many sites, it becomes increasingly important to be able to easily navigate from one site to another and, perhaps more importantly, to quickly navigate to the sites exhibiting alarms. To accomplish this, ITS created a "click-and-select" menu style using Microsoft combo-box ActiveX objects. Alerting the operator of a critical alarm by changing the background



color of the combo-box to RED, the operator is easily able to distinguish the sales location where there is currently an alarm. By selecting that sales location drop down, text next to the site indicates whether or not a critical alarm has occurred at the remote site.

## Site Reporting

The reporting solution deployed by ITS uses Wonderware's SQL compliant relational database, IndustrialSQL Server (InSQL) as the data warehouse and Seagate's Crystal Reports as the report engine. All site data is logged in the InSQL historical tables regardless of whether there is an active RTU logging data at the remote site. Because of the high compression ratios provided by InSQL, there is no worry about having enough disk space on the computer running InSQL. All RTU configuration data is also stored in the InSQL database. When the operator makes changes to the RTU using the above-mentioned RTU Configuration Screen, the data is also updated in the configuration tables. The report templates "relate" the configuration data to the historical data and automatically generate the daily reports required by BWM.

Another feature added to BWM SCADA system allows for maintenance personnel to be notified via a pager when sites go into alarm. This is accomplished through the use of Specter's Win911 external paging application. By alerting maintenance personnel via an unmanned paging service, BWM is able to provide timely responses to mission critical events thereby limiting drawn-out production slow downs. They are also able to provide 24 x 7 support for the gas wells without having to have a person dedicated to watching the SCADA system firsthand.

These reports provide an accurate picture of the previous day's field activity, including total gas flow and production for each sales area, pump runtimes, pressure and temperature values as well as current monthly totals for all site values. Daily downtime reporting is also utilized to help in calculating equipment efficiency and overall site performance. Since the report data is stored on InSQL, reports can be calculated for any interval at any time. Thanks to the efficient reporting, BWM maintenance staff can concentrate on keeping equipment running rather than manually retrieving the remote site data.

## The Payoff

By choosing a MOSCAD/InTouch solution provided by ITS, BWM is able to continually expand and upgrade their system with minimal additional programming costs allowing for a cost-effective, efficient information system.

### For More Information

For more information about ITS's services or Motorola MOSCAD product line, please call 847.368.8400 or visit us at <http://www.itsinfo.com/>.