



Member-Agency Case Study

## RBDMS.NET Inspection: Providing Complete Access to Well and Mine Data in the Field

# SAFEGUARDING THE ENVIRONMENT

### Overview

States: MS, OK, NY, AR,  
UT, MT, AK, ND, NM

### Business Situation

The clear preference of agencies for using laptops over PDA devices led the GWPC to re-factor the elnspect application into an integrated Inspection module within RBDMS.NET.

### Solution

The Inspection module is fully integrated with RBDMS.NET and uses SQL Server Mobile Express. It handles merge replication with SQL Server with synchronization via network or wireless Internet connection.

### Benefits

- Immediate access to data in the field
- Complete GIS integration, available via wireless Internet connection
- Elimination of iterative data entry tasks
- Reduced deployment costs by using the same application in both field and office

The ability to take database information into the field makes critical information about each well immediately accessible to inspection teams. The RBDMS.NET Inspection module tracks many well field inspection concerns, such as plugging and abandonment, mechanical integrity testing, blowout prevention, environmental inspection, logbook, and well construction information. The GWPC developed the Inspection module with the specific goals of eliminating iterative data entry tasks and transcription errors for more accurate and timely data management and to capture data necessary for environmental reporting to the U.S. Environmental Protection Agency and for other state purposes.

Recent improvements to the base application have made the Inspection module of RBDMS.NET portable to inspectors' laptops. Merge replication with the production database can be done anywhere and at any time an Internet connection is available. The Inspection module of RBDMS.NET now features the ability to store images associated with inspection and enforcement site visits.

### Situation

The goals for field inspection programs are generally to improve the number and quality of the inspections conducted, to provide immediate access to information about previous inspections, and to eliminate duplicated effort such as handwriting in the field and data entry in the office.

The appeal of using a pocket-sized personal digital assistant (PDA) that could overcome the drawbacks of using laptops led the GWPC to first introduce a PDA version of elnspect several years ago. Although the hardware was inexpensive, the platform lacked sufficient memory to be more than minimally useful. In addition, the data was difficult to translate from the PDA to SQL Server, and the devices were frequently lost.

With widespread acceptance of using laptops in the field, the GWPC fully integrated the Inspection and RBDMSGIS modules within RBDMS.NET. It is now being rolled out to interested agencies nationwide. Agencies in Mississippi and Oklahoma are scheduled to release their Inspection modules in the 2009-2010 timeframe.

# MANAGING FIELD DATA

“Having a field inspection application makes inspections easier and more uniform. Being able to merge the results into the production database frequently makes data available for analysis faster.”

*Don Drazan, NYSDEC  
Project Coordinator*

## Solution

The Inspection module of RBDMS.NET tracks such inspection activities as drilling and plugging activities, environmental concerns, abandoned wells, enforcement and compliance issues, well mechanical integrity testing, mining operations, and reclaimed lands information.

The GWPC can customize the Inspection module for state agencies to meet differing oil and gas field inspection requirements. These agency-specific requirements can be made without sacrificing base application compatibility, and the application can accept program updates without loss of those agency-specific modifications.

The Inspection module uses SQL Server Express and merge replication with SQL Server 2000, 2005, and 2008. With an Internet connection, a Virtual Private Network connection to the agency network, and the ability to run the Windows Synchronization Manager, an inspector can synchronize field data any time and any place. The base Inspection module includes the following components:

- The same well selection and navigation features available to in-office users of RBDMS.NET
- A generic inspection form, which includes the elements common to inspections nationwide, such as Inspector, Inspection Date, Inspection Type, etc.
- Access to multilateral well construction information.
- Global positioning system (GPS) capabilities.
- The ability to store photos and other images associated with inspected facilities.
- Merge replication and data validation with the RBDMS SQL Server database.

*The Inspection module of RBDMS.NET stores data and images associated with inspection and enforcement site visits.*

