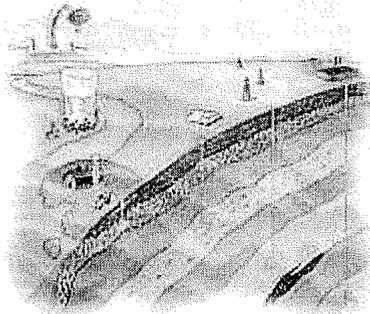


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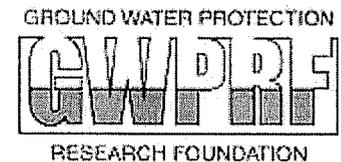
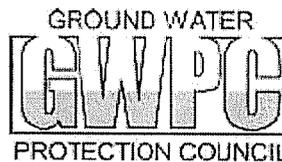
The Ground Water Protection Council's "Energy in the Environment" Initiatives

Featuring RBDMS: Recipient of a U.S. Department of Energy "Energy 100 Award"



A Nationwide Summary of Progress and a Vision for the Future

Management Solutions for Oil and Gas, Underground Injection Control, and Source Water Protection



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GWPC Plans for Electronic Commerce for Oil and Gas / GWPC/BLM MOU / E-
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RBDMS .Net

GWPC and California Department of Oil and Gas and Geothermal Resources (DOGGR) are upgrading RBDMS to N-tier technology (Figure 8) with a .net front end. GWPC, DOGGR, and other state agencies propose to build electronic business applications based on a .NET front-end user interface for the DOE's Energy 100 Award-winning Risk Based Data Management System (RBDMS) data source and XML Web services. This project will slash the costs of regulatory compliance by automating routine regulatory reporting and permit notice review and by making it easier to exchange data with the oil and gas industry—especially small, independent operators. Such operators, who often do not have sophisticated in-house databases, will be able to use a subset of the same RBDMS tools available to the agencies on the desktop to file permit notices and production reports online. Once the data passes automated quality control checks, the application will upload the data into the agency's RBDMS data source. The operators will also have access to state agency datasets to focus exploration efforts and to perform production forecasting, economic evaluations, and risk assessments. With the ability to identify economically feasible oil and gas prospects (including unconventional plays) over the Internet, operators will minimize travel and other costs.

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Because GWPC will coordinate these data sharing efforts with the Bureau of Land Management (BLM), this project will improve access to public lands and make strides towards reducing the duplicative reporting to which industry is now subject for leases that cross jurisdictions. The resulting regulatory streamlining and improved access to agency data will make more domestic oil and gas available to the American public while continuing to safeguard environmental assets. GWPC and DOGGR have identified several elements which are critical to the implementation of RBDMS in California including the ability to:

- ' Warehouse and manipulate data associated with hundreds of thousands of production and injection wells
- ' Provide access to 6 district offices, industry and other Internet users
- ' Ensure adequate security
- ' Host e-commerce applications including on-line data mining, reporting, and permitting

A key element of this project is the ability of other states to use and build on the RBDMS.net successes in California.

In order to accomplish this, DOGGR is completing a thorough business process review. This review is designed to eliminate any inefficiency in both the regulatory process and data management. The team will design the infrastructure components that will be fundamental to the application on a programming level. Use cases and class diagrams to document business processes have been prepared to guide the module coding. The base problem domain object and base objects governing navigation, security, menu control, form, and report behavior will be built through a collaborative team approach. Other base class objects in RBDMS (e.g., Well, Inspection, Permit, Violation, etc.) will also be re-designed for the .NET environment.

The business use case functional requirement specifications and business rules for Iteration 1 are complete and are available for review at: <http://calwims.consrv.ca.gov/Login.aspx?ReturnUrl=%2fDefault.aspx>. The use cases include a complete re-evaluation of the oil and gas regulatory program in California. Changes to the regulatory program will be made where necessary. Completed business use cases include: well permitting (including electronic permitting), bonding, construction site review, environmental inspection, idle well program, operator maintenance, orphan well program, pipeline management, production audit, reporting, UIC project, well file access, well information maintenance, and well mapping.

The business rules are the business practices of the Department of Conservation's (DOC) Division of Oil, Gas, and Geothermal Resources (DOGGR) with regard to the RBDMS.Net project. The business rules are organized into groups based on the business processes defined in the Target Organization Assessment: deserted well abandonment, Idle Well Management, information access to customers, operator compliance, permitting, production tracking, and well record maintenance. Each group may contain subgroups of business rules. The business rules, in part, define how the system will be developed to support a more efficient Notice-To-Permit turnaround time and access to well information. The project team is now working on the system use cases that will define data flow in RBDMS.net. System use cases that have been completed include: well permitting (including electronic permitting), bonding, construction site review, environmental inspection, idle well program, operator maintenance, orphan well

program, pipeline management, reporting, UIC project, and well information maintenance.

RBDMS N-tier Model

