Digital Oilfield Advantage
Case Study

Overview

A supermajor needed to track production and drilling for ongoing operations in the continental United States for its three million wells. Since it had hundreds of joint venture partners, the company needed to track its interests and provide partners with production, drilling, and operations information.

The company had operated wells in the region for more than half a century, resulting in a vast amount of well data stored in a proprietary Oracle database with additional production and reserves data in separate Oracle and SQL Server databases. Multiple Oracle databases existed with drilling data on company-operated and non-operated wells, and there was a separate system for partner information. Geoscience information, including well logs and culture, were also spread out in a number of commercial and proprietary Oracle databases. Production and drilling documents were stored in a variety of LAN drive locations and a document management application.

Geoscientists, engineers, and other business and technical employees had to work hard just to locate and organize the information they needed. In most cases, information was only accessible via specialized applications, with little horizontal integration. Partners were also not provided with direct access to critical information.

iStore Role

iStore assisted the oil company in its Digital Oilfield initiative by deploying PetroTrek® on the company intranet, providing the asset teams in all business units a single point of access to nearly 30 production and drilling data sources.

These sources included dozens of proprietary and commercial Oracle and SQL Server databases, including WellView, PI Historian, OpenWorks, and Documentum. The solution delivered secure, role-based access with a user interface designed around the company's workflow and business objects to enable efficient and intuitive access.

The Digital Oilfield initiative resulted in the following:

- All information and documents related to an asset, field, well, and completion were combined into dynamically generated web pages.
- Production rollups, decline curve charts, log viewers, and other tools aided the visualization of key data.
- An Internet-facing extranet site was deployed for sharing information with joint venture partners, which enabled authorized external users to securely access operation, production, and drilling information, including allocated production, well tests, morning reports, drilling reports, logs, and related information in a secure, entitled web portal.
- Confidential data was delivered via SSL encryption and only certain data types were exposed via the partner extranet.
- Highly confidential data, such as reserves, contracts, and leases, were restricted to appropriate internal users.
- The solution provided the ability to share large (more than 40 MB) files without having to burn and mail physical storage media.

Conclusion

By connecting to data where it was already stored, the company leveraged its existing information systems and IT infrastructure. Rapidly deployed PetroTrek solutions helped the company gain immediate value from the improvement in data transparency and availability across disciplines.

The intuitive, business object-oriented interface allowed users to quickly find and drill down to the information they needed. Time spent locating and organizing data by asset team members was reduced from hours to minutes, freeing more time for core business activities.

The PetroTrek Joint Venture Solution significantly improved collaboration and sharing of data between the company and its partners. The company discontinued the time and labor intensive tasks of faxing reports and was able to share real-time reports with all of its joint venture partners. Approval response time for joint operations was greatly reduced, thus realizing significant net present value.