

Anadarko Petroleum Optimizes Exploration and Production with Precise Project Management



Anadarko Petroleum Corporation
The Woodlands, TX
www.anadarko.com

Industry:

Oil & Gas

Annual Revenue:

US\$15.89 billion

Employees:

4,000

Oracle Products & Services:

Primavera P6 Enterprise Project
Portfolio Management

Key Benefits:

- Improved ability to schedule rigs based on requirement and availability
- Supported interactive planning sessions that help the company effectively manage complex deepwater operations
- Leveraged a centralized project management database to increase synergy and project performance
- Integrated development projects with production drilling operations to enhance productivity and revenue generation

“Today, we are working in a much more collaborative environment. Oracle’s Primavera P6 Enterprise Project Portfolio Management gives us shared resources across multiple entities, which is critical when scheduling the high-value assets we operate.” – John Reno, Project Management Professional (PMP), Area Project Advisor, Anadarko Petroleum Corporation

Managing the complex interdependencies of a major construction project is a challenge that excites many project management professionals. Yet, nothing handled by the average project manager matches the project complexities that Anadarko Petroleum Corporation faces on a daily basis.

One of the world’s largest independent oil and natural gas exploration and production companies, Anadarko, headquartered in The Woodlands, Texas, explores, develops, produces, and markets oil, natural gas, natural gas liquids, and related products. In addition to a vast inventory of onshore operations, the company—with an enterprise value of approximately \$48 billion—has one of the industry’s largest deepwater drilling programs. In 2009, Anadarko will have seven rigs in its deepwater drilling fleet, including three dynamically positioned (movable) drill ships, three semisubmersible moored (stationary) vessels, and one semisubmersible dynamically positioned vessel.

“It is unusual for any company to have such a large rig fleet,” said John Reno, Project Management Professional (PMP), area project advisor, Anadarko Petroleum Corporation. “. In addition, being under contract with so many rigs during a time when the rig market is extremely tight, gives us a significant competitive advantage.”

Anadarko’s deepwater projects take place in as much as 9,000 feet of water, and its fleet of rigs drills wells as deep as 33,000 feet below sea level. Working at these depths, Anadarko’s crews endeavor to meet project deadlines and deliver completed projects while safely managing the largely unpredictable impact of storms

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Area Project Advisor
Anadarko Petroleum Corporation

and underwater currents. The fast-moving business style of the oil industry also contributes to scheduling volatility. Since the cost of operating a rig can approach \$1 million per day, the pressure to make sure every asset produces value each day is intense.

With the increasing demands of the industry and millions of dollars at stake, Anadarko turned to Oracle’s Primavera software to help it bring drilling and other projects in on time and on budget.

The Right Rig in the Right Place

With the world’s ever-growing demand for oil and natural gas, Anadarko has experienced rapid growth. With some 4,000 employees, the company owns 2.4 billion barrels of oil equivalent of proved reserves. In addition to the deepwater Gulf of Mexico locations, the company has development and production fields in several sites in the United States, as well as in other countries, including Algeria and China, with an upcoming project off the coast of Ghana.

In 2006, Anadarko acquired two companies: Western Gas Resources for additional assets and infrastructure in the Rocky Mountain region; and Kerr-McGee, which like Anadarko, had a large established position in the deepwater Gulf of Mexico and exploration acreage in other proven hydrocarbon basins around the world. The challenge for the company was to merge these assets and systems, and manage resources so that the right rig could perform the right work in the right place—particularly in the deepwater Gulf of Mexico.

Anadarko must match each drilling target with the vessel best suited to conditions and requirements, based on a rig’s water depth limitations, drilling capacities, and working environments. Dynamically positioned rigs, for example, use computer-guided thrusters to hold their position in the water, even during bad weather or shifting currents. These rigs can work anywhere in the Gulf of Mexico, even during the annual June 1 through November 30 hurricane season. Moored rigs, which are anchored to the sea bed, must be positioned specific distances from existing production platforms and pipelines during hurricane season to protect the equipment and the environment during high winds and rough seas. Anadarko must manage the schedules of these rigs throughout each phase of the deepwater drilling process: exploration, delineation drilling, development drilling, and completion.

“This is where good project management comes in,” Reno said. “We use Oracle’s Primavera P6 Enterprise Project Portfolio Management to integrate our rig schedules with the development schedules. As volatile as the rig schedules can be, this integration enables the construction schedules to tie in all critical completion dates, making requirements and progress visible.”

Improving Controls for Expanded Scope

Before the acquisitions, Anadarko used Primavera P5 for basic project management. After Anadarko completed the merger, the company launched the new Anadarko Capital Effectiveness System (ACES), which includes a stage-gate process, Kildrummy Cost Manager, Primavera P6, and various estimating tools.

Today, a project services group helps to facilitate the transition between the Anadarko exploration and development teams. The group implemented the stage-gate process that clearly delineates when projects move to their next phase, who takes responsibility at each stage, and when the transition takes place.

“With the formation of the project services group, we now have a team that can use the new ACES system to do more for the company,” Reno said.

A Gusher of New Efficiencies

Anadarko used Oracle’s Primavera software to accomplish several key goals. In addition to scheduling rigs based on requirement and availability, the software supports interactive planning sessions that help the company manage complex deepwater operations. The sessions take place in the company’s operations intelligence center, where key stakeholders work interactively and collaboratively to review and refine all schedule activities.

“With this system, we can get everyone together to review and update schedules and project items,” Reno said. “We can prioritize drilling activities on multiple rigs, and we can build in our lease expiration dates. We can, for example, do ‘what-if’ analysis to prepare for unforeseen changes in rig availability.”

Primavera software also helps Anadarko to integrate drilling operations with field development work, while leveraging a centralized project management database to increase synergy and project performance.

The benefits of the new system are clear, according to Reno.

“Using the Oracle Primavera P6 software to integrate development projects with production drilling operations allows us to identify interface points and conflicts between the two,” Reno said. “For example, an installation vessel can’t be installing subsea flowlines while the drill ship is drilling in the same area. The integrated schedule allows us to easily identify these conflicts and plan accordingly. It also allows us to identify when we need long lead-time components for our subsea infrastructure projects, some of which must be ordered 18 months in advance. We expect to realize tangible benefits from what we’re doing. Every month of production is worth millions of dollars, so it’s important that we have tight integration between the various areas of our operations. Every day that we eliminate from a construction schedule is an additional day of producing oil and natural gas, and generating earnings for Anadarko.”

Looking Forward

Anadarko plans to continue exploring new opportunities in the deepwater Gulf of Mexico and international waters, while developing existing discoveries. To support these efforts, the company expects to integrate its project management tools with other back-office systems, such as its document management and enterprise resource planning (ERP) systems. This integration will create more visibility and support streamlined information exchange throughout the company.

Anadarko also plans to expand its use of Primavera’s Web-based capabilities. It hopes to integrate Primavera dashboards with the company’s existing dashboards for use by people within various levels of the organization.

“Anadarko’s project services group is poised to help the company achieve new success,” said Reno. “Today, we are working in a much more collaborative environment. Oracle’s Primavera P6 gives us shared resources across multiple entities, which is critical when scheduling the high-value assets we operate. The fact that everything is in one enterprise database delivers connectivity across regions, zones, and asset areas. In all, the solution’s project integration capabilities add tremendous value to Anadarko.”

Why Oracle?

According to Reno, Anadarko chose Oracle's Primavera P6 Enterprise Project Portfolio Management based on its outstanding project management functionality and centralized and collaborative design. "Primavera P6 facilitates planning and scheduling all of our individual projects and allows us to connect related tasks across multiple projects," he said. "Its centralized design, in addition to individual project reporting, aids in the production of multiprojects' detailed or summary reports. We even use P6 to assist in forecasting capital spending plans, which has proven to be invaluable, considering the current financial climate."

Another factor that appealed to Anadarko was how the solution centralizes global resources. "Primavera P6 Enterprise Project Portfolio Management truly allows resource sharing and leveling across multiple projects. We looked at several tools and found none of the others handled resource sharing and leveling remotely as well as P6 does." Reno said.

Anadarko Petroleum Corporation is among the largest independent oil and natural gas exploration and production companies in the world. Anadarko's mission is to deliver a competitive and sustainable rate of return to shareholders by exploring for, acquiring, and developing oil and natural gas resources vital to the world's health and welfare.