

CASOS de Dirección de Proyectos en la Industria del Petróleo y Gas

Case Example of Shell's Use of PMBOK

In May 2001, Shell International Exploration and Production Inc. reported the successful use of structured project management on their Brutus project, a deepwater tension leg platform (Shell, 2012). The company used new project management tactics based on the contents of the Project Management Institute (PMI)'s PMBOK, a standardization guideline established by the PMI. Standardization is needed as various elements of the offshore energy industry need a common language and common operating procedures so that they can better communicate with each other on complex deepwater projects. The procedures developed for the Brutus project were grouped and aligned in accordance with the PMBOK. A standardized work breakdown structure and a new financial software system are just two examples of new project management tactics used in the project. The approach gave team members new insights into achieving the objectives and reinforced the basic principles of project management. Customer expectations were exceeded and efficiency improved. Future project teams can achieve benefits by similarly organizing their project management processes. Shell opined that projects must be able to stand on their own financially and be capable of paying their own bills. Cash flow is essential in project finance. People behave as rewarded. Consequently, it is suggested that organizations should tie the cash flow to the performance desired and people will respond positively. Deepwater projects are particularly costly and of high risk. Project management tactics help companies gauge the accuracy of estimates for time and cost projections, Shell concluded. Project risk is often mismanaged. If projects are approved based on anticipated return on investment (ROI) with minimal analysis of risk, a project is set up for failure. Decisions based on incomplete information will be faulty during project execution.

Project Management Improve Operations

In 2000, Transocean Sedco Forex Inc.'s Discoverer Deep Seas utilized modern project management techniques to shorten cycle time and improve workflow procedures in dual-activity drillship operations. The Discoverer Deep Seas began work in the Gulf of Mexico in the fourth quarter 2000. It held a 5-year contract with Chevron Inc. at an estimated day rate of \$205,000. After this vessel, only one drillship remains in the 3-year old drillship construction cycle. This ultra deep water vessel, which used a dual-activity design pioneered by the Discoverer Enterprise was delivered in the fourth quarter of 2000.

Hail to Project Management

In a 2003 industry study,* owners of downstream petroleum and chemical companies ranked project management capability as the main consideration in choosing engineering contractors. The owners had concerns about the viability of contracting companies and the supply of reliable engineering resources. These were some of the conclusions of a biennial survey of the global downstream EPC industry by Transmar Consult Inc., Houston in 2003. The study designated seven engineering contractors as leading firms in executing projects: Bechtel Corp., Fluor Corp., Jacobs Engineering Group Inc., JGC Corp., KBR, Snamprogetti SPA, and Technip-Coflexip.

Project Management Improves Well Control Events

A 1995 report presented by Garold D. Oberlender (Oklahoma State University, Stillwater, Oklahoma) and L. William Abel (Wild Well Control Inc., Spring, Texas) is recounted here to illustrate how project management improved oil well control events (Oberlender and Abel, 1995). During a well control operation, the efficient use of personnel and equipment, through good project management techniques, contributes to increased safety and ensures a quality project. The key to a successful blowout control project is to use all resources in the most efficient manner. Excessive use of resources leads to unnecessary expenditures and delays in bringing the project under control.

Effective project management techniques are critical for complex, schedule-intensive, well control projects. In a well control situation, information must be gathered and organized in a systematic manner so that good decisions can be made at the right time. A project team must be organized, and all efforts must be coordinated to focus on the common goal of completing the project efficiently. Project management is a process of orderly management of numerous tasks that must be accomplished simultaneously. Project management is defined as the art and science of coordinating people, equipment, materials, money, and schedules to complete a specified project on time and within approved costs. Project management techniques have steadily improved in the last 40 years. In the 1950s, formal techniques, such as the critical path method (CPM), were developed for managing large complex engineering and construction projects for the petrochemical industry. In the 1960s, computer automation of many project management techniques became possible, with sophisticated tracking models developed for controlling the progress of projects. In the 1980s, the introduction of personal computers provided even more access to automated project management techniques to allow planning, scheduling, monitoring, and controlling of work in a real-time environment.

Lessons learned from the practice of good project management can be applied to wild well projects. In such emergency situations, the schedule of the project usually takes priority over all other considerations. Therefore, the ability to monitor progress carefully in a real-time environment is extremely important to controlling the project. Information must be gathered, organized, and given to the right person at the right time so good decisions can be made under adverse conditions. Well control projects have various levels of complexity, and as the complexity increases, the need for a project management approach becomes more important.

Several complicated and difficult well control projects occurred in the 1980s, and the cost to control these wells exceeded \$200 million each. Many experienced individuals in any business will readily agree that a \$200 million project justifies the use of advanced project management techniques to control and guide the efforts of all parties and ensure a successful outcome.

Several of these multimillion dollar projects, however, were run without proper planning and with little or no application of a formal system of project management. The lack of good project management principles caused inefficiencies, delays, and higher costs.

The Kuwait well control project, which involved more than 700 blowouts, was accomplished in a much shorter time (8 months) than first estimated (5 years). This improvement partly resulted from the application of sound project management techniques. These projects were prime examples of the need for a formal project management approach to handling wild well projects. There are many examples of projects that were successful in controlling wells but were economic disasters. Only through the effective application of project management can complex well control projects be completed in reasonable time frames at reasonable cost.

Team Management

To be effective, a project team must be able to make things happen, which is best accomplished by maintaining a “Can do” attitude and working together as an integrated team. Effective teamwork is mandatory for bringing any wild well under control.

The first step in organizing the team is selection of the project manager who is assigned full responsibility for all aspects of the project. This individual must have knowledge and experience in dealing with well control projects. Most importantly, he must be given the authority to make decisions and to act as the sole coordinator of all activities.

Because the project manager must focus his full attention on the wild well, he must not be involved in any other work that may distract his attention and concentration.

The first task of the project manager is to assess the condition of the well to determine viable options for bringing it under control. This task is best done if a proper contingency plan is already in place, providing for rapid deployment of predetermined action plans. The project manager must also establish proper communication channels with all appropriate authorities. He must have both a thorough knowledge of well control projects and effective management skills.

Because each wild well event is unique, the project team must be assembled, organized, and managed for the particular conditions at the well location. The project manager must assemble a team of people who have the right technical expertise to handle the job. He must be the leader of the team of individuals with diverse backgrounds and with special expertise to handle any problems that arise. Although a formal system of handling the project is needed, it is people that make things happen, and these people must have the ability to detect problems, make adjustments to the system, and make the right decisions at the right time.

Referencias bibliográfica:

1. "Project Management for the Oil and Gas Industry. A World System Approach." Adedeji B. Badiru Samuel O. Osisanya, International Standard Book Number-13: 978-1-4200-9426-8 (eBook - PDF). Edición 2013.