

# Manage Gulf of Mexico decommissioning

*Decommissioning focus adds profits.*

### AUTHOR

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Exploration and production companies operating on the shelf of the Gulf of Mexico (GOM) face the challenging task of managing fields as they approach their final decommissioning phase. This difficult undertaking is further complicated by the risk of hurricane damage and the current shortage of skilled personnel. A production plot of GOM fields in less than 1,000 ft (305 m) of water reveals the maturity of the shelf, showing a production peak that occurred 10 years ago in 1997 (Figure 1). Estimates suggest more than 100 platforms are decommissioned each year, and this number is expected to grow. In 2003, the Minerals Management Service (MMS) reported that 1,227 (or almost one third) of the total 4,019 structures in the GOM were idle.

In early 2000 TETRA Technologies Inc. formed Maritech Resources Inc. to acquire and operate mature GOM fields and manage their ultimate decommissioning. This provides an attractive buyer — with expertise in the decommissioning process — to whom exploration and production companies can sell mature fields.

### West Cameron 352

The company's first acquired field, **West Cameron 352**, is a great example of how a marginal asset can create a win-win situation for a seller and buyer while helping the world's energy needs. When this field was acquired in 2000, it was producing intermittently and had already been permitted for decommissioning. The structure of the transaction allowed the value of the property's remaining reserves to be used to reduce the seller's cost of a 14-platform decommissioning project, which it contracted with the

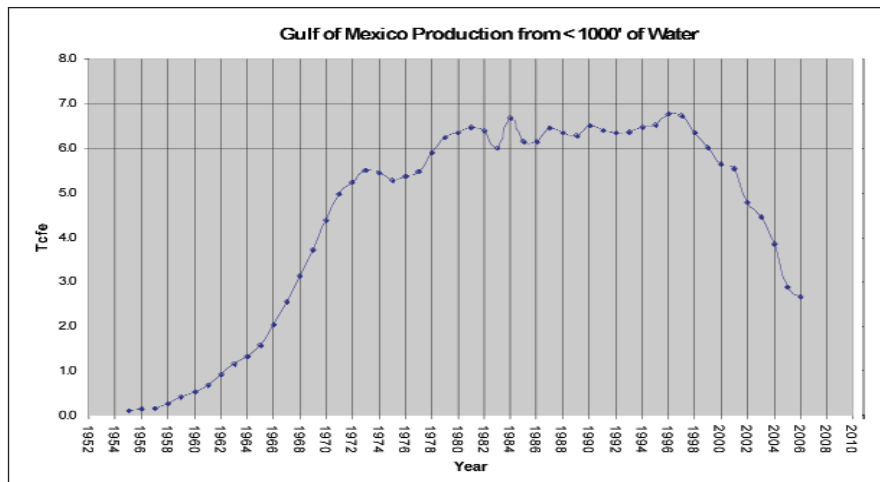


Figure 1. Following peak production in less than 1,000 ft (305 m) of water in 1997, decommissioning of platforms has increased. (All graphics courtesy of Maritech Inc.)

buyer's sister company, TETRA Applied Technologies. Combining a producing property investment with a contract to manage a large decommissioning project freed up the seller's personnel to focus exploration and production on more important assets.

This example is just one of many where sellers have managed their mature properties by divesting them to an operating company focused on managing sunset properties and their ultimate decommissioning. In circumstances where the decommissioning liabilities exceed the value of the remaining reserves, the divesting company often maintains an obligation for some, or all, of the future decommissioning cost. A significant benefit to such a transaction is that the seller can lock in the cost of decommissioning, which historically has increased with time. Depending on the property, a buyer may also extend the life of the mature asset, which can postpone the seller's decommissioning obligation until such time as the work is actually performed.

In the case of West Cameron 352, the buyer entered a farmout arrangement with an industry partner that resulted

in the drilling of six new wells. These wells added an additional 17 Bcfe of production that would not have been produced if the platform had been removed as initially permitted by the seller. West Cameron 352 is now scheduled for decommissioning in 2008 — nine years after it was originally permitted for decommissioning by its previous owner.

### Lessons learned

Because they manage the removal of so many structures, companies specializing in acquiring and later decommissioning mature properties gain a great deal of experience in this activity. Some lessons in doing so effectively include these facts:

**The cost of decommissioning is continually rising.** A large number of platforms in the GOM need to be removed due to the maturity of the shelf and hurricane damage. This has created a demand for heavy-lift vessels, diving services and other equipment necessary to remove offshore facilities. Management today must search for ways to reduce the liabilities associated with platform removal. Reuse of offshore platforms as prisons, hotels, wind



Figure 2. The Arapaho derrick barge performs a decommissioning operation in the Gulf of Mexico.

farms or fish farms has been discussed as a possible panacea; however, none of these options has been pursued on a large scale. The reuse of old structures at a new location has rarely proven cost-effective due to changing standards and the limited cost saving involved when compared to the benefit of new structures that are designed to fit the specific need at hand.

**It is important to understand how complicated a decommissioning project can become and to plan ahead.** Removing an offshore platform is often more difficult than the original installation. The most important aspect of managing the decommissioning of an asset is to plan ahead. Planning a decommissioning project should begin at least a year in advance. Coordination has to take place among co-owners, pipeline companies, service providers and numerous governing agencies. Regulations require offshore platforms to be removed within one year after production ceases and the lease expires. Advanced planning is crucial to meet this timetable and to reduce costs by avoiding problems and creating an optimum schedule.

### Decommissioning process

The term, “decommissioning” better describes the process than the more negative term, “abandonment.”

Abandonment is defined as “to forsake or desert,” which, unfortunately, is what a few companies have done in the past when declaring bankruptcy. Under those circumstances, the MMS has looked to the previous owners to assume the decommissioning task. In one situation, the previous owner of a platform was required to decommission a property after having paid a small company a significant sum to take the asset a year earlier. This decommissioning project was further complicated in that the well and platform files had been lost.

The decommissioning process varies depending on the water depth, number of wells, size and use of the structure. The presence of any hazardous materials — cement in the jacket legs or significant debris on the ocean floor — can significantly complicate the process. Decommissioning typically involves the following six steps:

#### **Obtaining permits and approvals.**

Depending on scope and location of work, this can be a complex and time-

consuming task involving numerous regulatory agencies. Many companies turn to consultants specializing in handling regulatory issues.

**Plugging wells.** This is usually performed by service companies specializing in this particular kind of work. If not done correctly, plugging can interfere with the timetable of the remaining decommissioning steps.

**Preparing the platform and pipeline(s).** All hydrocarbons are removed, and equipment and deck prepared for removal. This is best done before expensive heavy-lift equipment arrives.

**Abandonment of connected pipelines.** Divers or remotely operated vehicles (ROVs) cut, plug and bury the end of pipelines at least three feet deep. Where a pipeline may be a hazard to navigation or fishing, it must be removed.

**Removing the deck and jacket.** The deck (usually cut from the jacket) is lifted by derrick barge (Figure 2) and placed on a material barge, then transported to shore to be recycled, re-used or scrapped. The jacket, pilings and well conductors are cut 15 ft (4.5 m) below the mudline using explosives or cutting devices. The jacket is transported onshore to sell for scrap or reefed in place or in a pre-determined location. Note that if a reefing option is being considered, additional permitting and a donation are required.

**Clearing bottom and site verification.** Divers or ROVs remove remaining debris. The area is trawled to verify that it is free of obstructions.

### Looking ahead

As the GOM shelf matures and more companies focus their efforts on deep-water and other basins, companies must decide if they want to manage these assets through the decommissioning stage or divest them to a company specializing in this activity. To best manage the decommissioning stage, a combination of skilled professionals and detailed planning is required. If divestment is chosen, it is important to pick a financially strong buyer that can properly manage the assets through the decommissioning stage. **ENR**