Creating New Opportunities and Challenges: Growing Support Industry

In 1933 a prototype was created for the world's first submersible oil platform. This design, called "Giliasso" after the patent holder and inventor Louis Giliasso, was based on a concept by G.E. McBride, who was credited with envisioning the world's first submersible oil platform. The design included barges as floating vessels that carried a platform for equipment and a rig or derrick. It was to be towed to the drilling location and sunk, where it would act as a foundation for an above-water platform.

This new platform design was revolutionary and the beginning of many new exciting advances for the oil and gas industry during that period. However, the development of new ways to drill for oil also presented new challenges, such as how to house a crew on a marsh and how to store and transport the oil with no pipeline nearby.

These challenges gave rise to a support industry that still grows and changes today, right along with the oil and gas industry companies. Two interesting areas of such growth are fabrication yards and ports. Fabrication yards are private businesses along the coast that build components, such as jackets (the web of metal under the water on a fixed platform), platforms, and special areas such as housing for work crews who go on the platforms. As of 2001, there were over 40 fabrication yards on the Gulf.

The largest producing offshore fixed platform is Shell Offshore's Bullwinkle, at 1,615 feet tall. Compare it to the Sears Tower, the largest building in North America, at 1,450 feet. As offshore rigs get larger with the exploration of deepwater, the fabrication yards must be big enough to handle such massive structures. Two of the largest yards are J. Ray McDermott's Morgan City facility at 287 acres, and Gulf Island Fabrication at 250 acres, both located in Louisiana.

Most fabrication yards specialize in production of a particular type of platform or component, such as living quarters, decks, or modules. Only 12 yards along the Gulf coast can make platforms for over 1,000 feet of water. Almost all fabrication facilities are interdependent, as few complete entire projects in their own yard, but instead rely on outsourcing. Traditionally, yards have been located onshore with water access, but some are locating offshore to provide components nearer to the platforms they serve, becoming what might be viewed as a sort of industry version of a convenience store.

While fabrication yards enjoy success when the industry's production booms, they also feel the bust times. In an attempt to prevent the loss of skilled labor when there is no oil rig work to be done in yards, some yards are attempting to diversify their products.

Another group immediately affected by the industry's ups and downs are the Nation's ports. Because almost 44 percent of total waterborne commerce in the U.S. is attributed to petroleum and petroleum products, ports are vital to the smooth flow of these products in and out of the country. Of the two types of ports (deep-draft seaports and inland river and intracoastal waterway ports), deep-draft seaports can accommodate oceangoing vessels that serve offshore platforms.

These ports are needed not only for ships carrying petroleum products, but also for support vessels such as desk barges, drilling tenders, pipe carriers, salvage tugs, supply vessels, well stimulation vessels, and anchor-handling tugs. Once a platform is operational, continued support, such as food, personnel, and maintenance equipment, is required from the coast.

As in the fabrication industry, the rapidly advancing technology and changing needs of the oil and gas industry are putting greater demands on the Nation's ports. First, as vessel sizes increase, so does the need for deeper channels. Second, the volume of trade moving through ports is increasing. Third, ports must consider the environmental impact of expanding their operations. Finally, funds must be found to provide capital improvements for these ports, most of which are

run by local or State government.

Other ripple effects include the need for better infrastructure on land, such as better and wider highways to avoid bottlenecks when the product is transported inland. Even public schools are affected by the influx of workers to port cities, straining the capacities of local schools. Increased commerce causes a need for increased infrastructure, balanced by a need to protect the environment from rapid expansion.

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MMS Ocean Science Journal