

## INTRODUCTION

The GLOMAR ROBERT F. BAUER, first in a new class of drillships, is currently under construction at the Far East Levingston Shipyard in Singapore. Starting with Global Marine's proven basic drillship design, the GLOMAR ROBERT F. BAUER was developed to incorporate the latest in conventionally moored drillship technology. The water depth capability of 2,500 feet (3,000 feet under certain conditions) permits effective and economical operation in water depths normally requiring dynamic positioning. The GLOMAR ROBERT F. BAUER has a completely self-contained propulsion system, mooring system, and marine riser system and requires no support in transit or location moves; only minimal support while on location. The high transit speed (approximately 14 knots), large variable load (approximately 7,000 tons), wide water depth range (100 to 2,500 feet plus), and proven safety features (ability to move rapidly off location in an emergency) give this unit an over-all capability unsurpassed for self-sufficiency, versatility, economy of operations, and safety. The major design criteria for the GLOMAR ROBERT F. BAUER are as follows:

- A design permitting a high degree of mobility.
- A design permitting deepwater drilling while utilizing a fully self-contained mooring system.
- A design permitting effective operations in a wide range of environments.
- A proven evolutionary design rather than a radical new approach.
- A safe design with regard to strength, stability, and the ability to move rapidly off station.
- A design that facilitates high operational reliability coupled with low maintenance costs.
- A design that offers a large variable load capability to enhance self-sufficiency and reduce dependency on re-supply.
- A design that will facilitate efficient inspection and service.
- A simple but efficient design to allow optimization of storage and transfer of expendables.

## GENERAL DESCRIPTION

The GLOMAR ROBERT F. BAUER is a self-propelled diesel electric powered single-hull drillship designed to drill up to 25,000 feet in water depths up to 2,500 feet. In addition to the vessel meeting the latest requirements of the U.S.C.G. and ABS for safety, stability, and strength, it also bears the highest ABS classification for an offshore drilling unit.

The vessel is framed longitudinally, maximizing strength and cargo carrying capacity while minimizing the total steel weight. The principal dimensions are well-balanced, providing optimum freeboard to depth ratio and resulting in dryer working decks. The hull is divided into seven main cargo and service compartments with each compartment subdivided into a centerhold and port and starboard wing tanks. Center spaces are further subdivided to carry bulk materials. A double bottom is fitted throughout the length of the cargo and machinery spaces and allows for storage of fuel oil, ballast water, drill water, and wash water. The large storage and cargo capacity allows for storage and transportation of a sufficient amount of supplies to drill in remote locations with minimal re-supply.

The main deck is arranged to handle all the equipment necessary for drilling operations. A casing rack is located aft, while an automatic drill pipe racker is located forward of the drill well. Three pedestal mounted revolving cranes are located to optimize equipment and material handling.

Five 2100 kw, 60 Hz, 600 VAC, diesel-electric generators supply power to all propulsion, drilling and auxiliary machinery. The major drilling and propulsion machinery is powered through SCR converters for DC drive. Propulsion power is supplied to the vessel's twin screws by 1600 hp DC electric motors producing a total of 9600 hp and an estimated speed of 14 knots.

The vessel is equipped with a completely self-contained eight-point combination wire/chain deepwater mooring system, and is outfitted with eight 30,000 lb. Moorfast anchors, each with 2,000 feet of 2¾ in. anchor chain and 6,500 feet of 3 in. wire rope. The mooring system permits heading changes to minimize motion during drilling operations and to provide protective shelter for offloading supply boats or to reduce mooring loads during rough weather.