Products

Dril-Quip designs, manufactures, fabricates, inspects, assembles, tests and markets subsea equipment, surface equipment and offshore rig equipment. The Company's products are used to explore for oil and gas from offshore drilling rigs, such as floating rigs and jack-up rigs, and for drilling and production of oil and gas wells on offshore platforms, tension leg platforms ("TLPs"), Spars and moored vessels such as FPSOs. TLPs are floating production platforms that are connected to the ocean floor via vertical mooring tethers. A Spar is a floating cylindrical structure approximately six or seven times longer than its diameter and is anchored in place. FPSOs are floating production, storage and offloading monohull moored vessels.

Subsea Equipment. Subsea equipment is used in the drilling and production of offshore oil and gas wells around the world. Included in the subsea equipment product line are subsea wellheads, mudline hanger systems, specialty connectors and associated pipe, production riser systems, subsea production trees, liner hangers, subsea control systems and subsea manifolds.

Subsea wellheads are pressure-containing forged and machined metal housings in which casing hangers are landed and sealed subsea to suspend casing (downhole pipe). As drilling depth increases, successively smaller diameter casing strings are installed, each suspended by an independent casing hanger. Subsea wellheads are utilized when drilling from floating drilling rigs, either semi-submersible or drillship types, and TLPs and Spars. The Company's SS-20™ BigBore II-H™ Subsea Wellhead System is designed to accommodate additional casing strings installed through a conventional marine riser and a subsea blowout preventer.

Mudline hanger systems are used in jack-up drilling operations to support the weight of the various casing strings at the ocean floor while drilling a well. They also provide a method to disconnect the casing strings in an orderly manner at the ocean floor after the well has been drilled, and subsequently reconnect to enable production of the well by either tying it back vertically to a subsequently installed platform or by installing a subsea tree.

Large diameter weld-on *specialty connectors* (threaded or stab type) are used in offshore wells drilled from floating drilling rigs, jack-up rigs, fixed platforms, TLPs and Spars. Specialty connectors join lengths of conductor or large diameter (16-inch or greater) casing. Specialty connectors provide a more rapid connection than other methods of connecting lengths of pipe. Connectors may be sold individually or as an assembly after being welded to sections of Company or customer supplied pipe. Dril-Quip's weld-on specialty connectors are designed to prevent cross threading and provide a quick, convenient method of joining casing joints with structural integrity compatible with casing strength.

Production riser systems are generally designed and manufactured to customer specifications. Production risers provide a vertical conduit from the subsea wellhead to a TLP, Spar or FPSO.

A *subsea production tree* is an assembly composed of valves, a wellhead connector, control equipment and various other components installed on a subsea wellhead or a mudline hanger system and used to control the flow of oil and gas from a producing well. Subsea trees may be either stand alone satellite type or template mounted cluster arrangements. Both types typically produce via flowlines to a central control point located on a platform, TLP, Spar or FPSO. The use of subsea production trees has become an increasingly important method for producing wells located in hard-to-reach deepwater areas or economically marginal fields located in shallower waters. The Company is an established manufacturer of complicated dual-bore production trees, which are used in severe service applications. In addition, Dril-Quip manufactures a patented single bore (SingleBore™) subsea completion system which features a hydraulic mechanism instead of a wireline-installed mechanism that allows the operator to plug the tubing hanger annulus remotely from the surface via a hydraulic control line and subsequently unplug it when the well is put on production. This mechanism eliminates the need for an expensive multibore installation and workover riser, thereby saving both cost and installation time. Dril- Quip's guidelineless subsea production tree is used in ultra-deepwater applications. This tree features remote multiple flowline and control connections, utilizing remotely operated intervention tools. The Company's subsea production trees are generally custom designed and manufactured to customer specifications.