

# Montrose, Scotland Repair Facility



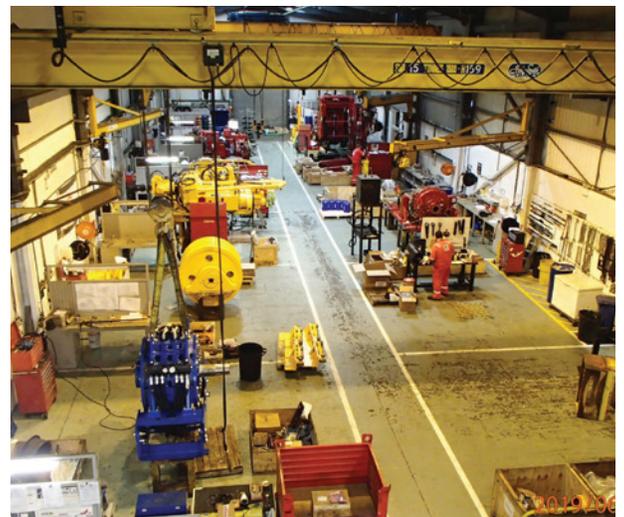
Our Montrose, Scotland repair facility is a premier aftermarket repair and overhaul center with five unique workshops and several storage and warehouse areas. Situated on a 54,000 ft<sup>2</sup> yard with 45,000 ft<sup>2</sup> of total workshop area, we strive to serve the needs of a diverse customer base whose main concerns are reliability and uptime. Supported by our Montrose-based mechanical and electrical engineering groups, we handle everything from welding, stress relieving, and machining to hardness testing, load testing, and NDT as part of our general repair offerings. We specifically service the following key equipment areas:

## **Pressure control equipment**

We service the full range of Shaffer™ and T3™ ram BOPs and spherical BOPs, with a primary focus on 18<sup>3</sup>/<sub>4</sub> and 15,000-psi Shaffer equipment. We provide in-house inspection, assembly, and testing, and our extensive network of experienced vendors provide repair welding and machining. Our pressure test cell can test up to 22,500 psi. We also service riser equipment and control pods in this workshop.

## **Top drives**

With 39 years of experience servicing top drives in Montrose, our expertise is unmatched. We service a wide range of top drives, including virtually every TDS model (3H, 5H, 4H, 4S, 6S, 8, 9, 10, 11, and 1000) as well as the TDX-1000/1250 and all PS2 models. Our load test stand is capable of 35,000 ft-lb of dynamic load testing, and we are currently building a new load test stand that will be capable of 105,000 ft-lb dynamic load (scheduled for completion in Q1 2020). A full condition-monitoring vibration service is available during FAT.





### **Pipe handling**

We cover all legacy Varco and National Oilwell rackers and catwalk systems. All sub-assemblies are hooked up in the highest state of assembly for final function testing, with our HMI-controlled VFD test unit driving AC functions and proving tool feedback.

### **Handling tools**

We repair the entire range of hydraulic BX elevators and hydraulic PS slips, PS16 slips and GG-type elevators, and legacy Varco BJ manual tools, including elevators, slips, bowls, and tongs. Fixed pricing options are available for handling tools at a reduced labor rate, and various SOW options are also available to meet customer needs (CAT III, CAT IV, or full overhaul). We have 39 years of experience with handling tools repair and overhaul in Montrose and work closely with Etten-Leur engineering to feedback product enhancements and define efficient repair procedures.

### **Valves and manifolds**

Across our T3, Anson™, Mission™, and Shaffer product lines, we service and test choke and kill manifolds, standpipe manifolds, and flowline equipment, including plug valves and check valves. We have test capabilities for all equipment rated up to 15,000-psi working pressure, with a test pressure of up to 22,500 psi. In addition, relationships with approved repair vendors has allowed us to expand our options, and equipment can now be repaired in the original material, stainless steel, or Inconel.

### **Legacy National Oilwell equipment and Drawworks**

Whether you have crane components and sub-assemblies, mud pumps, or drawworks that need repair, we can help. Our ability to service legacy National Oilwell and other product line equipment further extends to EDS and Elmagco brakes, traveling and crown blocks, deadline anchors, anchor winches, and rotary tables. Whatever the need, we've got you covered.