

d. Individually close and open each ram BOP (excepting blind/shear ram BOPs), recording the closing time and fluid volume required for each function. (To simulate the functioning of the blind/shear rams, close and open one set of pipe rams again.) Closing times shall meet response times established in 13.3.5.

e. Function the hydraulic operated valves and record the time and volume required.

f. Close and open one annular BOP and record the time and volume.

g. Record the final accumulator pressure. The final accumulator pressure shall be equal to or greater than 200 psi (1.38 MPa) above precharge pressure.

## 18.8 AUXILIARY EQUIPMENT

Auxiliary equipment includes the upper and lower kelly valves, drill pipe safety valves, inside BOPs, and kelly.

**18.8.1** Prior to spud or initial use, determine from the manufacturer's documentation whether kelly valves and safety valves can be opened when rated working pressure below the valve is equalized by applying pressure from the top.

**18.8.2** Verify that appropriate operating tools (wrenches, etc.) are readily available for kelly cocks and safety valves.

## 18.9 MUD/GAS SEPARATOR

Prior to spud, pump water or drilling fluid into the separator inlet and verify unobstructed flow from the separator or connections. If the separator is equipped with a float to regulate liquid discharge, observe that the float properly regulates liquid discharge.

## 18.10 INSPECTIONS

### 18.10.1 BETWEEN WELLS

After each well, the well control equipment should be cleaned, visually inspected, preventative maintenance performed, and pressure tested before installation on the next well. The manufacturer's test procedures, as prescribed in their installation, operation, and maintenance (IOM) manual, should be followed along with the test recommendations of Table 3. All leaks and malfunctions should be corrected prior to placing the equipment in service.

### 18.10.2 VISUAL INSPECTION—FLEXIBLE CHOKE AND KILL LINES

A visual external inspection of flexible choke and kill lines through the entire length of the line should include:

a. Outer Jacket. Visually inspect to ensure that the outer jacket is intact to protect polymeric sheath underneath from tearing and being punctured.

- Verify that the outer jacket is properly attached at both end fittings.
- Verify that the entire surface of the polymeric sheath is protected.
- If any damage is noticed on the outer jacket, verify that damages would not be detrimental to the polymeric sheath.

b. Termination. Record any damage to the coating on the end-fitting, and monitor progression of damage. Facilitate repair, if necessary.

c. Connector. Particularly inspect the seal area of the connectors recording any damage and monitor progression of damage.

### 18.10.3 MAJOR INSPECTIONS

After every 3-5 years of service, the BOP stack, choke manifold, and diverter components should be disassembled and inspected in accordance with the manufacturer's guidelines.

Elastomeric components should be changed out and surface finishes should be examined for wear and corrosion. Critical dimensions should be checked against the manufacturer's allowable wear limits. Individual components can be inspected on a staggered schedule.

A full internal and external inspection of the flexible choke and kill lines should be performed in accordance with the equipment manufacturer's guidelines.

## 18.11 MAINTENANCE

### 18.11.1 INSTALLATION, OPERATION, AND MAINTENANCE MANUALS

Manufacturer's installation, operation, and maintenance (IOM) manuals should be available on the rig for all the BOP equipment installed on the rig.

### 18.11.2 CONNECTIONS

Studs and nuts should be checked for proper size and grade. Using the appropriate lubricant, torque should be applied in a criss-cross manner to the flange studs. All bolts should then be rechecked for proper torque as prescribed in API Specification 6A. When making up connections, excessive force should not be required to bring the connections into alignment.

EXHIBIT # 1169

WIT: \_\_\_\_\_