Purpose: Provide a safe working procedure for nippling up/down BOP

Responsibility: Driller

Supervision: Toolpusher (PIC)

GENERAL SAFETY CONSIDERATIONS

WARNING: OBTAIN A WORK PERMIT FOR HOT WORK. FIRE FIGHTING EQUIPMENT MUST BE READILY AVAILABLE WHENEVER THE CUTTING TORCH IS USED.

CAUTION: ALL LIFTING AND HANGING EQUIPMENT MUST HAVE CURRENT COLOUR CODE & INSPECTED FOR SAFE WORKING LOAD (SWL).

CAUTION: WORKING AREA SHOULD BE CLEAR AND CLEAN.

CAUTION: TOOLBOX TALK MUST BE HELD BEFORE OPERATION BEGINS TO DISCUSS THE OPERATIONAL PROCEDURE, TOOLS AND SAFETY EQUIPMENT.

CAUTION: WORK AREA MUST BE ROPE OFF WITH HAZARD TAPE. DURING MOVEMENT OF BOP AND NON-ESSENTIAL PERSONNEL MUST RETREAT TO A SAFE AREA.

CAUTION: DO NOT USE MANRIDING WINCH IN CELLAR.

CAUTION: FALL ARRESTORS CONNECTED DIRECTLY TO THE SAFETY HARNESS.

CAUTION: IF USING A FMC WELL HEAD LOWER THE ALIGNMENT TOOL INTO UNIHED WITH LIFTING CAP AND AIR WINCH. RECOVER THE TOOL WITH A JOINT OF DRILL PIPE AND CHAIN TONG TO ENSURE PROPER ENGAGEMENT. (DO NOT USE KELLY)

NOTE: GOOD ORAL & VISUAL COMMUNICATION AND TEAMWORK IS ESSENTIAL FOR SAFE COMPLETION OF THE TASK.

NOTE: CONDUCT PJSM TO DISCUSS OPERATION.
STANDARD OPERATIONAL CONSIDERATIONS (DO'S & DON'TS)

(1) Supervision must be carried out by the Toolpusher.

(2) Ensure that the space out data / measurements are known before operation begins.

(3) Ensure that the flange is clean and dimensions are checked on the flow nipple / bell nipple.

(4) Ensure that all wellhead, adapter and spool flange ring groves are cleaned, examined and oiled.

(5) Ensure that the flanges of BOP are cleaned, inspected and oiled.

(6) Check all ring gaskets for size, type and pressure rating and ensure that only new gaskets are used.

(7) Check the hammer wrenches for size and serviceability.

(8) Check hang-off chains and lifting ring.

(9) Ensure that all stud bolts, nuts and threads are clean, free from damage or corrosion.

Note: Ensure that the DSA / drilling spool are the correct size and pressure rating.

(10) Do not throw metal objects, such as hand tools, nuts, bolts, etc., up or down. Always use rope, winch or ladder to carry tools.

(11) While stacking the BOPs, one section at a time, a work platform should be erected at each break.

(12) Visually inspect the overhead lifting beams and ensure that the running beam is clear of all obstructions.

(13) Ensure that the BOP hoists are operational and have been inspected and certified.
PROCEDURE

(1) Install casing Spool.
(2) Using air tuggers, lift, install and make up the DSA on the casing head.
(3) Tighten the studs and nuts on the DSA and casing head.

Note: Testing of the wellhead and seal assembly will be done by the wellhead Service Representative.

(4) Move the BOP hoist to a position above the BOP.
(5) Attach the BOP hoist to the stack and secure connections.
(6) Remove bolts from BOP transport frame.
(7) Lift BOP, gently, (snub with air tugger if needed) to proper height and move over to the spool and DSA.
(8) Clean the oil from the sealing area of the 13-5/8" BOP and the spool with a soft cloth.
(9) Check ring grooves for damage, scratches and corrosion pitting.
(10) Clean and dry gasket thoroughly.
(11) Install a new ring gasket in ring groove.
(12) Gently lower the 13-5/8" BOP onto the DSA, ensuring the alignment of the studs and holes on the BOP flange and make up hand-tight.
(13) Torque the nuts in a sequence; the opposite ones first, then the ones which are separated at 90 degree angles, then 45 degrees, etc., using hammer wrenches or torque wrench.

Note: Proper make up will ensure the gap between flanges is even and that the exposed threads are equal above each nut.

(14) Attach and tighten the choke and the kill lines.
(15) Attach hydraulic lines from closing unit, fill-up line and guidelines.
(16) Install the flow nipple and the flowline.
(17) Function test BOP stack, pressure test as per specifications and record the results.

**Nipple Up BOP after Running 9-5/8” Casing**

1. Run 9 5/8” casing, wash and clean the BOP, jet off mud & cement.
2. Open or remove the drilling spool valve and drain the stack, wash the inside of the BOP and jet cellar.
1. Loosen the nuts on the spool to DSA and the nuts on the DSA to the BOP. Pick up the BOP & DSA with the BOP winches.
2. Pick up the BOP, set the slips and top pack-off element if available according to operator instruction. (Casing slips must be installed with casing in tension, according to the Company representative instruction).
3. Rough cut the casing, pick up with single JT elevator and lay it down.
4. Lower the BOP, Remove the DSA.
5. Disconnect and remove the flow line and Bell nipple.
6. Pick up the BOP and move it on side.
7. Attach air tugger to the DSA and remove.
8. Proceed to Casing Final cut according DCS stand off.
11. Install a new ring gasket on the wellhead and lower the 11” spool with the DSA onto the 11” casing spool.

**Note:** The seal assembly will be tested by the well head Service Rep.

12. Install a new ring gasket in the DSA and lower the BOP onto the DSA ensuring the alignment of the studs and holes.
13. Torque the nuts in a sequence; the opposite ones first, then the ones which are separated at 90 degree angles, then 45 degrees, etc.

**Note:** Proper make up will ensure the gap between flanges is even and that the exposed threads are equal above each nut.

15. Attach and tighten choke and kill lines.

16. Attach hydraulic lines from the accumulator unit and install the fill-up line. Connect turnbuckles and guidelines to the stack.
(17) Install the flow line and Bell nipple.

(18) Test the BOP stack as per specifications and record the results.

**Note:** The 11" casing spool, BOP and annular preventer must be tested prior to installation of the wear bushing.

**Nipple Down BOP**

(1) Wash and clean the BOP inside and outside before nipple down. Use high pressure washer to clean the inside with the BOP doors open.

(2) Flush all surface equipment with clean water (kill line, choke line, choke manifold and stand pipe manifold).

(3) Clean and clear entire work area around BOP.

(4) Pull wear bushing.

(5) Remove the hydraulic control lines, fill-up line and guidelines.

(6) Disconnect the flow line and remove the flow nipple.

(7) Remove the kill line and choke line.

(8) Loosen the nuts on the spool to DSA and the nuts on the DSA to the BOP. Raise BOP with BOP hoist, ensuring that both seals are broken.

(9) Lower the BOP and remove all the nuts from the bottom flange.

(10) Lift and move BOP over to the transport frame using the BOP hoist.

(11) Clean and inspect the ring grooves on the BOP.

(12) Install new ring gasket on the transport frame and lower BOP onto it.

(13) Fasten BOP with bolts and nuts on to its transport frame.

(14) Reposition BOP hoist and attach to the DSA.

(15) Remove the nuts on lower flange and lift the DSA off the wellhead.

(16) Remove the DSA from the wellhead. Clean and grease the DSA and replace the nuts.

(17) Clean wellhead flange, ring groove and cover it to protect from debris.
TOOLS & EQUIPMENT

- Sledge hammer
- Safety belts and Life lines
- BOP Lifting beams and winches
- Hammer wrenches
- Hydraulic torque tool
- Grease and Cleaning rags
- Ring gaskets
- Studs, nuts and bolts
- High pressure washer
- Cutting Torch
- BOP work platform
- Hazard tape
- Turnbuckles to align BOP stack
- Double stud adapter (DSA)
- Correct size and pressure BOP
- Drilling spool
- Wellhead equipment

ASSOCIATED PUBLICATIONS

- SOP 404  (Pressure test BOP hydraulic control lines)
- SOP 410  (Nipple up / down 20 ¾ or 21 ¼ BOP)
- JSA 411  (Nipple up 20” Riser)
- JSA 412  (Nipple down 20” Riser)
- JSA 408  (Nipple Up/Down 13 5/8 BOP)
- API Spec. 6A (Wellhead and X-Mas Tree equipment, “Recommended flange bolt torque”).
- Equipment specs from Cameron, Hydril, T3 Energy, NOV Shaffer and Wellhead manufacturer.
- IADC Manual (Chapter on “Well Control Equipment & Procedures”).