

SOUTH TEXAS BUSINESS UNIT

Minimum Requirements for a 3,000 psi BOP

Stack Manifold & Closing System

Exhibit E

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BOP'S AND ALL
REMOTE CONTROL VALVES
CONTROLLED FROM RIG FLOOR.

Rotating Head →

Flowline

- meets the
minimum BLM
requirements for
a 2m stack only.

A

ANNULAR

(1)

This will be
sufficient for the
11" hole to 4300'.

(2)

The choke manifold
does not meet all
3m requirements to
meet BLM specs.

B

BLIND RAMS

C

PIPE RAMS

H2S trim ~~is~~ / is not required.

11" hole - Max Mud Wt 10 pp

7 7/8" hole - Max Mud Wt 8.5 pp

E

KILL LINE

TO CHOKE MANIFOLD

G - Closing Unit

HCR VALVE
2" 3 M

F

D

- A. Annular BOP Must be 3000 psi Working Pressure.
- B. Blind Rams Between Annular & Pipe Rams w/ 3000 psi Working Pressure.
- C. Pipe Rams Below Blind Rams w/ 3000 psi Working Pressure.

Note: All Rams & Spools Must Meet Required I.D. for Hole Size.

- D. Drilling Spool w/ 2 Outlets for Choke Line & Kill Line
- E. Kill Line 2" 3 M w/ 2 Manual Valves Bolted & Flanged Below Bottom Pipe Rams. Either a Drilling Spool or the Outlet on the BOP Stack can be Used to Accommodate Kill Line and Choke Line.
- F. Choke Line w/ 2" 3 M Valves. Inside Valve can be Manual but the Outside Valve Must be Hydraulic (HCR). Choke Line Must be 2" 3 M.
- G. Closing Unit (Koomey) w/ a Primary & Secondary Pressure Supply to Operate the BOP Stack. Also a N₂ Supply will be Provided as a Final Source of Operation to Close the BOP Stack. This Unit is Required to Contain a minimum of 1 1/2 Times the Needed Volume to Operate the BOP Stack at All Times. The Precharge of N₂ will be Checked Prior to Commencing Work for SONAT.