CHECKLIST AND DRAWING MINIMUM CHOKE MANIFOLD EQUIPMENT REQUIREMENTS (ATTACHMENT 3 TO BID SHEET AND WELL SPECIFICATIONS)

5,000 PSI WORKING PRESSURE

TO BE INSTALLED AFTER SETTING 85/8 INCH CASING

Contractor or Pz1. to furnish items checked (X). See attached drawing.

| No. | ltem | * Min. Size | Type | Press. Rating | Furnished By | |
|----------|---|-------------------|---------------------------------------|---------------------------------------|--------------|---------------|
| | | | | | Contr. | Pzl. |
| | | | | | | |
| | | | | | | |
| 1 | Choke Line from BOP stack (same as Item No. 13 on | | | | | |
| | Attachment 2) | 3" | | | | |
| 2 | 4 Way Cross, 3 in. × 3 in. × 3 in. × 3 in. | 2" | flanged | 5,000 | | |
| 3 | Gate Valve | 13/ | | 5,000 | | |
| 4 | Pressure Sensor | 1/2" | union | 5,000 | | |
| 5 | Pressure Gauge | 13/ | 16 flanged | 5,000 | | |
| 6 | Gate Valve | 2 1/10 | | 5,000 | | |
| 7 | Gate Valve | 2 1/10 | | 5,000 | | |
| 8 | Gate Valve | 3 1/8 | flanged | 5,000 | | |
| 9 | Way Cross, in. × in. × in. × in. | | | | | |
| 10 | Way Cross, in. × in. × in. × in. | | | | | |
| 11 | Adjustable Choke | 2" | flanged | 5,000 | | |
| 12 | Positive Choke | 0.11 | | | <u> </u> | |
| 13 | Hydraulically Operated Choke | 3" | flanged | 5,000 | | |
| 14 | Forged Extension Spool | | | | | |
| 15 | Hydraulically Operated Gate Valve | | | | | |
| 16 | Hydraulically Operated Gate Valve | | | | | |
| 17 | Line to Low Pressure lieader | | Flg. X weld | 5,000 | | |
| 18 | Line to Low Pressure Header | $\frac{3}{2}$ | | 5,000 | | |
| 19 | Line to Burn Pit | $\frac{3 1}{2}$ | | 2,000 | | |
| 20 | Line to Burn Pit | $\frac{3}{2}$ 1/3 | | 5,000 | | |
| 21 | Line to Reserve Pit | $\frac{2}{2}$ 1/ | | 2,000 | | |
| 22 | Line to Mud Pit Line to Mud 'Gas Separator | 3 1/ 3 1/ | <u>B Flg. X weld</u> B Flg. X weld | 2,000 | | |
| 23 | Header | 3 1/ | priy. A weiu | 2,000 | | |
| | | | | | | |
| 25 | Header Gate Valve | 2 1/ | 6 flanged | 2,000 | | + |
| 26 27 | Gate Valve | | 6 flanged | 2,000 | | + |
| 27 | Gate Valve | 3 1/ | | 2,000 | | |
| 29 | Gate Valve | 3 1/ | | 2,000 | | |
| 30 | Gate Valve | <u> </u> | | 2,000 | | + |
| 31 | Gate Valve | | | | | |
| 32 | Base for Choke Manifold | | | | | |
| 33 | Block Tee, in. x in. x in. x | | | | | · · · · · · |
| 34 | Tee 3 in. x 3 in. x 3 in. | 3" | flanged | 2,000 | | |
| 35 | Tee 3 in x 3 in x 3 in. | 3" | flanged | 2,000 | 1 | |
| 36 | Operating Consoles for Hydraulic | <u> </u> | | | 1 | |
| | Choke | 1 | | | | |
| 37 | Line to Low Pressure Header | [| | | | |
| 38 | Line to Reserve Pit | | | | 1 | |
| 39 | Line to Mud Gas Separator | 1 | | | 1 | |
| 40 | Line to Mud Gas Separator | 1 | | ······ | | |
| 41 | Line to Burn Pit | | | | 1 | |
| 42 | Forged Extension Spool | 1 | | | | |
| 43 | Way Cross, in. × in. × in. × in. | | | · · · · · · · · · · · · · · · · · · · | | |
| 44 | Gate Valve | | | | | |
| 45 | Gate Valve | 1 | | | | |
| 46 | Gate Valve | | | | | |

*Line sizes to be inside diameter.

Valves, spools and preventer sizes to be bore dimension. Header size to be outside diameter.