

SHELL MINIMUM BOP STACK REQUIREMENTS

| No. | Item | Min. I.D. | Min. Nominal |
|-----|---|--------------|-----------------|
| 1 | Flowline | | 7" |
| 2 | Fill up Line | | 2" |
| 3 | Drilling Nipple | | |
| 4 | Annular Preventer | | |
| 5 | Two single or one dual hydraulically operated rams | | |
| 6 | Drilling spool with 2" and 3" min. outlets | | |
| 7 | Gate Valve | 3 1/8" | |
| 8 | Gate Valve Power Operated | 3 1/8" | 3" |
| 9 | Line to choke manifold | | |
| 10 | Gate Valve | 2-1/16" | |
| 11 | Check Valve | 2-1/16" | |
| 13 | Casting Spool | | |
| 14 | Valves Gate | 1-13/16" | |
| 15 | Compound Pressure Gauge connector | | |
| 16 | Control plug or valve | 1-13/16" | |
| 17 | Kill line to rig mud pump manifold | | 2" |
| 18 | 2" X 2" X 2" cross | | |

*NOTE: Additional specifications for Air/Gas Service are given in Shell
Well Control Manual, Appendix 6.18.
A rotating head shall be provided on Air/Gas Service

| OPTIONAL | | | |
|----------|-------------------------------|----|----|
| 12 | Wear flange or bore protector | | |
| 19 | Gate valve | | |
| 20 | Line to roadside connection | | 2" |
| 21 | Rotating blowout preventer | | |
| 22 | Gate valve power operated | 6" | |

DRAWING & CHECK LIST 104A SHELL CLASS 5M SURFACE INSTALLATIONS NORMAL AIR/GAS*



CONFIGURATION A

FOR AIR/GAS DRILLING

