



FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- All preventers to be hydraulically operated with secondary manual controls installed prior to drilling out from under casing.
- Choke outlet to be a minimum of 4" diameter.
- Kill line to be of all steel construction of 2" minimum diameter.
- All connections from operating manifolds to preventers to be all steel.
- hole or tube a minimum of one inch in diameter.
- The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate the B.O.P.'s.
- All connections to and from preventer to have a pressure rating equivalent to that of the B.O.P.'s.
- Inside blowout preventer to be available on rig floor.
- Operating controls located a safe distance from the rig floor.
- Hole must be kept filled on trips below intermediate casing. Operator not responsible for blowouts resulting from not keeping hole full.
- D. P. float must be installed and used below zone of first gas intrusion.

SHAFFER 10" SERIES 1500
DOUBLERAM HYDRAULIC WITH
HYDRILL AND CHOKER MANIFOLD