

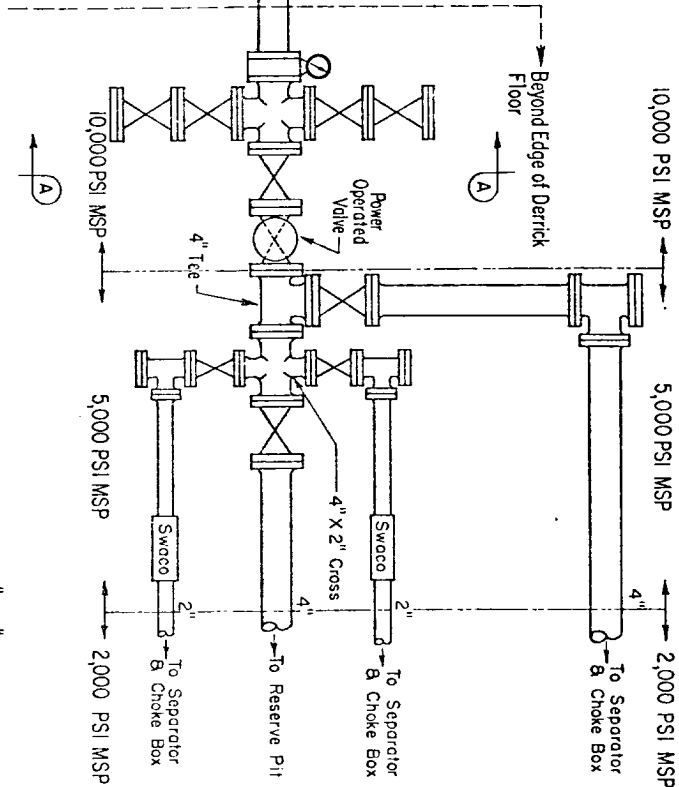
10,000 PSI WORKING PRESSURE
BLOWOUT PREVENTER HOOK-UP

NOTES

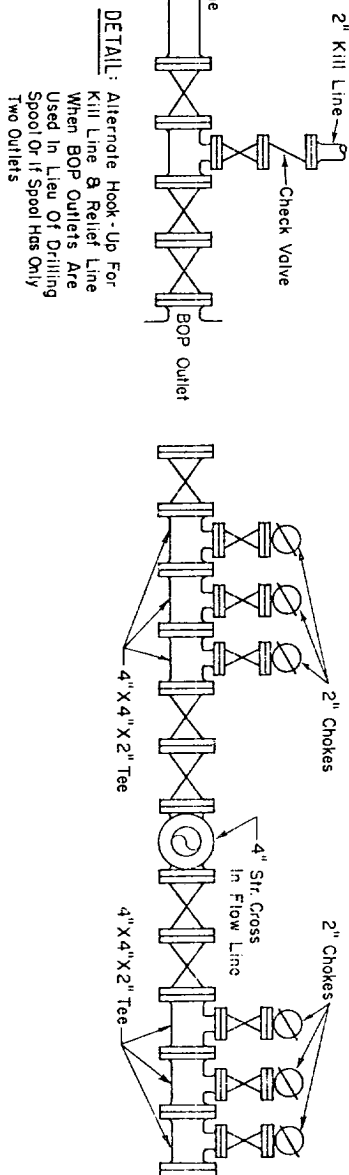
Use Only Open Face Flange Connections

* Two Singles Or Double BOP Acceptable

The 4" Outlets Of The BOP May Be Used In Lieu Of The Drilling Spool . If So, The Kill Connection To Be Connected To The 4" Relief Line By Use Of Tee And Additional Valve.



SECTION "A-A" - CHOKE MANIFOLD



Minimum assembly will consist of three hydraulically operated ram type preventers, a Hydrii GK, a rotating blowout preventer, valves, chokes and connections as illustrated. The working pressure of the Hydrii GK will be designated by Gulf at either 5,000 M.S.P. or 10,000 M.S.P. The two upper ram preventers may be double or singles, open-faced flanged. In lieu of the drilling spool, the flanged outlets of the middle ram preventer, provided they are the correct size, may be used for connecting the two 4-1/16" ID flow lines. If a tapered drill string is used, extra ram preventers will be required.

Minimum operating equipment for the preventers will be: (1) Air or power operated pumps, and (2) accumulator(s) with means of obtaining a fluid charge. A closed system is required. In addition to the above, separate pressurized gas storage shall be provided. The closing manifold will have a separate four-way valve for each pressure operated device, and a regulator for the Hydril will be provided. * Sufficient fluid capacity in the accumulator(s) shall be available to close all the pressure operated devices at the same time plus 25 percent reserve. Gulf Legion No. 38 hydraulic oil or an equivalent or better shall be used as the operating fluid. Seamless steel piping shall be used to connect from the closing unit to the preventers. Piping is to be tested to maximum rated fluid pump pressure.

The choke manifold and flow lines shall be supported by metal stands or reinforced concrete. The choke lines shall be anchored. No sharp bends or curves will be permitted in the flow lines from the preventers to the pits. Easy and safe access will be maintained to choke manifold at all times. If deemed necessary by Gulf, walkways and stairways will be provided in and around choke line manifold. All valves throughout the assembly shall be selected for operation on both gas and fluids. The ram type preventers and hydraulically operated valves will be provided with stem extensions, universal joints, if needed, and operating wheels which are to extend beyond edge of derrick substructure.

- ★ Each four-way valve will be labeled so as to designate which pressure operated device it controls.