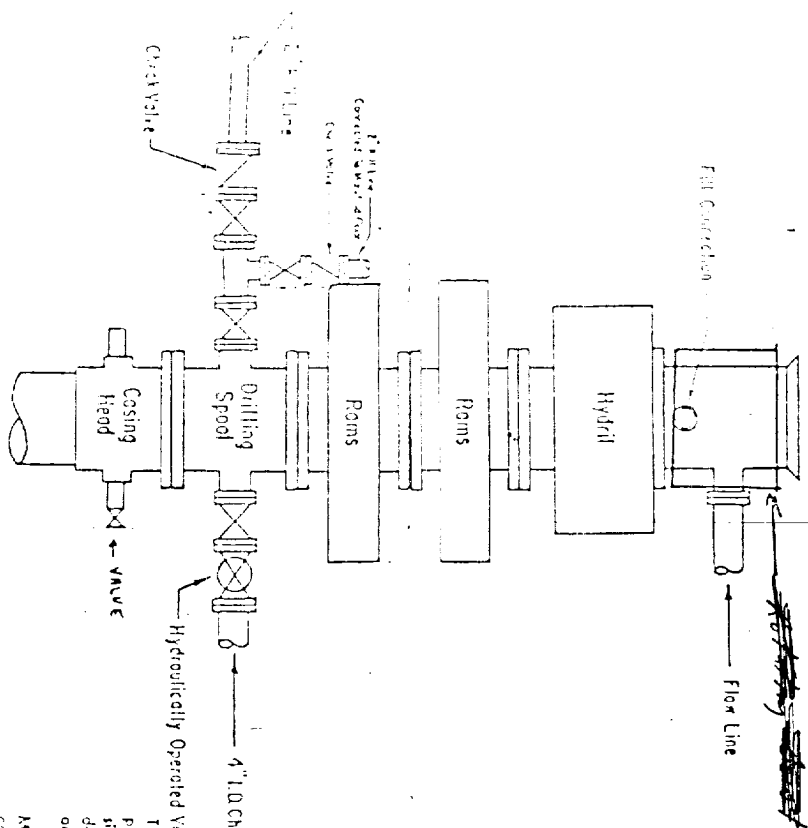




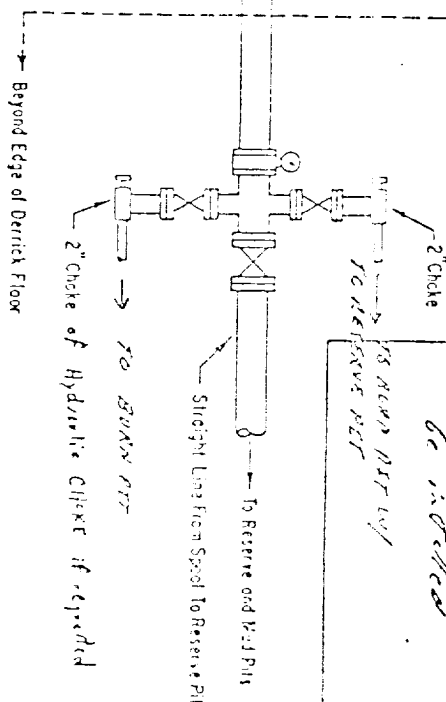
Blowout Preventer Assembly

The blowout preventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated, a hydril preventer, valves, chokes and connections, as illustrated. If a tapered drill string is used, a ram preventer shall be provided for each size of drill pipe. Casing and tubing rams to fit the preventer are to be available as needed. The ram preventers may be two single or a double type. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and to the kill line. The substructure height shall be sufficient to install a rotating blowout preventer.

Minimum operating equipment for the preventer and hydraulically operated valves shall be as follows: (1) multiple pumps, driven by a continuous source of power, capable of fluid charging the fluid accumulator volume from the nitrogen precharge pressure to its rated pressure within 2 minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) the charging pumps shut down, the pressurized fluid volume stored in the accumulator shall be sufficient to close all the preventers and remaining accumulator fluid volume of least 5 percent of the original. When released, either an additional source of power, remote and equivalent, it is to be available to operate the above pumps or there shall be additional pumps operated by separate power and equal in performance capabilities.

The closing manifold and remote closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles to indicate open and closed positions. A pressure reducer and regulator must be provided for operating the Hydril preventer. When required, a second pressure reducer shall be available to limit operating fluid pressure to ram preventers. Gulf Legion No. 38 hydraulic oil, an equivalent or better, is to be used on the fluid to operate the hydraulic equipment.

The choke manifold, the choke flow line, the choke lines are to be supported by metal stands and adequately anchored. The choke flow line, relief lines and choke lines shall be constructed as straight as possible and without sharp bends. Any or a side access shall be maintained to the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valves and valves of the relief lines connected to the drilling spools and all ram type preventers must be equipped with stem extension, universal safety, if needed, and hand wheels which are to extend beyond the edge of the derrick floor.



ADDITIONS - DELETIONS - CHANGES
SPECIFY

Notes: "Notes Required" means at any time the Gulf Synovian can, may or will require the equipment to be installed during operations.

Rolling Board to be installed

18 inch drill bit

18 inch drill bit

2\"/>