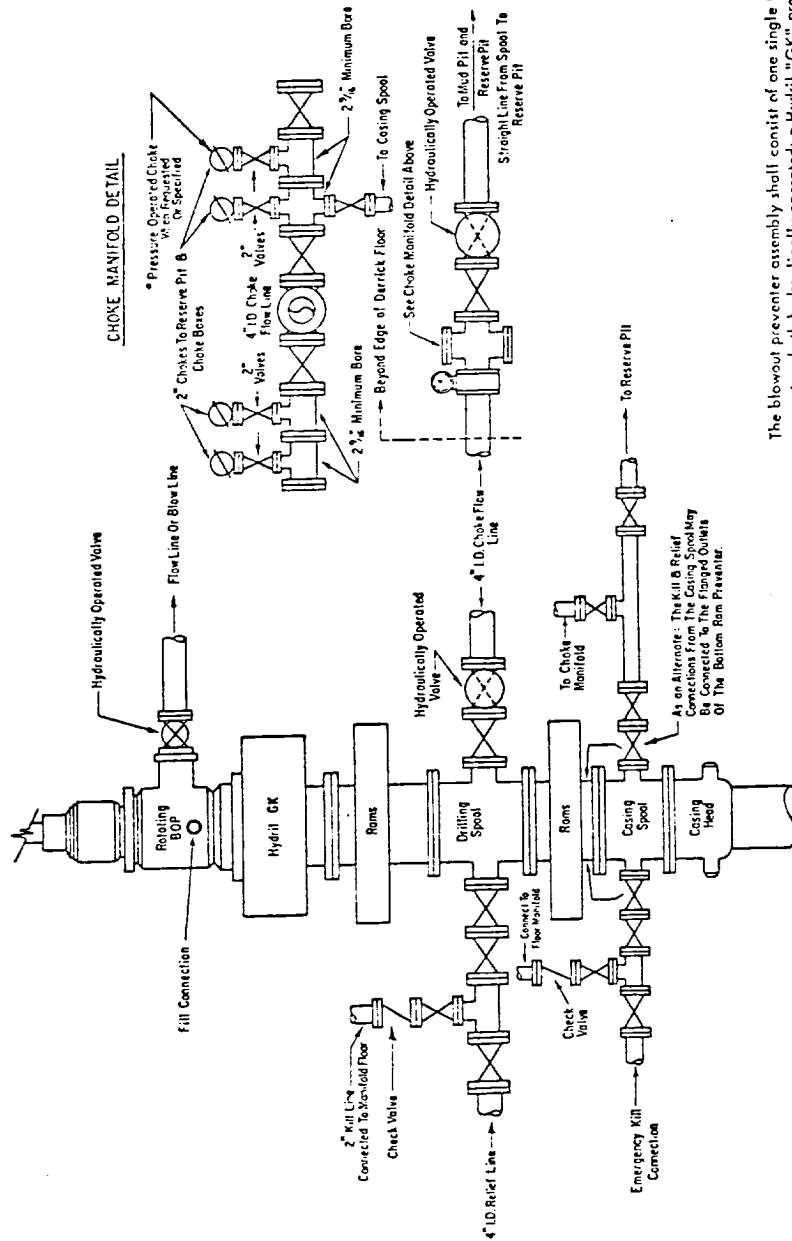


ILLEGIBLE



3000 # PSI WORKING PRESSURE
BLOWOUT PREVENTER HOOK-UP

The blowout preventer assembly shall consist of one single type blind ram preventer and one single type pipe ram preventer, both hydraulically operated; a Hydril "CGK" preventer; a rotating blowout preventer; valves; chokes and connections, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Coating and tubing rams to fit the preventers are to be available as needed. 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 4-inch flanged outlets of the ram preventer. All accumulator connections are to be seen-flow flanged.

Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continuous source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within _____ minutes. Also, the pump are to be connected to the nitrogen precharge pressure of not less than 750 PSI and connected so as to receive the aforementioned fluid charge. With the precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid charge, there must be sufficient to close all the pressure-operated devices simultaneously within _____ second; after closure, the fluid volume of the accumulators shall be at least _____ percent of the original. (3) When requested, an additional source of fluid to supplement the fluid volume of the accumulators shall be provided. (4) The system shall have the capability of generating separate power and signal 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 handle indicating open and closed positions.

A pressure-reducer and regulator must be provided for operating the Hydell preventer. When the preventer, a second pressure-reducer shall be available to limit operating fluid pressures to ram preventers.

Self-lubrication No. 38 hydraulic oil, or equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line, relief line, and choke lines shall be constructed on straight or possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. If deemed necessary, walkways and stairways shall be erected in and around 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 relief line valves connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints, if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

*To include derrick floor mounted controls.