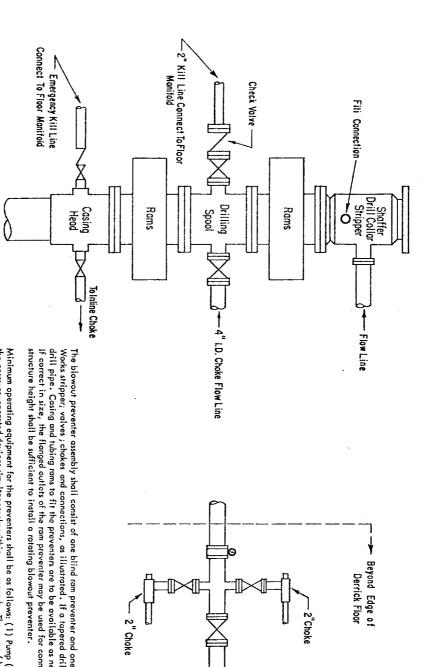
ADDITIONS -

DELETIONS - CHANGES SPECIFY



Straight Line From Spool To Reserve Pit To Reserve and Mud Pit

BLOWOUT PREVENTER HOOK-UP 3000 PSI WORKING PRESSURE

The blowout preventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated; a Shaffer Tool Works stripper; 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. Casing and tubing rams to fit the preventers are to be available as needed. The ram preventers may be two singles or a double type. If correct in size, the flanged autlots of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and kill line. The sub-

(2) When requested, accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive a fluid charge from the above pump (s). With the charging pump (s) shut down, the pressure-Minimum operating equipment for the preventers shall be as follows: (1) Pump (s), driven by a continuous source of power, capable of closing all operated devices simultaneously within _____ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least ____percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pump (s); or there shall be an additional pump (s) operated by separate power and equal in performance. the pressure-operated devices simultaneously within seconds. The pump (s) is to be connected to a closed type hydraulic operating system.

The closing manifold shall have a separate control for each pressure-operated device. Controls are to be lobeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided if a Hydril preventer is used. Gulf Legian No. 38 hydraulic oil, on equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

All valves are to be selected for operation in the presence of ail, gas, and drilling fluids. The choke flow line valve connected to the drilling chake lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the chake manifold. The chake manifold, chake flow line, and chake lines are to be supported by metal stands and adequately anchored. The chake flow line are the edge of the derrick substructure. All other valves are to be equipped with handles. spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond

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