Fill Line Connection Emergency Kill Line Check Valve Connect To Floor Manifold Check Valve 2" Kill Line Hydril"GK" Drilling Casing Rams Spool Rams Head As an Alternate: The Kill & Relief Connections From The Casing Spool May Be Connected To The Flanged Outlets Of The Bottom Ram Preventer. To Choke Manifold Hydraulically Operated Vaive To Reserve Flow Line FlowLine Choke 4 $\mathcal{D}[\![\mathcal{D}]\!]$ 2 9/16 Minimum Bore ---2"Chokes To Reserve Pit & Choke Boxes See Choke Manifold Beyond Edge of Derrick Floor 4" I D. Choke Detail Below FlowLine CHOKE MANIFOLD DETAIL To Casing Spool Hydraulically Operated Valve
When Specified To Mud Pit & Reserve Pit Straight Line From Spool To ReservePit *Pressure
Operated Choke
When Requested
or Specified ADDITIONS - DELETIONS - CHANGES SPECIFY

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3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

ficient to install a rotating blowout preventer. be used for connecting to the 4-inch I.D. choke flow tine and kill line, except when air or gas drilling. The substructure height shall be sufpreventer; 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. If correct in size, the flanged outlets of the ram preventer may The blowout p eventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated; a Hydril "GK"

ous source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulators with Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continu-

rne 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 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 indicating open and closed positions. A pressure reducer and regulator must be provided for operating the Hydril preventers. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. Gulf Legion No.38 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment

and without sharp bends. Easy and safe access is to 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 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 choke manifold, choke flow line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line and choke lines shall be constructed as straight as possible the derrick substructure. All other valves are to be equipped with handles.

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