DRAWING NO.3 Revised April, 1971 Fill Line Connection —Emergency Kill L'ne Check Valve Floor Manifold onnect To Check Valve 2" Kill Line Hydril GK Drilling Casing Roms Head Koms As an Alternate: The Kill B. Relief Connections From The Casing Spool May Be Cannected To The Flanged Outlets Of The Bottom Ram Preventer. To Choke Manifold Hydraulically Operated Valve ן ToResene Pit Flow Line Choke \mathbb{Z} 2 9/16" Minimum Bore ---See Choke Manifold 2"Chokes To Reserve Pit & Choke Boxes 4" I D. Choke Detail Below Buyond Edge of Derrick Floor CHOKE MANIFOLD DETAIL FlowLine To Casing Spool Hydraulically Operated Valve
When Specified To Mud Pit & Reserve Pit Straight Line From Spool To Reserve Pit When Requested or Specified * Pressure Operated Choke ADDITIONS - DELETIONS -SPECIFY CHANGES

3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

preventer; valves; chokes and connections as illustrated. If a topered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and twing 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 1, D. choke flow the and kill line, except when air or gas drilling. The substructure height shall be sufficient to install a rotating blowout preventor. The blowout preventer assembly shall consist of one blind ram preventer and one pipa ram preventer, both hydraulically operated; a Hydril "CK"

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

a precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid charge. With the charging pumps shut down, the pressurized fluid volume stored in the pumps; or there shall be additional pumps operated by separate power and equal in performance capabilities. the remaining accumulator fluid volume at least accumulators must be sufficient to close all the pressure-operated devices simultaneously within percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above seconds; after closure, the remaining accumulator pressure shall be not loss than 1000 PSI with

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 preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. Gulf Legion No.38 hydraulic all, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

the derrick substructure. All other valves are to be equipped with handles. and without sharp bends. Easy and safe access is to be maintained to the choke manifold. All volves 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 noeded, and hand wheels which are to extend beyond the adge 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

^{*} To include derrick floor mounted controls