Revised April, . 1971 Fill Line Connection —Emergency Kill Line Check Valve -Floor Manifold Connect To Check Valve 2" Kill Line Hydril GK Drilling Rams Casing Rams Spool Head As an Alternate: The Kill 8 Relief Connections From The Casing Spool May Be Connected To The Flanged Outlets Of The Bollom Ram Preventer. _3 To Choke Manifold Hydrautically Operated Valve Flow Line To Reserve Pit FlowLine Choke \mathbb{Z} 29/16 Beyond Edge of Derrick Floor 2"Chokes To Reserve Pit & Choke Boxes See Choke Manifold 6 Minimum Bore — Detail Below 4" I D. Choke CHOKE MANIFOLD DETAIL Flow Line To Casing Spool Hydraulically Operated Valve
When Specified Straight To Reserve Pit t Line From Spool b Reserve Pit When Requested or Specified * Pressure Operated Choke To Mud Pit 8 ADDITIONS - DELETIONS -SPECIFY CHANGES

DRAWING NO.3

3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

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. Casing and tubing rams to fit the preventers are .o 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 kill line, except when air or gas drilling. The substructure height shall be sufficient to install a rotating blowout preventer. The blowout preventer 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 Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continu-

accumulators must be sufficient to close all the pressure-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 pumps; or there shall be additional pumps operated by separate power and equal in performance capabilities. 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 vol. me stored in the minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulators 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 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 dilling fluids. The choke flow line valves cannected 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. 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

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