Fill Line Connection Check Valve Floor Manifold Emergency Kill Line onnect To Check Valve 2" Kill Line Hydril"GK" Casing Drilling Rams Kams Spool 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 Flow Line To Reserve Flow Line Choke 2 9/16" Minimum Bore — Beyond Edge of Derrick Floor 2"Chokes To Reserve Pit & Choke Boxes See Choke Manifold Detail Below 4" I D. Choke Flow Line CHOKE MANIFOLD DETAIL To Casing Spool Hydraulically Operated
 When Specified Straight To To Mud Pit &
Reserve Pit
t Line From Spool
b Reserve Pit When Requested or Specified X-Pressure Operated Choke Valve ADDITIONS - DELETIONS -SPECIFY CHANGES

DRAWING NO.3 Revised April,.1971

3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

The blowout p, eventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated; a Hydril "GK" 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 tubing rams to fit the preventers are so 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 one and kill Ina, except when air or gas drilling. The substructure height shall be sufficient to install a rotating blowout preventer.

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 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. minutes. 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 aforementiaced fluid charge. With the charging pumps shut down, the pressurized fluid volume stored in the seconds; after closure, the remaining accumulator pressure shall be not less 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 rom preventers. Gulf Legion No.38 hydraulic oil, 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. 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 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 flower 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

* To include derrick floor mounted controls.