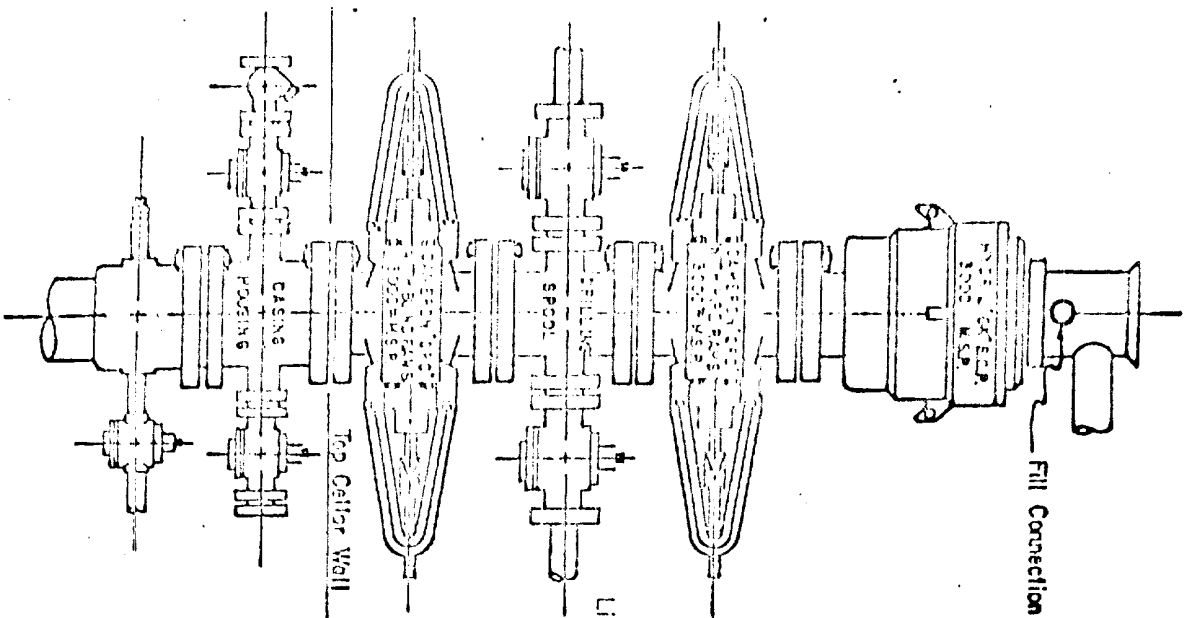
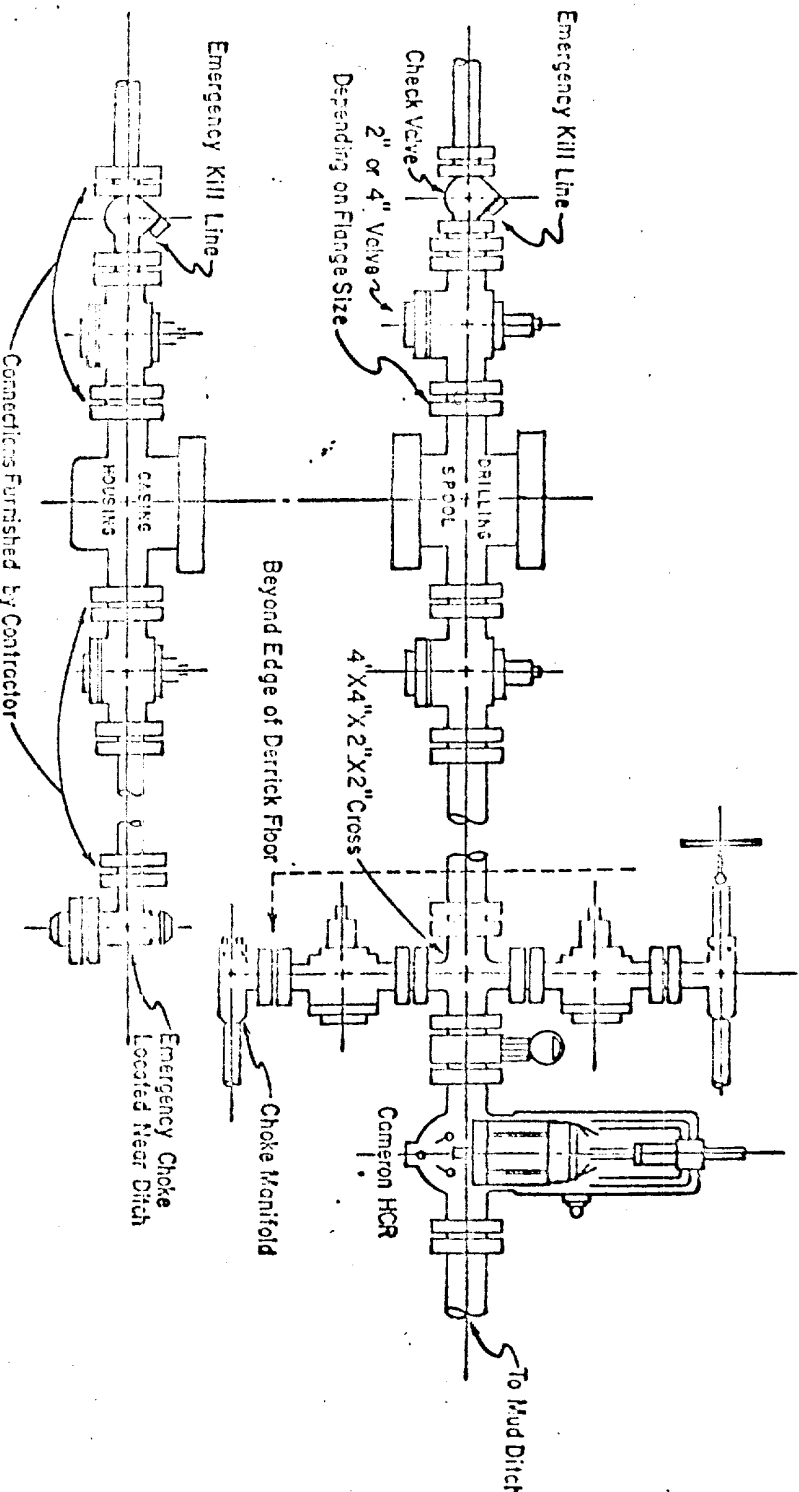




See Detail of 4" Flow Line and Choke Assembly



3,000 PSI WORKING PRESSURE KILL, CHOKE, AND FILL CONNECTIONS API Series 900 Flanges or Better

DETAIL OF 4" FLOW LINE CHOKE ASSEMBLY

Minimum assembly for 3000 PSI working pressure will consist of three preventers. The bottom and middle preventers may be Cameron QRC, Cameron Type F single or Shafter Hydraulic single, and the upper will be Hydril GK. In lieu of the drilling spool, the flanged outlets from the Cameron Type F single open face flanged preventer, provided the outlets are the correct size, may be used for the four-inch flow line and the two-inch kill line.

Size 12-inch preventers may be used for work down through 8-5/8-inch casing. Size 10-inch preventers may be used for work down through 7-5/8-inch casing. Size six-inch preventers are to be used for work through 7-inch and 5-1/2-inch casings.

Minimum operating equipment for the preventers will be: (1) An air operated pump and (2) An accumulator(s) with some means of obtaining a fluid charge. A closed fluid system is recommended. The closing manifold and reverse closing manifold will have a separate four-way valve for each pressure operated device and a Hydril regulator will be provided. Sufficient fluid capacity in the accumulator(s) shall be available to close all the pressure operated devices at the same time with 25 percent reserve. Guffin 551 hydraulic oil shall be used as the operating fluid. The four-inch flow line from the preventers shall be supported by a metal stand or reinforced concrete. All valves throughout the assembly shall be selected for operation in both gas and fluids.

The room type preventers and the Cameron HCR valve will be provided with stem extensions, universal joints, if needed, and operating wheels.

3,000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

Series 900 Flanges, or Better