



Minimum assembly will consist of three hydraulically operated ram type preventers, a Hydril GK, a rotating blowout preventer, valves, chokes and connections as illustrated. The two upper ram preventers may be double or singles, open-faced flanged. In lieu of the drilling spool, the flanged outlets of the middle ram preventer, provided they are the correct size, may be used for connecting the two 4-1/16" ID flow lines. If a tapered drill string is used, extra ram preventers will be required. Minimum operating equipment for the preventers will be: (1) Air or power operated pumps, and (2) accumulator(s) with means of obtaining a fluid charge. A regulator for the Hydril will be provided. Sufficient fluid capacity in the accumulator(s) shall be available to close all the pressure operated devices at the same time plus 25 percent reserve. Hydraulic oil shall be used as the operating fluid. Seamless steel piping shall be used to connect from the closing unit to the preventers. The choke manifold and flow lines shall be supported by metal stands or reinforced concrete. The choke lines shall be anchored. No sharp bends or curves will be permitted in the flow lines from the preventers to the pits. Easy and safe access will be maintained to choke manifold at all times. The ram type preventers and hydraulically operated valves will be provided with stem extensions, universal joints if needed, and operating wheels are to extend beyond edge of derrick substructure.