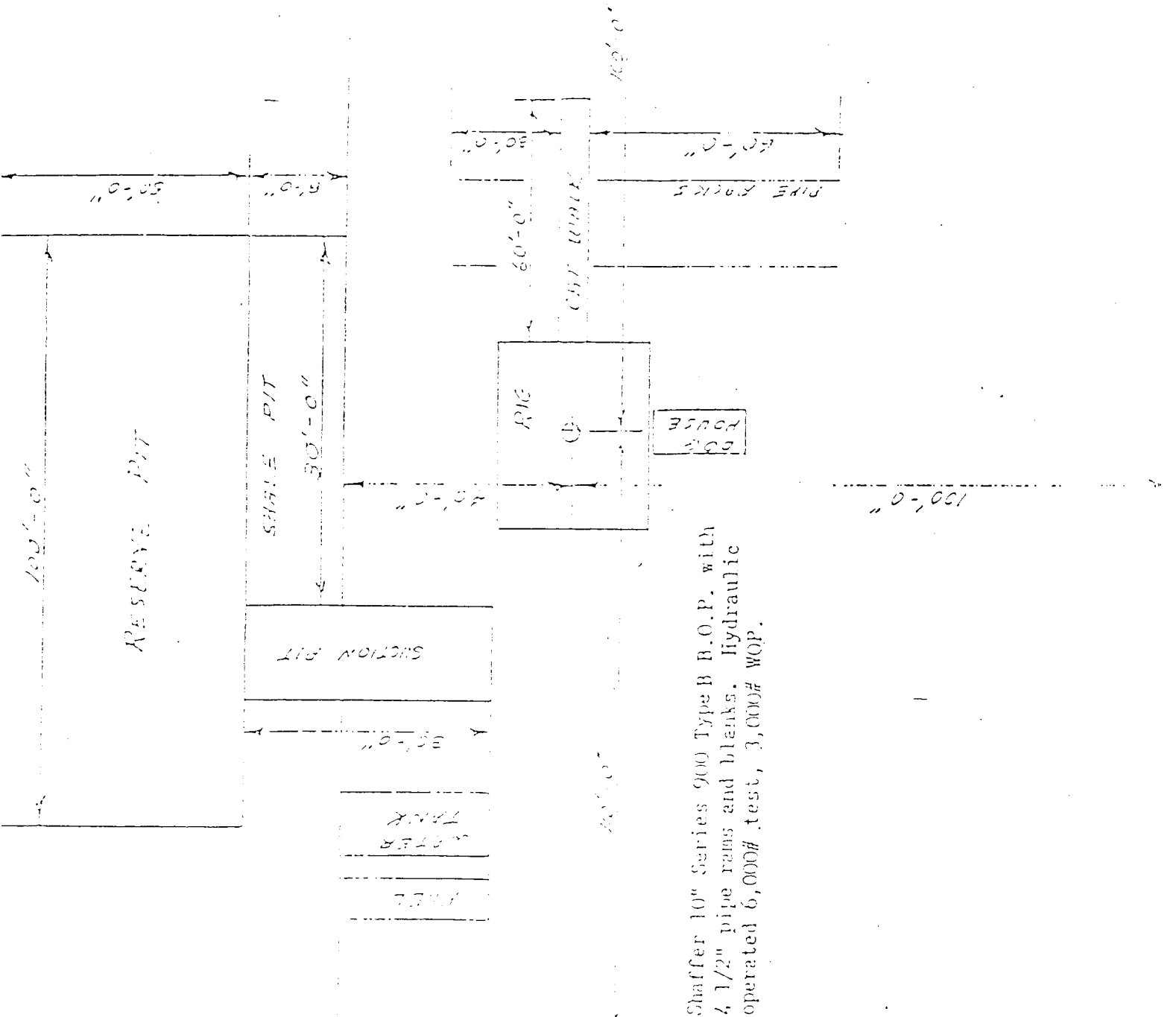
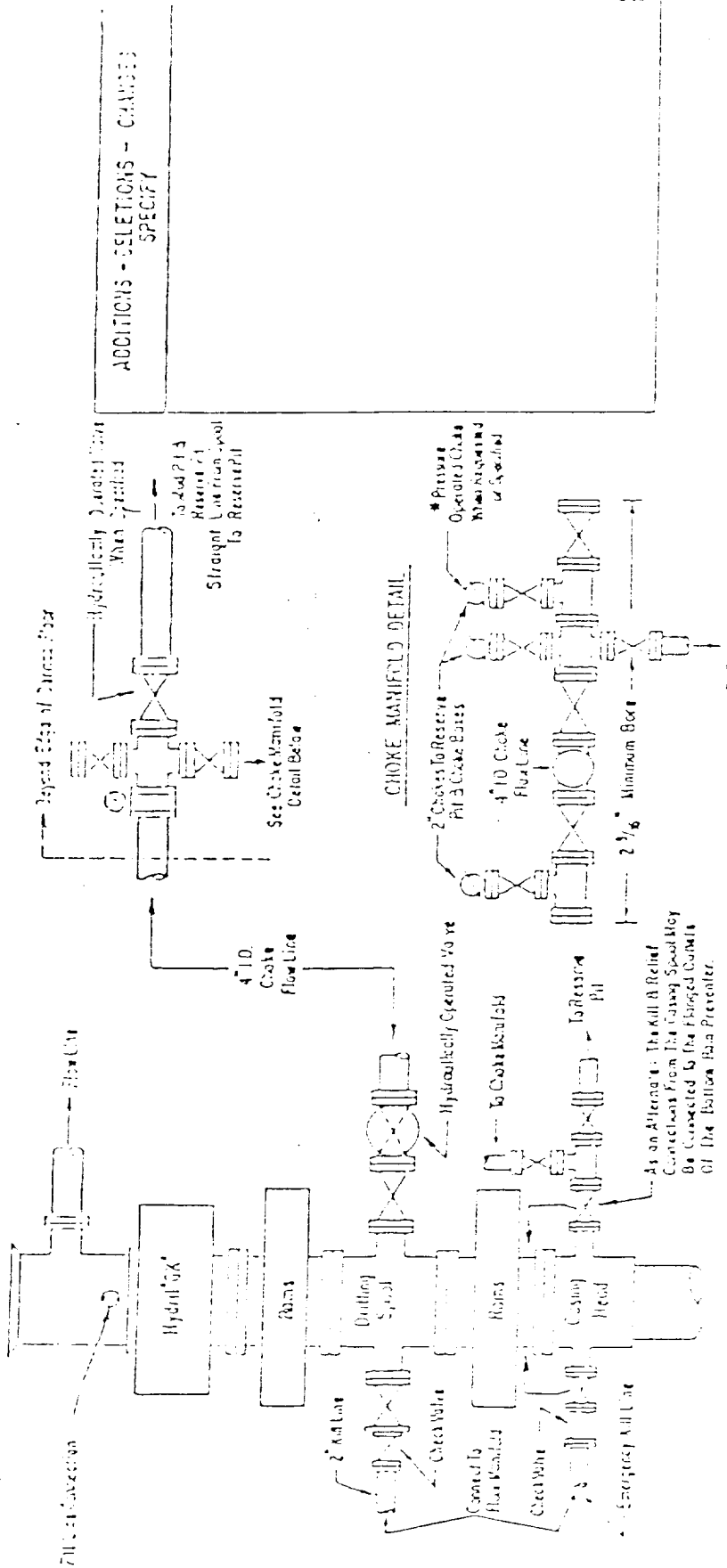


ILLECIBLE



Shaffer 10" Series 900 Type B B.O.P. with
 4 1/2" pipe rams and blinds. Hydraulic
 operated 6,000# test, 3,000# WOP.



300 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

The blowout preventer assembly shall consist of one blind ram preventer and one flow ram preventer, both hydraulically operated, a hydraulic power preventer, valves, check and connections as illustrated. If a tapered drill pipe is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing runs to the preventer are to be available as needed. If connect in line, the flanged outlets of the ram preventers shall be used for connecting to the 4-inch I.D. choke flow line and kill line, except when drill or gas drilling. The add-on hose height shall be sufficient to install a rotating blowout preventer.

Minimum operating equipment for the preventer shall be as follows: (1) Multiple pumps, driven by a constant source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within a pressure of nitrogen of not less than 750 PSI and connected to be to receive the accumulator fluid charge. With the charging pumps that charge the pressurized fluid, the accumulator shall be sufficient to close all the pressure operated devices simultaneously within 10 seconds after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator volume at least 10 percent of the original. (2) When separate, an additional source of power, remote and applicable, is to be available to operate the preventer.

The choke manifold and remote casing manifold shall have a separate control for each pressure operated device. Controls are to be located, with control handles indicating open and closed position. A pressure relief and regulator must be provided for operating the hydraulic preventer. When necessary, a second pressure regulator shall be available to limit operating fluid pressure to non-pressure.

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 flow line valves connected to the drilling pipe 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 deck's obstruction. All other valves are to be equipped with hand-wheels.

ADDITIONS - SELECTIONS - CHANGES SPECIFY

To Casing 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 be located behind the concrete controls