

NOTES

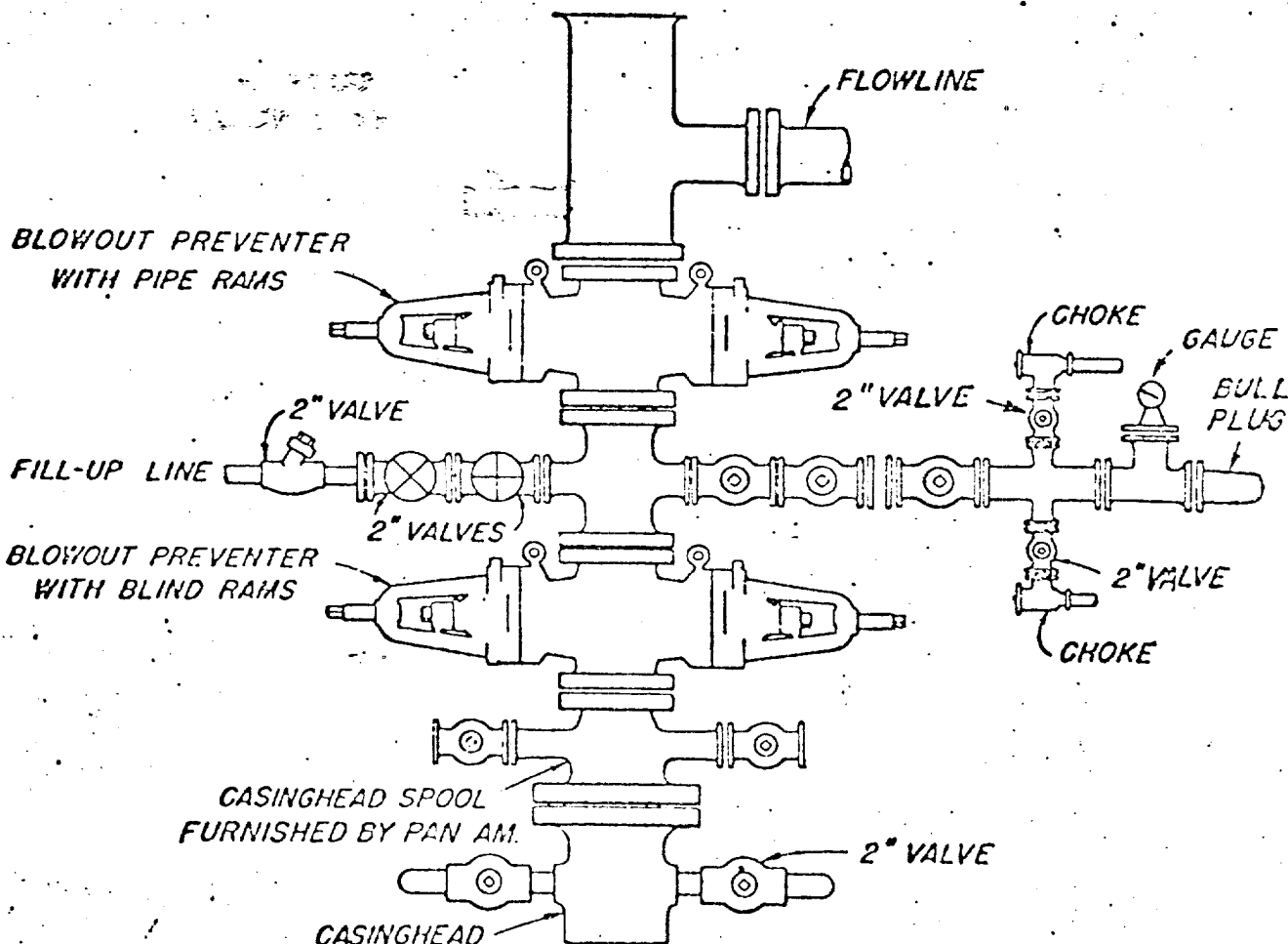
1. Blow-out preventers and master valve to be fluid operated and all fittings must be in good condition, 3,000* W.P. (6,000 p.s.i. test), minimum.
2. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
3. Nipple above blow-out preventer shall be same size as casing being drilled through.
4. Kelly cock required, 3,000* W.P. (6,000 p.s.i. test), minimum.
5. OMSCO or comparable safety valve must be available on rig floor at all times with proper connection or sub, 3,000* W.P. (6,000 p.s.i. test), minimum.
6. Blow-out preventers and master valve while drilling intermediate hole to 6,000' may be 2,000* W.P. (4,000 p.s.i. test), minimum.
7. Choke assembly, beyond second valve from cross, may be positioned (Optional) outside of derrick foundation.
8. Spool or cross may be eliminated if connections are available in the lower part of the blow-out preventer body.
9. Plug valves - gate valves are optional. Valves shown as 2" are minimum size.
10. Casing head and casing head spool, including attached valves, to be furnished by Pan American.
11. Rams in preventers will be installed as follows:

When drilling, use:

Top Preventer - Drill pipe rams
Bottom Preventer - Blind rams or master valve

When running casing, use:

Top Preventer - Casing rams
Bottom Preventer - Blind rams or master valve.



BLOWOUT PREVENTER HOOK-UP
PAN AMERICAN PETROLEUM CORP.