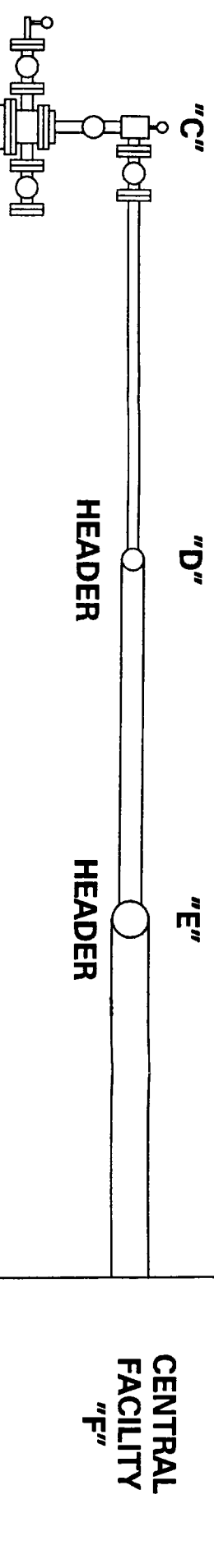


SURFACE FACILITY MODEL POINT "C" TO POINT "F"



SURFACE

CALIBRATION OF MODEL (I.E., HISTORY MATCHING)

- I. Run reservoir model first (Point "A" to Point "C")
 - A. Input reservoir parameters for model area and well bore configuration for each of the 350 active producers.
 - B. Allow model to run to simulate production from 1984 to 12/31/95 in monthly increments. The model predicts flow rate and flowing tubing pressure (FTP's) at Point "C" for each well.
 - C. Compare flow rates and FTP's with actual historical data. Adjust effective well bore radius as necessary to approach a match of simulate performance and actual conditions, i.e., a history match.
- D. Continue iterative process until a history match is achieved.

II. Run surface facility model next (Point "C" to Point "F")

- A. Input pipe parameters (diameters, length, valves, roughness, etc.) for the gathering system within the model area and flow rate at Point "C" for each of the 350 active producers.
- B. Input inlet pressure at the central facility each month (90 to 175 psi).
- C. Allow model to run to simulate flow and pressure drops at the surface from 1984 through 1995 in monthly increments. The model calculates flowing tubing pressure (FTPs) at Point "C" for each well.
- D. Compare FTPs with actual historical data. Adjust flow efficiency factors as necessary to approach a match of simulate performance and actual conditions, i.e., a history match for the flow regime at the surface.
- E. Continue iterative process until a history match of flowing tubing pressures at Point "C" is achieved.

RESERVOIR MODEL POINT "A" TO POINT "C"

TOP OF TUBB FORMATION

A.

"B"

BASE OF TUBB FORMATION