

CORINNE GRACE

No.1 City of Carlsbad
Unit O, Section 25, T-22-S, R-26-E
Eddy County, New Mexico

MINIMUM FLOW CALCULATION

Flowing Tubing Pressure = 2600 psig
Compressibility = 1.0116
Surface Temperature = 75 F = 535 R
Tubing Size = 2-3/8" A = 0.012171 ft
Fluid - Water = 9 lbs/gal

$$\begin{aligned} V_g &= \frac{5.62(67 - 0.0031 \times P_{ft})^{.25}}{(0.0031 \times P_{ft})^{.5}} \\ &= \frac{5.62(67 - 0.0031 \times 2613.2)^{.25}}{0.0031 \times 2613.2)^{.5}} \\ &= 5.47011 \text{ ft/sec.} \\ Q_m &= \frac{3.06 \times P_{ft} \times V_g \times A}{T \times Z} \\ &= \frac{3.03 \times 2613.2 \times 5.47011 \times 0.012171}{535 \times 1.0116} \\ &= 1.755 \text{ MMCF/PD} \\ 1\text{-}1/2\text{" Tubing} &- 1.139 \text{ MMCF/PD} \\ 1\text{-}1/4\text{" Tubing} &0.841 \text{ MMCF/PD} \\ 1\text{" Tubing} &0.485 \text{ MMCF/PD} \end{aligned}$$

