

1-4033

THEORETICAL PUMP FLOW CALCULATIONS

Formula:

$$Q_{cfs} = [(Hp)(8.814)(Eff)] \div [Lift + (psi \times 2.308)]$$

$$Hp = \text{Horsepower} = \frac{10}{}$$

$$Eff = \text{Efficiency} = \frac{70\%}{\text{}} \text{ (Usually 70\%)}$$

$$\text{Lift: (Static Level + Assumed Draw down)}$$

$$\text{Static Water Level} = \text{ } \text{ft.}$$

$$\text{Assumed Draw down} = + \text{ } \text{ft.}$$

$$\text{Lift} = \frac{15}{\text{}}$$

OR

$$\text{Measured Dynamic Water Level} = \text{ } \text{ft.}$$

$$psi = \text{Operating Pressure} = \frac{0}{\text{}} \text{ psi}$$

$$Q_{cfs} = \left[\frac{10}{Hp} \times 8.814 \times \frac{70\%}{Eff} \right] \div \left[\frac{15}{Lift} + \left(\frac{0}{psi} \times 2.308 \right) \right]$$

$$Q_{cfs} = \left[\frac{61.7}{\text{}} \right] \div \left[\frac{15}{\text{}} \right]$$

$$Q_{cfs} = \frac{4.11}{\text{}} \text{ cfs}$$

This system served the land described in statutory claim 1-4033, which is claimed as 1-4033 A and 1-4033 B.

PERMIT NO. _____