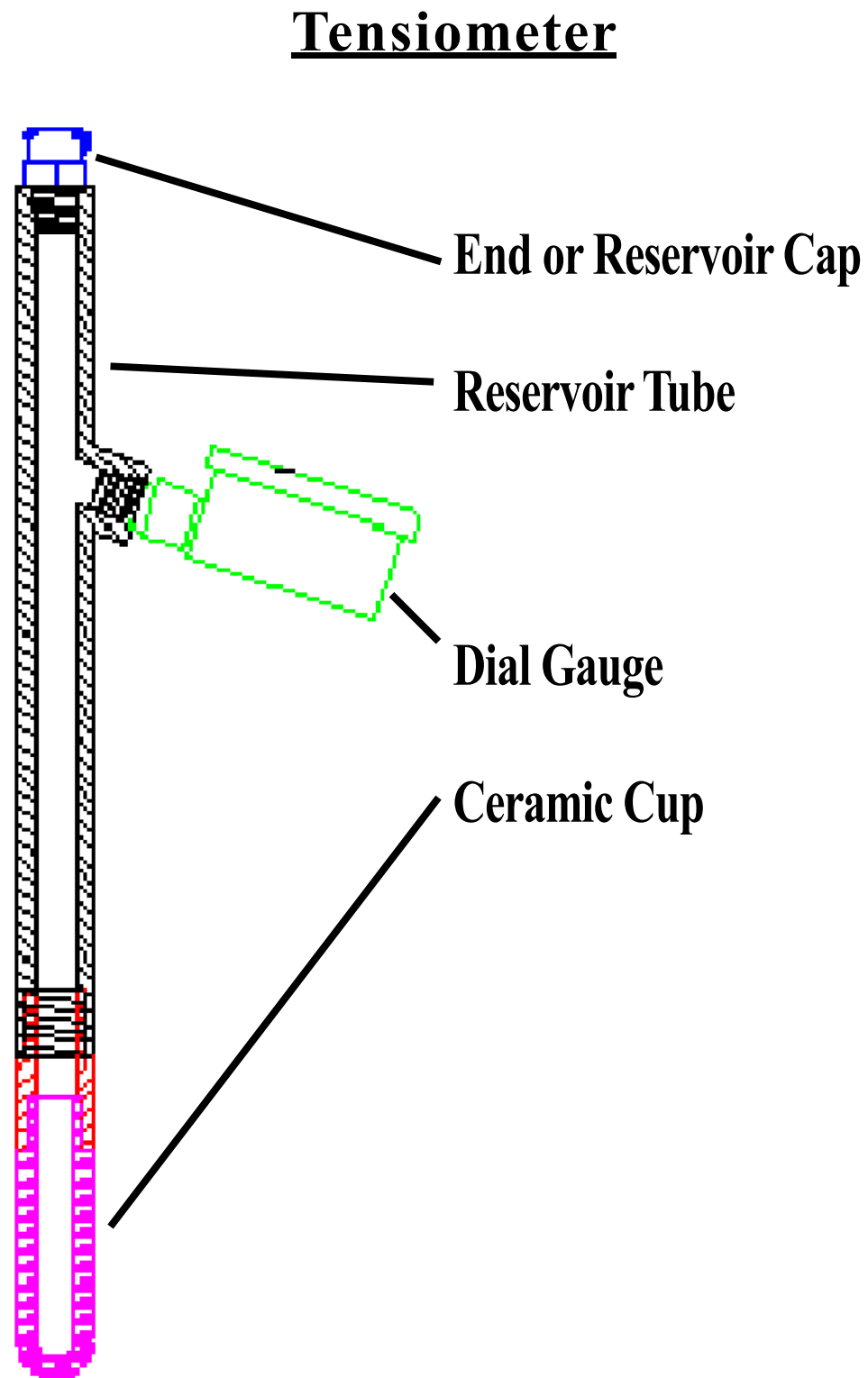


Determining Matrix (Suction) Potential by means of field measurements with Tensiometer.



Calculation steps:

1) Determine the TOTAL HEAD for two tensiometer:

$$\text{Total Head (Ht)} = \text{Measured Pressure Head (Hp)} + \text{Elevation Head (Hz)}$$

A) For each tensiometer convert the suction measured in centibar (cb) into centimeter (cm)

$$1 \text{ centibar} = 10 \text{ cm. (approximate conversion)}$$

B) Determine Ht

$$\text{Tensiometer 1: } Ht_1 = Hp_1 + Hz_1$$

$$\text{Tensiometer 2: } Ht_2 = Hp_2 + Hz_2$$

****Water will move in the direction of DECREASING (more negative) Total Head****

2) Determine the VERTICAL GRADIENT of Total Head:

$$\frac{d(Ht)}{d(Hz)} = \frac{(Ht_2 - Ht_1)}{(Hz_2 - Hz_1)}$$

Where:

Ht = Total Head in centimeter (step one)

Hz = Elevation Head in centimeter

****Vertical Gradient is a unit less parameter****

Field Measurements:

