

# Barite and Salt Weight-Up Formulas

## Barite Weight-Up:

Old School Formula:

$$(MWd - MWp) \times 5 \times MWd = \text{sks}/100 \text{ bbl required}$$

MWd = Mud Weight Desired

MWp = Mud Weight That You Have at Present

Sks = 100 lb sks Barite

Engineering Formula:

$$1505 \times \frac{(MWd - MWp)}{35.8 - MWd} = \text{sks}/100 \text{ bbl required}$$

## Salt Weight-Up (Sodium Chloride Salt)

### Rules to Remember:

- From fresh water, it takes 110 ppb of sodium chloride salt to increase MW to 10.0 ppg.
- To increase fluid density by 1/10 ppg, it takes 7 ppb salt.
- If 180,000 mg/L(ppm) chlorides is saturation, there are 10,500 mg/L(ppm) per each 1/10 ppg of MW.
- Increasing fluid density with salt from fresh water to saturation will increase that fluid's volume by 13%.
- Each 8.5 ppb of sodium chloride salt is equivalent to 1% of volume increase.
- Each pallet of sodium chloride salt (30- 80 lb bags) is equivalent to 2.85 bbl of volume.
- Saturated sodium chloride solution is 26% sodium chloride by weight.  
42 gallons/bbl x 10.0 ppg = 420 lb (for 1 bbl of saturated salt water)  
110 lb / 420 lb = 0.26 (26% by weight)