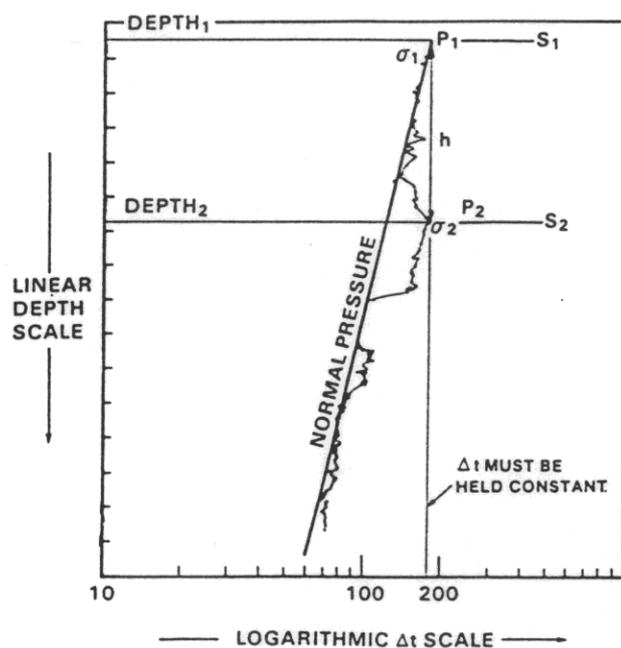


A METHOD FOR CALCULATING PORE PRESSURES FROM WELL LOGS

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5 cm



$$S_1 = \sigma_1 + P_1 \quad (1)$$

$$S_2 = \sigma_2 + P_2 \quad (2)$$

when ϕ is constant, $\sigma_1 = \sigma_2$:

$$\sigma_2 = S_2 - P_2 = \sigma_1 = S_1 - P_1 \quad (3)$$

$$P_1 = D_1 \times 0.433 \times SG_f \text{ average (psi)} \quad (4)$$

$$(S_2 - S_1) = h \times 0.433 \times SG_b \text{ average (psi)} \quad (5)$$

pore pressure
at DEPTH₂: $P_2 = (S_2 - S_1) + P_1$ (psi) (6)

mud weight = $\frac{P_2}{D_2} \times 19.27$ lbs/U.S. gal (7)

Derivation of Mud Weight Calculation