

Calculation of OOIP

Material Balance Method

Solution-Gas Drive Reservoir Below Bubblepoint

$$N = \frac{N_p [B_t + B_g (R_p - R_{si})]}{B_t - B_{ti} + mB_{oi} (B_g/B_{gi} - 1)}$$

Where

N_p = cumulative oil production

B_t = two-phase formation volume factor

B_g = gas formation volume factor

R_p = cumulative produced GOR

R_{si} = initial solution GOR

B_{ti} = initial two-phase formation volume factor

m = PV of gas cap/PV of oil zone

B_{oi} = initial oil formation volume factor

B_{gi} = initial gas formation volume factor

Reference: Petroleum Engineering Handbook, (Society of Petroleum Engineers, Richardson, Texas, 1987), pg. 37-6

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Production Inc.

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