

Correlation Of Centrifuge Capillary Pressure Data

Al-Fosail, KA

MARCEL DEKKER INC, PETROLEUM SCIENCE AND TECHNOLOGY; pp: 1395-1407;

Vol: 21

King Fahd University of Petroleum & Minerals

<http://www.kfupm.edu.sa>

Summary

Capillary pressure curves are helpful in studying the performance of reservoir rocks. Several methods are used to determine the capillary pressure curves. In this study Berea sandstone centrifuge capillary pressure measurements were carried out on more than twenty core samples that have different porosity and permeability values. The capillary pressure data are used with different forms of normalized water saturation in obtaining the correlation. This article shows that there are more than one correlation that can be obtained (exponential, linear, and polynomial forms). Also an improvement of the correlations was achieved by including certain parameters which represents the physical properties of the core sample with the normalized water saturation.

References:

1. ALGER RP, 1989, SPE FORMATION EV JUN
2. BENTSEN RG, 1976, J CDN PET TECH JUL, P75
3. DABBOUS MK, 1976, SPEJ, P261
4. DOBRYNIN VH, 1962, SOC PETROLEUM EN DEC, P316
5. DONALDSON EC, 1991, J PETROL SCI ENG, V6, P249
6. FATT I, 1952, PETROLEUM T AIME, V195, P329
7. GOLZ P, 1980, 31 ANN TECHN M PETR, P25
8. GRAY DH, 1963, SPEJ JUN, P95
9. HALL HN, 1953, PETROLEUM T AIME, V198, P309
10. HAMID K, 1986, J EGYPTIUM SOC ENG, V12, P85
11. HERELDIN GM, 1974, SPWLA 15 ANN LOG JUN, P2
12. LEVERETT MC, 1941, T AM I MIN MET ENG, V142, P152
13. NEWMAN GH, 1973, J PETROLEUM TECH FEB, P129
14. SINNOKROT AA, 1969, 44 SPE ANN FALL M DE
15. SONDERA E, 1992, ADV CORE EVALUATION, V3

16. WRIGHT HT, 1955, TEX S FORM EV AIME O

For pre-prints please write to: abstracts@kfupm.edu.sa