

Supporting Information

Impact of Connate Brine Chemistry on In-situ Wettability and Oil Recovery: A Pore-scale Experimental Investigation

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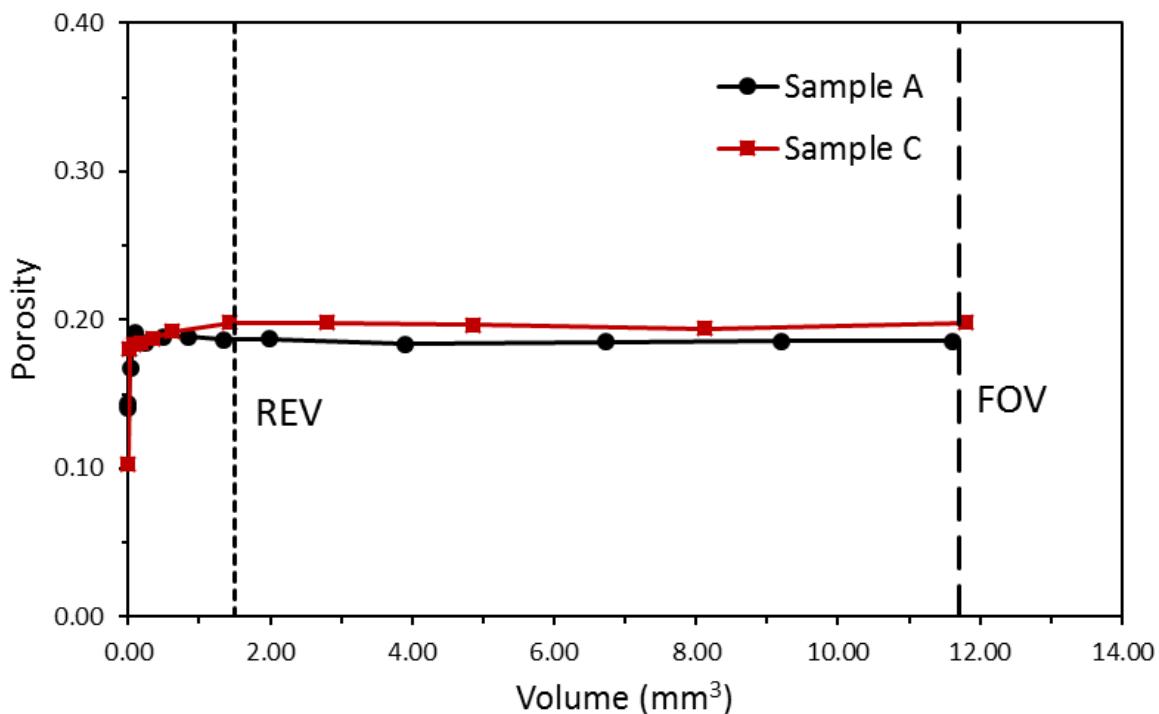


Figure S1. Variation of porosity with various sub-sample volumes for Samples A and C. The porosity-based REVs for both samples are approximately 1.5 mm^3 .

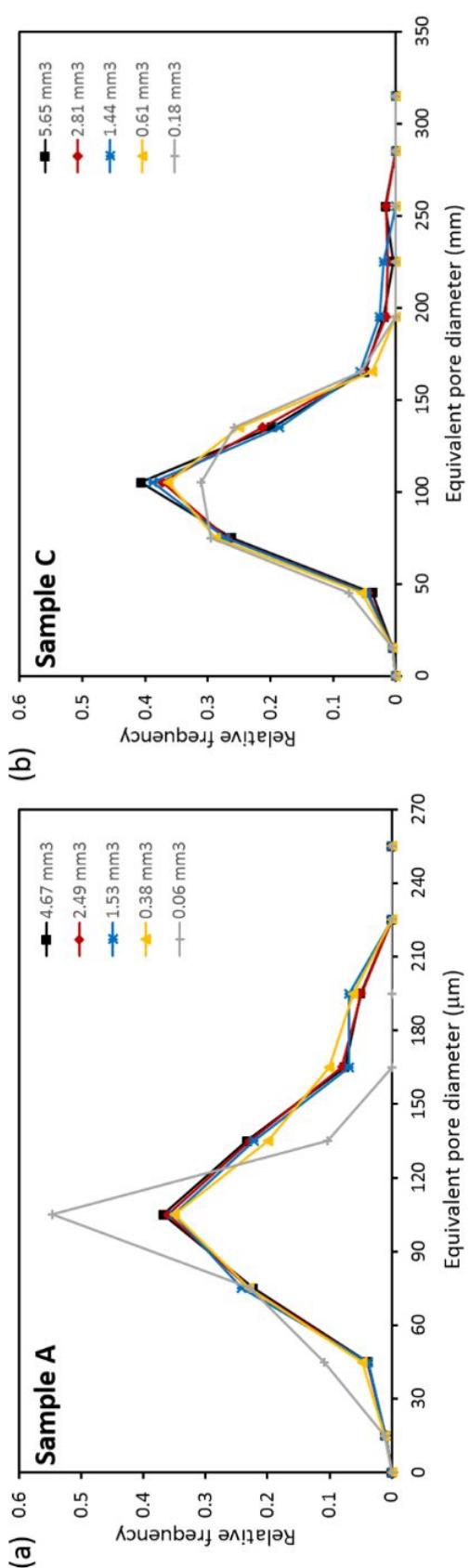


Figure S2. Variations of pore-size distribution (PSD) with the size of sub-sample volume for (a) Sample A (i.e., Berea sandstone) and (b) Sample C (i.e., the target reservoir sandstone). The analysis shows that the PSD does not change when the sizes of sub-samples become larger than 0.38 and 1.5 mm³ for Samples A and C, respectively.

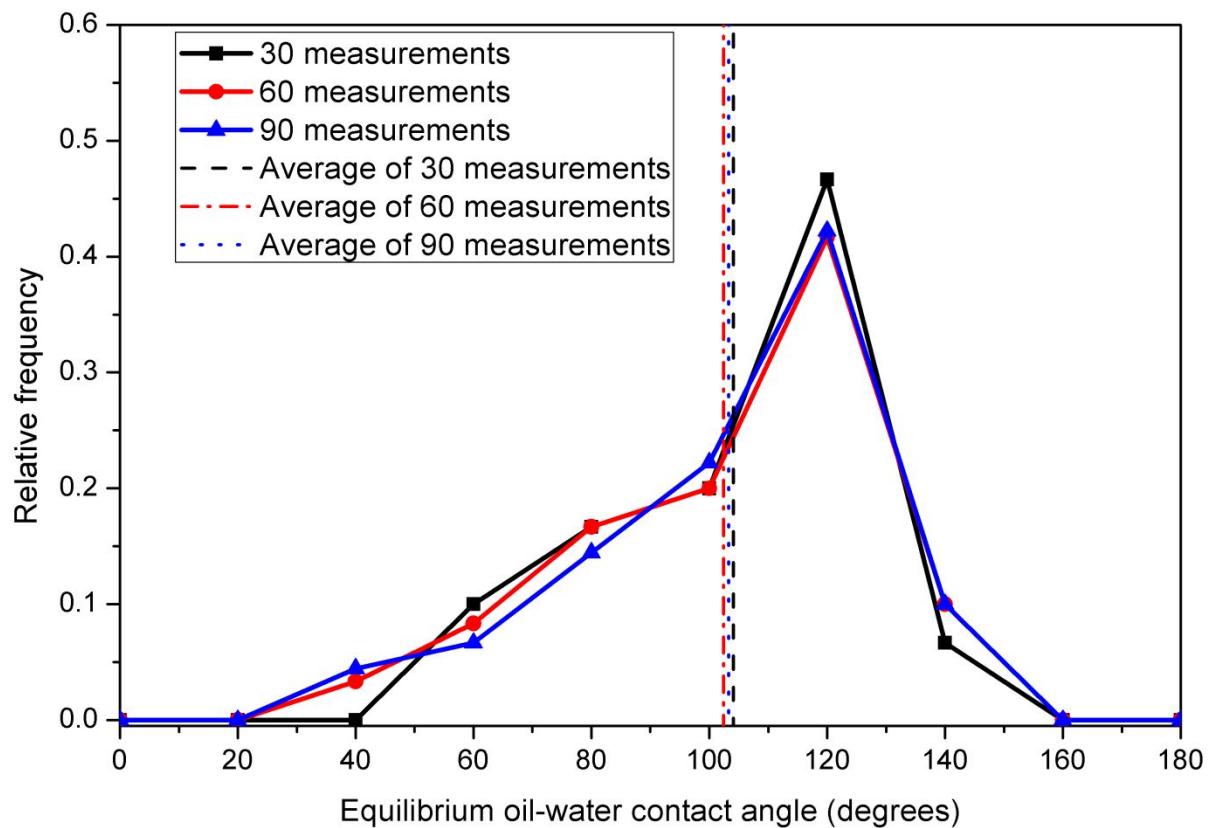


Figure S3. Sensitivity of the distribution of equilibrium oil water contact angle to the number of measurements in Sample A. The averages of 30, 60, and 90 measurements are 104.1, 102.4, and 103.3 degrees, respectively.