

Interactive comment on “Classification and quantification of pore shapes in sandstone reservoir rocks with 3-D X-ray micro-computed tomography” by M. Schmitt et al.

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Dear referee #2 thanks a lot for your comments. As we recognized from referee #1 as well, we need to add and rephrase some parts of the discussion and conclusions in order to clarify the points you asked for (please also check the comments we provided to the discussion with Referee#1). In fact, the correlation of the different classes of pore shapes with different petrophysical parameter is part of the ongoing research of this project. Besides trying to use this classification for predictive parameter correlations, the main idea is to “decompose” the integrative, i.e. laboratory scale petrophysical parameter into the according pore size and pore shape class as well as to investigate

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the individual influence at the pore scale on the “macroscopic” (laboratory) value.

Of course, pore shape classes are not sufficient as a “stand alone” set of values for this task. Hence we consider the surface area as well as fractal dimension as “structural data” in addition. This is a slightly different set of parameters, compared to the work of Vogel & Schlüter. At this point we cannot say if this approach leads to similar or different (or “worse or better”) results. In fact, this would be the scope of the next paper of our project.

The authors agree that these points need distinct clarification in the manuscript. We are going to address it within the next iteration of the document.

Interactive comment on Solid Earth Discuss., 7, 3441, 2015.

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