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Interactive comment on "Qualitative and quantitative changes in detrital reservoir rocks caused by CO_2-brine-rock interactions during first injection phases (Utrillas sandstones, Northern Spain)" *by* E. Berrezueta et al.

Anonymous Referee #2

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Please specify in the revised ms:

1) Authors' reply: that the presence of non-dissolved SC CO2 in the brine was not in contactwith the rock. This occupied the top of the test chamber. Sample+brine+CO2 were upto supercritical conditions for 24 hours. Sample+brine+CO2 were 6 hours in conditionsbelow 38âŮęC and 7.8 MPa: 3 hours from ambient conditions to supercritical conditions and 3 hours to go from supercritical conditions to ambient conditions.

2) that the measured pH (pH = 5.2) is not representative of the solution pH during the

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experiment, as it was measured after the experiment during depressurization (Table 2).

3) that you assume that the acidified brine interact with the brine that is filling the pores. The low compressibility coefficient of a fluid in the case of an increase of pressure and temperature (as in this experiment) does not favour displacements of the fluid.

4) pg. 2252: explain in the revised text that "in case of gas leakage in the chamber durign the experiment, the pump maintains the experimental pressure".

After the authors accomodate the above suggested changes in the revised ms, and considering their satisfactory replies to the first round of comments, I consider the paper is publishable with no further modifications.

Interactive comment on Solid Earth Discuss., 7, 2243, 2015.