

Interactive comment on “Characterizing a decametre-scale granitic reservoir using GPR and seismic methods – A case study for preparing hydraulic stimulations” by Joseph Doetsch et al.

Joseph Doetsch et al.

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Reviewer: The overall quality of the paper is excellent. I enjoyed the logical flow, how the materials presented, and how the methodology is explained. The integration of GPR and high-res seismic is properly justified and motivated on different levels (fracture density vs shear zones, etc.). I appreciated the exhaustive discussion of the seismic anisotropy and how it has been tackled. I only have a few technical corrections that the authors might consider including in the final version. Although I do not consider those bounded to the acceptance of the paper for publication, I think that the corrections might improve the clarity of a couple of details. Answer: Thank you for the kind

C1

words.

Reviewer: 1) Figure 1 caption: why (a) is repeated twice into the first sentence? Answer: We removed the first (a) for clarity.

Reviewer: 2) Figure 3: In (a) and (b), why 30 m? and not an exact scale? In (b) Why not showing the exact position of Receiver #45 instead of only pointing at it? In (b), I would flip "Receivers", seems easier to read. Answer: The scale does not contain the exact value. We think the arrow point at Receiver #45 location is sufficient enough for the figure. We are not sure which "Receivers" label the reviewer would like to flip. It seems that readability would not improve as the one in b) is flipped.

Reviewer: 3) In 3.2.1, what is 100-Hz referred to the geophones? Center frequency? Corner frequency? Damping frequency? Later in the section, it is pointed out that the dominant frequency observed is 1.1 kHz. Answer: 100 Hz is the resonance frequency of the geophones. This has been added to the manuscript.

Reviewer: 4) In 4.1 and Figure 6 caption, GRP instead of GPR. Answer: This has been corrected.

Reviewer: 5) Figure 6, why not indicating N and S as in Figure 7? Just a stylistical detail, not crucial. Answer: Actually, a good question. We changed this, to be consistent.

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2020-40>, 2020.

C2