

General notes:

We included the original comments in black, followed how we addressed them in the revised paper in green. We thank the first reviewer and Isabelle Lecomte for the reviews, corrections and hints.

Reviewer #2 – Isabelle Lecomte

See attached an edited PDF with mostly minor edits. You had already addressed key issues taken up by other reviewers. On the style side, make sure to be coherent in your hyphenation use.

We took care about the hyphenation use.

Please make sure to distinguish between reflectivity/reflectors and reflections.

We corrected the text accordingly.

Figures: even if you have a 3D cube, the vertical sections you show would have been easier to analyze if plotted as pure 2D vertical sections with some more focusing around the mineralization (Figures 6-8). You do state many detailed observations which the readers can not really constrained on their own with the actual 3D-view plots.

We included subfigures in Figure 6 and 7 with a 2D view for the shown slice and a zoom on the important section of the image. Such, we hope the reader can easier follow our descriptions and see the match/mismatch between the seismic image and the model.

I do miss some sort of illumination study to better assess how the quite sparse/irregular acquisition geometry may have affected the images; to be considered in a future study!

We agree that such a study would help to verify the made observations. We included this as an outlook in the discussion.

Following the most important comments and question from the annotated pdf. We considered also all minor comments and corrections in our revision:

Figure 1: Use a thicker black line if possible.

We revised the figure.

Figure 2: Are your displayed logs truncated from the original ones? If so, that would explain the synthetic signal at the top, but the depth starting at 0 (and twt from 0), this seems to be a wrapping effect in your synthetic seismograms, due to a too short time window for the calculation? Not ideal to display such, at least without explaining that modelling artefact.

We see what you mean. This figure is taken 1:1 from Maries et al. (2017), therefore we can not correct this effect.

Do you specifically target the mineralization part in a way? It seems that "legit" coherent events further away (i.e., near and below the deepest blue arrow) are strongly attenuated after FVM.

No, there is no a priori information included for FVM. These visible coherent reflections are outside the Fresnel volume of the back-propagated rays and are only visible in the KPSDM due to migration artefacts (smearing).

The caption of figure 6 mentions just an adjustment of the display gain? („Therefore, we normalize both volumes to the root mean square (RMS) of all amplitudes in the volume so that the variability of the amplitudes is in the same range.“)

This is correct. The additional normalization was done only for the signal-to-noise estimation for KPSDM and FVM, not for the shown figures.