

## ***Interactive comment on “Joint interpretation of magnetotelluric, seismic and well-log data in Hontomín (Spain)” by X. Ogaya et al.***

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The manuscript describes a valuable and interesting comparison of seismic velocity and resistivity data in the area of the Hontomín CO<sub>2</sub> sequestration site. Three-dimensional velocity and magnetotelluric (MT) resistivity models are described and compared, and these data are compared with well-log information. Statistical relationships between the velocity and resistivity are derived from the well-log data and used to convert the 3-D MT resistivity model into equivalent velocity models. These results are then compared with the actual well-log data and near-surface seismic models. The manuscript is well written and illustrated and appears to be scientifically correct. It will be of interest to a wide range of readers of Solid Earth.

I have only one significant comment on the scientific aspects of the manuscript and

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that is that although the relationships between the well-log seismic and velocity data are established for subsequent empirical use I think there should be a little discussion of their physical basis and a more critical assessment of their significance. There are also a number of small editorial scale corrections that would enhance the manuscript. These aspects are documented in the attached file.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/se-2016-24/se-2016-24-RC2-supplement.pdf>

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