RC1:

Dear authors,
Thank you for the submission of this article. I have completed my evaluation of your manuscript and will send it out for review.
The work presents a very interesting methodology that can help mineral exploration in hard rock sites in an effective and sustainable way. The work has a certain originality, since there are few similar works published until the moment. Still taking into account the originality of this research, an important factor is that the present study developed a semi-automatic workflow for application of active and passive surface wave tomography, which is quite interesting and worthwhile.
The work is well presented. However, in my opinion, the text requires the insertion of some information that I believe is important. All comments have been detailed throughout the text in the attached file (pdf).
Kind regards.

REPLY to RC1:

We are thankful to the reviewer for the work done to improve the manuscript and the positive evaluation. We have carefully considered all the comments and suggestions that were given in the attached file. In particular, we have better motivated all our choices about the data processing and interpretation and added references where possible. We have refined the introduction of the paper following the reviewer's suggestion and updated two figures to fulfill the comments. We have replied to all the comments, point by point, in the attached commented pdf provided by the reviewer (and posted online for the discussion).

RC2:

I read your manuscript with great attention and interest as it is an essential topic about applying the seismic potential (active and passive surface-wave tomography) in solving or dealing with mining exploration problems, especially about the estimation of phosphorus-bearing reserves, which is a critical point from which important management decision are relied on. I found this article not only written in a clear language but also well structured so potential readers are going to be pleased to read that. From a more technical point of view, I could see that a significant number of seismic data were gathered from different seismic sources, which are well described, and also using a high number of geophones. I found particularly interesting the excellent agreement among the seismic anomalies and the potential deep ore-bearing structures that could help support those decision stages for further drilling works. So that makes this methodology too promising for other mining areas where it is crucial to have a precise understanding of the geological structures from which the ores are mined. The authors even suggest an appropriate and tested workflow that could be implemented by potential practitioners. So, I would suggest the paper to be considered for publishing.

REPLY to RC2:

We are grateful to the reviewer for the positive feedback on the manuscript. We fully agree on the potentialities of this robust and automatic workflow for future mineral exploration applications in a wide variety of geological contexts. We have now slightly revised the paper to improve the quality of the manuscript following the comments and fruitful suggestions of another reviewer.