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Some improvements in subbasalt imaging using pre-stack depth migration
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Dear Editor, we have carefully followed the suggestions indicated by the reviewer. Our comments are in red

(1) In "Abstract", a word of "ubbasalt" may be "Subbasalt". (Fixed)

(2) Readers can well understand the superiority of the method in this paper if the authors compare the image by old type (conventional) technique corresponding to a case of Fig. 3 or Fig. 5.

(3) In Fig. 4, "direction" of profile should be added. Which side is SE direction? The direction has been included in the Figure and in the figure explanation lable.

(4) In tomographic analysis on Sec. 4, the authors are using reflected waves (reflections from the top basalt, base basalt and top basement reflections) and as well as refracted waves. Does it mean that the velocity and velocity interfaces are obtained in this inversion? Some additional explanations are necessary for the velocity inversion.
A few sentences have been included to address this issue pointed out by the reviewer "The velocity model was obtained using the tomographic algorithm by Trinks et al., 2005. The algorithm develloped by Trinks et al., 2005 is able to to use diving as well as reflected waves. Therefore it recovers the velocity distribution and the topography of the reflecting structures.
In this study, the reflected phases were only use to increase the resolution of the velocity model. The pre-stack migration algorithm only requires the distribution of velocities to generate the depth migrated image, the reflecting interfaces constrained by the tomographic algorithm were not used."

The interface by the tomographic inversion well correspond to the prestack migrated image? The depth image and the constrained interfaces by the inversion algorithm are very closely to each other.

(5) What new geologic/geophysical interpretations are yielded by this new method? I understand that this paper is to present the new prestack migration method. But I recommend some (brief) description on this matter.
The following text has been added to the manuscript

"The determination of the base of the basalt layers is a key issue for the exploration perspectives. Sedimentary layers with prospects can have been trapped between the basalt intrusive and the basement. Thus the importance of imaging these trapped sedimentary structures."

Sincerely

Ramon