

Interactive comment on “Structural evolution of the VMS-hosting Kristineberg area, Sweden – constraints from structural analysis and 3-D-modelling” by P. Skyttä et al.

Anonymous Referee #2

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This paper presents a combination of structural geology and 3D geometrical modelling to constrain the tectonic environment responsible for VMS deposits. This issue has of course a great economic importance. However, the purpose and techniques used in this study are not well presented. It is therefore very complicate to objectively evaluate the present manuscript. Several major issues need to be achieved in order to consider this manuscript suitable for publication.

1/ the introduction is not well written, since the main aim of the paper is not defined. The VMS and their relationship with Ore deposits are not clearly defined. What is new in this paper? : tectonic context of VMS deposit (many papers are cited related to this),

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3D modelling? As a consequence, the paper is very difficult to follow and the findings of the present study, with respect to previous one are not clearly identified.

2/ the authors state that the deposit occurs in a SSE-NNW transpressive regime. This conclusion that was previously proposed is however not clearly supported by the structural data. Moreover, the tectonic map does not show the relationship between the high strain zones and the VMS deposit.

2/ the link between small-scale observations (figs 5 to 7) and the large-scale interpretation (tectonic) is not clear: to what extend observations at centimetre scale can be used as a constraint to tectonic process?

3/ 3D modelling. This could be the innovative part of the study. However, the two figures (3 and 8) are so poorly explained that it becomes complicate trying to understand what is plotted. As a consequence, the outcomes of this modelling are meaningless for the present study. I do think that such 3D geometrical modelling can be served as a geometrical constraint to structural data, but it is not used in that sense here.

On the above bases, I thus suggested that the paper is rejected

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