Large-scale mineral system study in Finland using 3D magnetotellurics

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SUMMARY

The study of mineral systems has been demonstrated to be a paradigm shift in mineral potential assessment of mineral belts in cratonic environments by revealing lower crustal structures associated with metal concentration and emplacement in the upper-most crust. Magnetotellurics is a powerful tool for imaging these lower crustal structures and their connections to surficial interest zones. However, it has largely been applied in a two-dimensional fashion. In complicated Precambrian environments, 3D magnetotellurics is effective for production of more stable and less ambiguous conductivity models. Within the framework of the D-REX project we have examined three regions across the Fennoscandian shield and here we present results from the Pyhäsalmi mineral system, a part of the Rahe-Ladoka zone, Finland, on a regional scale and in 3D.

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