

# **Petrogenesis of the Kemi chromite deposit, Finland**

## **Supervisors**

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## **Project description**

The Kemi chromium deposit is one of the largest Cr deposits globally. The origin of the deposit has remained controversial. In contrast to chromitites in most other layered intrusions, the Kemi chromitite shows extreme lateral variation in thickness, increasing from a few cm at the margins of the intrusion to nearly 100m in the centre. The present project will examine the lateral compositional and textural variations in the chromite layer, in order to constrain the nature of the magmatic processes. Potential mechanisms include magma mixing, crustal contamination, crystal settling, and crystal sorting in magmatic slurries. Comparisons will be drawn with other chromitite deposits in layered intrusions, namely the Bushveld and Stillwater complexes.

Reference: Maier WD, Barnes S-J, Groves DI (2013) *Min Deposita*, 48, 1-56