

Nickel, Platinum Group Element and Gold mineralization in Greenland produced by the Iceland mantle plume

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As Greenland migrated over the Iceland mantle plume, magmas derived from the plume produced mafic intrusive rocks that have considerable potential to host economic magmatic nickel-copper (Ni-Cu) and platinum Group Element (PGE) and Gold (Au) mineralization. This talk will present results of detailed geochemical studies of 1) the Skaergaard Intrusion in East Greenland that hosts significant magmatic Au and Pd mineralization which is the product of prolonged fractionation of sulphide-undersaturated parental Skaergaard magma and 2) picritic and tholeiitic volcanic rocks on Qeqertarsuaq(Disko) Island and the Nuussuaq Peninsula in West Greenland that are co-magmatic with dykes hosting some Ni sulphide mineralization.