## Magma and Salt: The Discovery of the Oktyabrsky Supergiant and the Role of Salt-Magma Location on Genesis and Value

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The Oktyabrsky Cu-PGE-Ni deposit is the world's most valuable metal deposit of any type. The deposit was discovered in 1965 in the Noril'sk district, Russia, at a depth and complexity of exploration searchspace radically different from the original discovery of the smaller Noril'sk deposit. Oktyabrsky is worth over 50 times the insitu value of Noril'sk!

The discovery of Nori'lsk is well documented in Russian, but the discovery of Oktyabrsky is poorly documented. In this contribution we integrate work on the history of the discovery of the deposit, with new work on the role of magma intrusion interaction with evaporites, and in particular the relative location of magma emplacement with respect to salt position within the target sedimentary basin.

The location of autochthonous salt is considered the primary ingredient that controls both the deposit quality and discoverability. Targeting datasets thus shift away from magmatic processes towards basin studies with new prediction and detection tools. We integrate this basin analytical approach to new geochemical and mineralogical data on evaporite sub types.

Oktyabrsky represents a rare deposit style but with a highly salient deposit footprint linked to economic metrics. At a moment when timeline to discovery and capital intensity are considered key metrics, this deposit sub type represents a premium alternative source of Copper, let alone Ni, PGE, and semi-metals.

The results of this integrated basinal approach is applied to the Central Lapland Greenstone belt in Finland, and is the subject of numerous ongoing 'real world' exploration programs globally.