



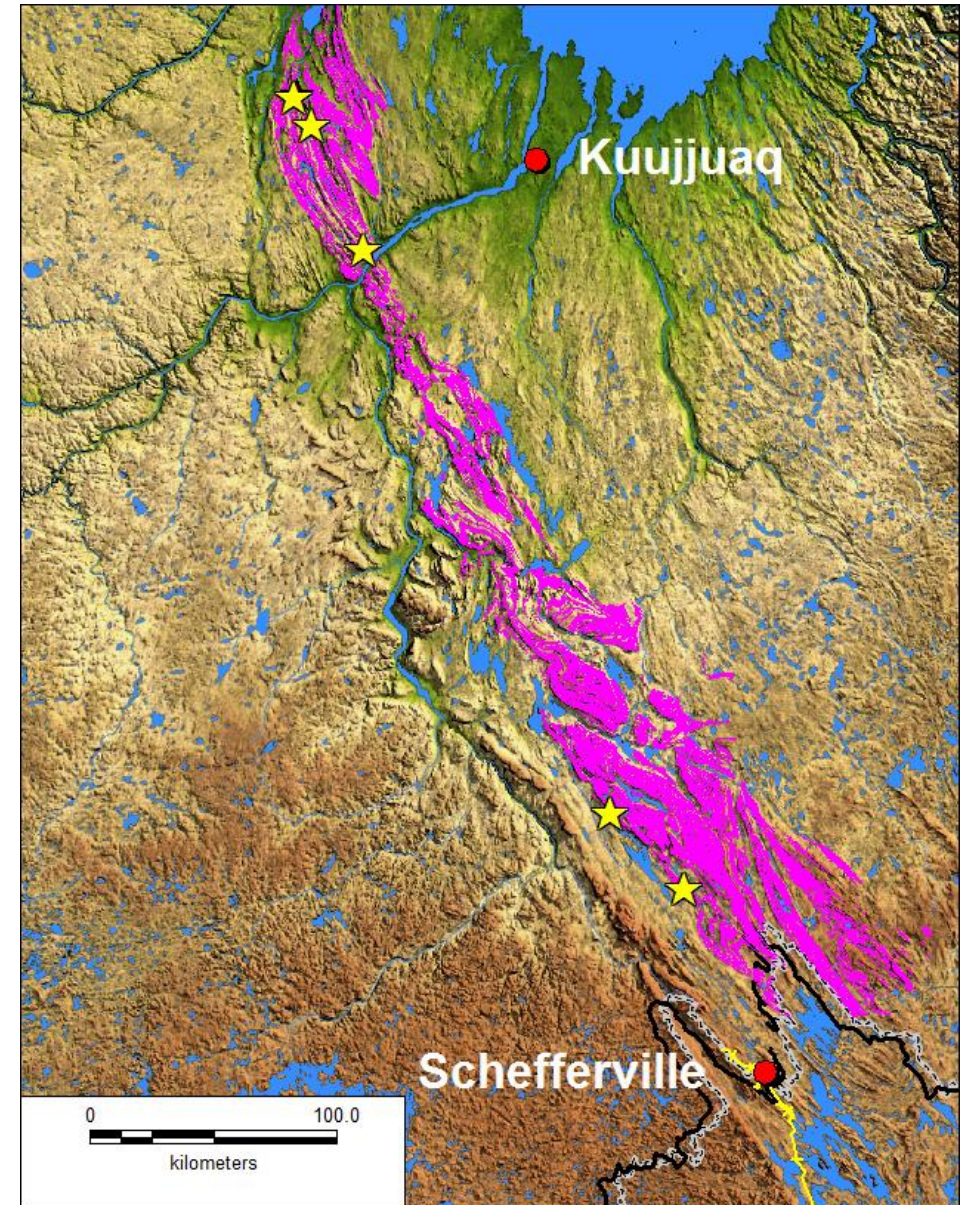
**NORTHERNSHIELD**  
RESOURCES INC.

**IDEFIX PROJECT**  
**and the Prospectivity of the Montagnais Sills,**  
**Labrador Trough, Quebec.**

# Gabbros of the Labrador Trough

At over 500 km long and 50 km wide, the gabbroic sills of the Labrador Trough represents a massive target area for magmatic Ni-Cu-PGE deposits.

Based on the geochemical analysis of over 3,000 samples, Northern Shield developed a geochemical exploration methodology that successfully separates the sills into distinct phases; only one of which appears to be systematically prospective for in Ni-Cu-PGEs.



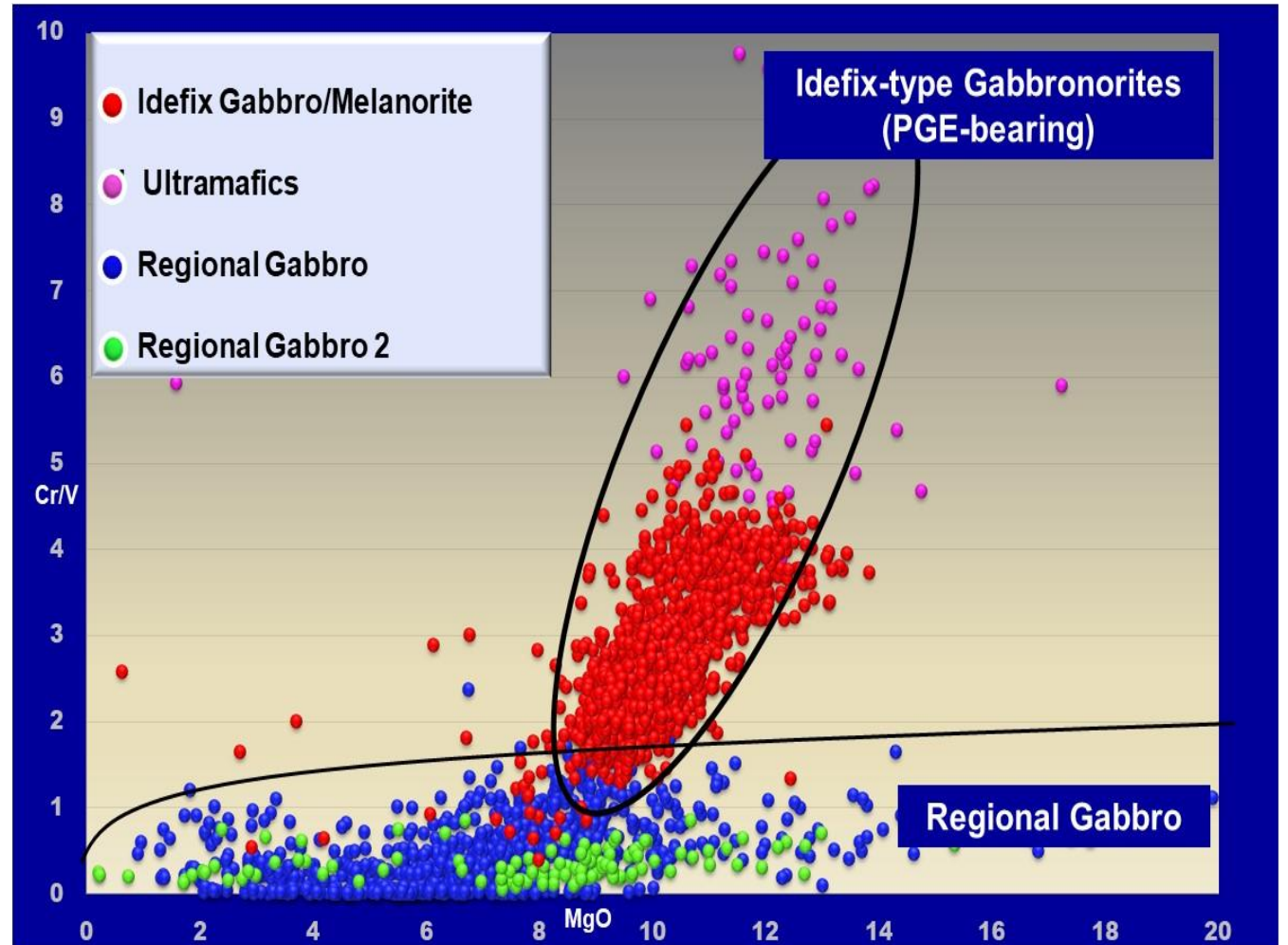
# Cumulates versus Non-Cumulates

The slide shows Cr/V vs MgO for about 3,000 samples Northern Shield has collected from the Montagnais sills in the Labrador Trough.

There are clearly two population groups in this plot. The group dominated by the red and purple dots indicates a fractionated magma as Cr/V increases with MgO as one would expect during fractional crystallization of cumulates.

The blue and green dots show no correlation between Cr/V and MgO and low Cr/V values suggesting these are **not** cumulates.

Nearly all PGE and Ni-Cu deposits are hosted in cumulate rocks.

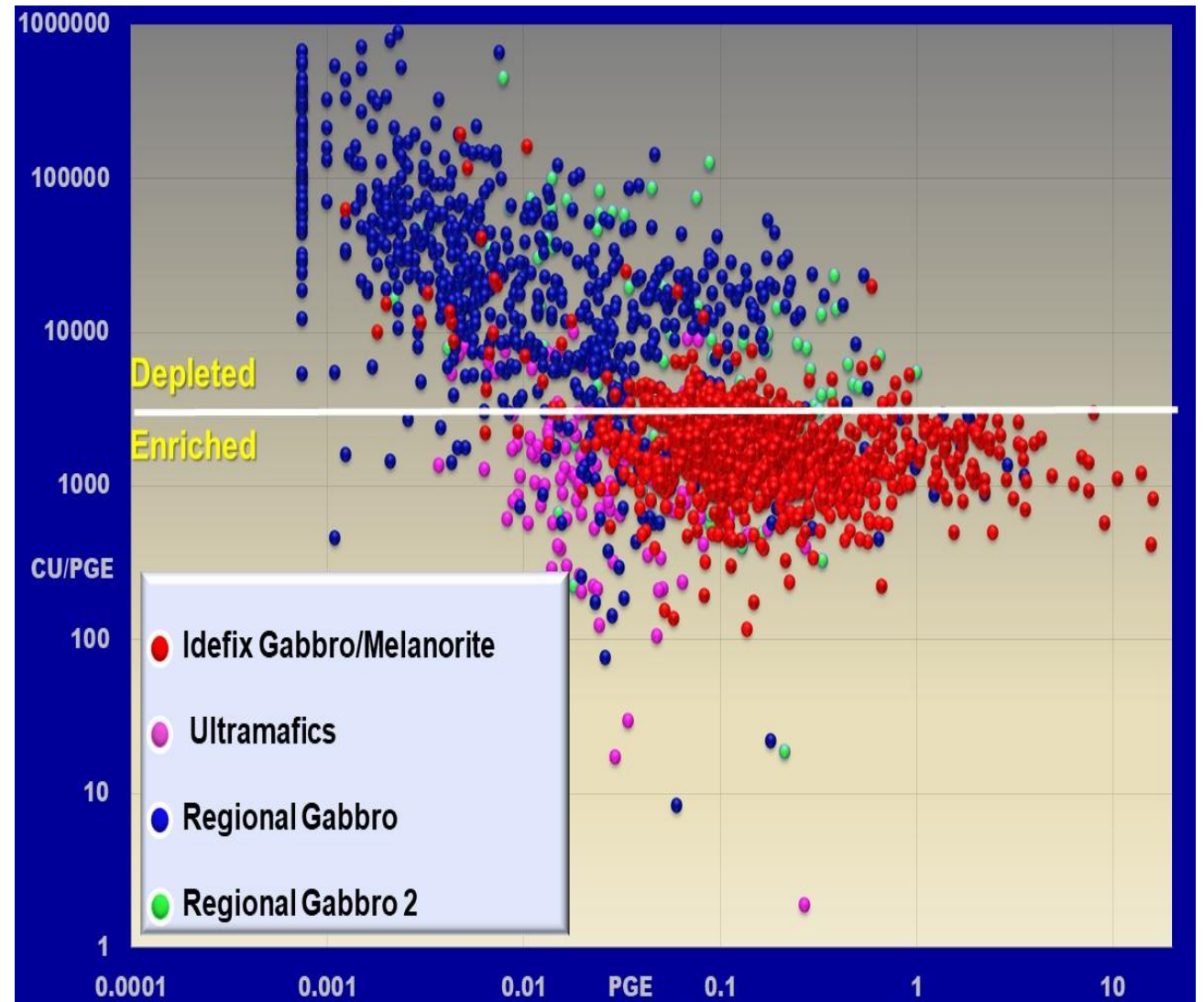


# Enrichment Relative to Mantle Source

This prospectivity of the Montagnais Sills is further highlighted by observing the Cu/PGE vs PGE ratio, which determines if a magma is depleted or enriched in PGE.

This plot clearly shows that the regional gabbro is dominantly depleted in PGE whereas the Idefix-type gabbro is dominantly on the enriched side.

In a complete magmatic system, rock units from different levels of the intrusion would plot on both sides of the Enrichment line; however, the deposit itself will be hosted in rocks exhibiting an enriched signature.



# Prospectivity Map

The geochemical discrimination of the samples can be used to spatially identify where the enriched “Idefix-type” gabbro are located within the Labrador trough.

The vast majority of the Montagnais Sills, as currently mapped, consists of “Regional” Gabbro and typically not prospective for Ni-Cu-PGEs

