

## **Metallurgy Backgrounder**

On May 8, 2019 Grid Metals Corp released a press release about our ongoing metallurgical program at our Mayville Copper Nickel deposit in southeastern Manitoba. The information was important, but quite technical in nature, so we thought it might be helpful to provide some background context.

### **Mayville – Exposure to the Battery Metals**

The Mayville deposit is one of two that comprise the Makwa Mayville Project. The Mayville deposit contains copper, nickel, platinum, palladium and gold. Maximizing the extraction of the contained metals from the Mayville Deposit is a key to the successful development of the deposit. The metallurgical program uses analysis and testing to evaluate and maximize metal recovery and the **quality and type** of end-product. In the case of Mayville the products that would be produced for sale are metal concentrates that would be sold to a smelter. The Preliminary Economic Assessment published by the Company ( RPA Inc. April 30, 2014)\* envisioned a copper concentrate, and a separate nickel concentrate being produced with by-product metals associated with these concentrates.

### **Produce Something Customers Want to Buy**

Smelters are choosy about the concentrates that they buy. When we refer to the term “marketable concentrates,” we are referring to concentrates, that all things being equal, a smelter is willing to purchase on reasonable terms. The press release noted that in the case of Mayville a marketable nickel concentrate ( which is produced by flotation ) would contain ~10% nickel ( or higher ) while a marketable copper concentrate would be ~25% copper. The respective grade of the concentrates is one factor, as is the expectation that the concentrates not contain other elements harmful to the smelting process.

### **Metallurgy – A Critical Factor**

The recovery rate is the percentage of the various metals in the rock that can be recovered through processing. There is always some percentage of the contained metal that cannot be recovered – sometimes quite a significant amount. Maximizing the recovery rate of processed ore and producing marketable concentrates for sale is ultimately what a metallurgical program seeks to test and confirm. The cost of processing the rock from a deposit is roughly the same whether 10% or 90% of the contained metal is recovered, so the economics of a deposit can vary widely depending on its metallurgical characteristics.

Grid is planning further metallurgical work focused on improving nickel recovery at Mayville and making a marketable nickel concentrate. The methodology being followed in the current round of testwork is to initially produce a “bulk” concentrate containing both nickel and copper

while at the same time reducing the iron content in the bulk concentrate to an acceptable level. The next step would be separation of the bulk concentrate into copper and nickel concentrates.

### **Results of Current Phase of Met Work.**

The testwork just announced indicated that the recoveries to a bulk concentrate ( copper and nickel combined ) were encouraging. The next phase of work will seek to replicate that bulk concentrate result, and then proceed to separation of copper and nickel while losing as little metal as possible during the process. This testwork is being undertaken on a new sample of Mayville drill core with approximately the same grade as the sample previously tested. A key outcome will be to see higher nickel recoveries in the nickel concentrate produced along with acceptable concentrate specifications.

### **Cobalt Recovery**

While there is no cobalt indicated in the resource estimate at Mayville, there is appreciable amounts of cobalt reported in the drill results. The recent testwork and a previous mineralogical study concluded that a certain amount of cobalt occurs with nickel in pentlandite and that some level of pay-ability from the smelter for cobalt contained in the nickel concentrate may be possible. Again, the testwork being undertaken will look to advance this. Cobalt is a key battery metal we believe will have a bright future in the coming years.

Maximizing metal recovery and producing marketable metal concentrates in testwork are an important part of the development of the Makwa Mayville Project. Further updates will be forthcoming. Please do not hesitate to contact us if you have any questions about Grid Metals Corp.

\* It is important to note that the preliminary assessment referred to is preliminary in nature and includes inferred mineral resources too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves and that there is no certainty the preliminary assessment will be realized.