Polymet Talking Points

Good afternoon. My name is John Gappa. I have had the opportunity to serve as a Chief Financial Officer for nearly 20 years.

As CFO, I have reviewed hundreds of millions of dollars of investments creating over 1000 jobs. My role in these investments, some of which were in excess of \$100 million each, was to develop the business case, project costs and revenues over a twenty year period, and evaluate the returns and associated risks.

While most of these investments were successful, some were not. Over the years, I have learned the hard way that failed projects all have two problems – overestimated benefits and underestimated costs and risks.

As I have reviewed the Polymet plan from a CFO perspective, I have struggled to figure out how the numbers can work with a model that has 20 years of benefits and hundreds of years of costs. My conclusion is that the only way the PolyMet model works is to inflate the benefits, underestimate the costs and shift the risks to someone else.

For example, I believe the recent issue over the base flow rates in the Partridge River may be a troubling example of underestimating the costs to the environment in order to make the models work.

For my own understanding, I wanted to try to model out what 500 years of remediation costs might look like. The first thing I discovered is that an Excel spreadsheet only goes out to 250 years. I next attempted to find inputs for my model from the draft supplemental EIS. While PolyMet provided estimates for closing costs and annual post-closure monitoring and maintenance expenses, there was no further detail or mention of ongoing expenses such as ongoing equipment repair and obsolesce. There was also no mention of ongoing capital expenditures that will be required of an operation of this scale and duration such as equipment and facility replacement.

Never the less, I built a 100 year model using assumptions derived from my experience with planning complex, capital intensive processing operations. What I found is that the financial assurance model is highly sensitive to very small changes in inputs. For example,

- A \$1 million increase in annual operating costs results in a \$21 million or 9% increase in the future value of funding required
- A half a percentage point decrease in the reinvestment or discount rate used results in a \$57 million or 24% increase in the future value of funding required.
- Finally, a one half a percentage point increase in the inflation rate assumed increases the future value of funding required by \$90 million or 40%.

The point of the matter is that given the significant length of time that remediation will be required, estimating the upfront investment needed to fund the remediation is highly uncertain and very small differences in assumptions have a dramatic impact on the total funding required.

Another key concern is to ensure that the remediation is fully funded, regardless of when PolyMet stops mining – either after 5, 10 or 20 years. To quote one of the many risk factors that PolyMet included for their investors in a recent filing with the SEC:

"Because the price of metals fluctuate, if the prices of metals in our ore body decrease below a specified level, it may no longer be profitable to develop our NorthMet Project for those metals and we will cease operations."

The State of Minnesota would be wise to heed this risk factor as well.

A key difference between PolyMet and most companies making these sorts of investment decisions is that PolyMet exists solely to develop the NorthMet project. Most companies can choose among an array of investments, acquisitions or returning cash to shareholders. PolyMet's motivation is not to pick the best project possible, but to persuade the state to approve this specific project.

This is also not to say that the management of PolyMet and Glencore don't understand investment analysis, quite the contrary. They have skillfully set up an investment vehicle that leverages their investment by transferring risk to the taxpayers of Minnesota. Their losses are limited to what they put in up front, potentially creating a significant unfunded liability for the citizens of Minnesota.

In many ways, the PolyMet/Glencore model is reminiscent of the many creative financial structures that Wall Street brought us where complex instruments such as credit default swaps were created to transfer toxic liabilities to someone else.

My request to our elected officials is to be wary of overestimated benefits and underestimated costs and risks. Once PolyMet exposes the sulfur laden ore to the elements, Minnesota does not want to be facing our own "too big to fail" scenario, at tremendous cost to our taxpayers and to our environment.

Thank you.

John A. Gappa