WOMEN'S MINING COALITION

Decision to Develop a Mine: Part 3 of a Six-Part Series

Decision to Develop a Mine: Culmination of Exploration and Feasibility Study Results as Well as a Project's Economic Viability

As we have learned in Parts 1 and 2 of this series, mineral exploration and discovery and the associated feasibility studies help determine the technical and economic viability of developing a mineral deposit. Upon completion of exploration and discovery and the determination that the deposit is both technically and economically feasible to mine, a mining company must make the ultimate decision as to whether they wish to proceed to the mine development stage or if they will sell the project to another mining company.

Expenditures to Date

At this point in the process, a company will have spent a minimum of tens of millions of dollars to conduct the exploration and analyses required to "prove up" a deposit. Feasibility studies, in turn, also cost up to tens of millions of dollars due to the necessary discussion of required technical components in these reports. All of this work involves highly technical analyses and countless individuals schooled in all aspects of mineral exploration, reserve/resource estimation, mining, processing, development, environmental permitting, and other specialties.

Decisions to Be Made

Decision-makers at a company must consider multiple[1] aspects of a project before making the decision to proceed with development and mining or not:

- Does the company have experience developing and mining other mineral deposits?
- If the company is an exploration company, does it make sense to sell to a mining company that has the expertise to mine the deposit?
- What is the capital outlay (expense) to start the project?
- What is the expected operating expense on various bases (monthly, annually, etc.)?
- How will the development stage be funded? Does money have to be raised or can the company initiate this step unaided monetarily?

[1] This list is not exhaustive. These are simply a few of the high-level decisions that must be made.

Moving Forward

If the decision is made to move forward and develop the mine, several "next steps"[2] begin to occur simultaneously:

- Refinement and finalization of the mine design (mining method, schedule of operations waste disposal options, etc.)
- Refinement and finalization of mineral processing methods (type of mill or other facility, tailings disposal method, etc.)
- Development of the Mine Plan of Operations which describes the operation in its entirety and is the basis for the permitting process
- Permitting, including federal, state, and local, as applicable
    - initiate the NEPA[3] process if project is on federal lands
    - conduct baseline survey work for the project area (biological, cultural, socioeconomics[4], etc.)
    - initiate engagement with local communities, including tribes, if applicable
    - work with state and local agencies to determine permit needs
- Determination and posting of financial assurance(reclamation and closure bond) prior to any disturbance

This process can take several years, particularly once the permitting process has begun. Both the time required and the cost to even get to the development decision stage can be overwhelming. Once the permitting process begins, the expenditures continue and are aimed at determining the state of the existing environment and the types and extent of potential impacts that would result if the project is developed.

The decision to develop a mine is one not taken lightly. Before the development decision is even made, the expenditures already incurred during the exploration and feasibility stages are staggering.

[2] Again, this list is not exhaustive and is only intended to be a high-level look at some of the many steps involved.
[3] National Environmental Policy Act of 1969 (Pub. L. 91-190, 42 U.S.C. 4321 *et seq*)
[4] WMC is in the process of developing a socioeconomics paper which will discuss this topic in more detail and explain how it fits within the process.