MANAGING RISK AND VALUE IN MINERAL EXPLORATION

Deborah Lord
Senior Associate, SRK Consulting, West Perth

Exploration is a high-risk business often involving the expenditure of large sums of money for seemingly little return. To be commercially viable exploration needs to compete with alternate strategies available to companies for acquiring mineral commodities. Given that exploration lead times are also often quite extended, we need to be able to critically examine and manage the risks associated with exploration.

Successful mineral exploration requires a clear strategy and well-defined exploration models for the deposit styles being sought. In order to meet corporate / management objectives this exploration model needs to be matched with the company's business objectives via an economic / financial framework.

This paper will describe a method to evaluate risk in exploration, progress to discovery and the probability that a resource will be discovered and will be economically viable. In order to examine risk, exploration is divided into several key exploration stages. Each project area can be evaluated in terms of the likelihood or probability of progression to the next exploration stage. To provide the link to the potential economic return on exploration, a target value for the deposit style being sought is required.

Using a simple spreadsheet analysis, the distribution of risk by exploration stage can be examined. The maximum value creation and highest risk in exploration occur at the more advanced exploration stages, particularly after the first mineralised hole is drilled.

Selected case studies will be included to demonstrate the practical application of the method outlined. The paper will outline the main risks involved in the exploration process, and summarise the critical success factors that can assist companies to lessen the risks associated with exploration.