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## **The International Mineral Reporting Codes – The importance of the Competent Person**

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The focus of this paper is that the Competent Person and specifically the geologist has unique and critical skills that he brings to the estimation of the Mineral Resource or Mineral Reserve. The CRIRSCO family of international mineral reporting Codes requires registration with an accredited organisation that in turn requires suitable tertiary education and experience. The Codes require over and above this 5 years relevant experience in the field of work being undertaken. These requirements presuppose a high level of tertiary scientific and/or engineering education and training and suitable post training experience.

The geology of a deposit is a critical aspect of the development and exploitation of a mining project. The geological interpretation is based on sparse data that has been accessed from surface or limited underground exposures. The geologist must take this information and interpret it to understand the deposit's geometry and mineralisation. Geological interpretations are the basis for predicting aspects of the mineralisation which underpin the predictive models used to develop mining projects and move them towards successful business ventures.

These geological interpretations are examples of science that has huge impact on our world and the economies of regions and countries. All subsequent work in developing a mining project or optimising a mine hinges on these geoscientific models. Their reliability has potentially large value implications for all stakeholders including the promoters, investors, potential mine employees, governments etc.

The geoscientific interpretation combined with a grade model, often the result of further geoscientific approaches in the form of geostatistics, is the basis of Mineral Resource and Mineral Reserve estimations. A number of other aspects of the potential mine that require further scientific input include characterising the ore (mineralogy, hardness etc), characterising the waste material, hydrogeology and environmental considerations as well as civil and mining geotechnical engineering. These estimations or declarations are in turn the basis for mine planning and scheduling, process plant design, and infrastructure considerations. These data and scientific interpretations can have significant positive or negative impacts on the value chain and should be undertaken to the same level of scientific accuracy as the other scientific inputs to the project.

The development of a project using appropriate scientific and engineering principles can lead to substantial economic activity which can change the lives of many, often poor or poverty stricken rural people.

