



Project Risk Evaluation Workshop

One Day Professional Development Workshop

Objectives of the Course

The influence of spatial variability on the system linkages between sampling, resource estimation, reserve evaluation and the financial model is dealt with in this one-day seminar. The programme focuses on some of the critical issues that should be considered when evaluating the net present value (NPV) of a mineral project while appropriately capturing technical resource and reserve risks. While the use of geostatistics in estimation has been widely applied to mineral resources for several decades now, there is limited understanding as to how the ‘wealth of information’ gathered in the resource estimation stage can effectively be used to quantitatively capture technical risks and opportunities in the financial model.

Some of the key issues in each project evaluation stage are discussed to demonstrate how the combined correlations affect the financial outcome. At the sampling stage, evidence is produced to dispel the perception that an increase in sampling information affects only the variance and not the mean of resource estimates. At the mining/treatment stage, the influence of limited sampling data and mining and treatment constraints are assessed with respect to project NPV. At the financial modelling stage, the impacts of conditional simulations are used to express variability around the base case model (usually based on a single, linear estimate) in discounted cash flow (DCF) NPV terms. This highlights the main risks and produces quantitative confidence limits for cash flows and NPV estimates.

Who Should Attend?

This program is suitable for mining engineers, geologists, metallurgists and financial analysts who are currently involved in building, evaluating and/or using evaluation models to make informed decisions on mineral projects. It would be especially useful to any manager who would like to understand the fundamental concepts associated with project evaluation, risks and financial opportunities.

Program

	TOPIC	DESCRIPTION
Day 1	Evaluation Overview	system linkages, correlations, model framework
	Risk Modelling	definitions, key concepts and misconceptions
	Financial Modelling	financial modelling techniques
	Project Risk Evaluation	case studies, real options in mining

A full set of PowerPoint slides will be provided to each participant. Additional reference materials will also be provided electronically.

Course Leader: Grant Nicholas



Grant Nicholas is a Principal Consultant at QG with responsibility for the area of risk modelling and financial evaluation. Grant has a background in geology, computer science, geostatistics, risk analysis, finance and management which spans over 14 years. He is currently completing a part-time Ph.D. in risk, finance and real option valuations at the University of Adelaide in Australia. His production and resource management experience has afforded him the opportunity to apply his skills in many diverse areas along the evaluation pipeline for mineral projects. He has developed a range of specialized skills in quantifying the impact of resource and reserve risks in financial terms for project valuations.

He has published several papers on these topics and presented at international conferences and universities around the world, including countries such as France, the United Kingdom, Australia, South Africa, Canada, the United States of America and South America. His pragmatic approach to business combined with an analytical background has provided him with the ability to understand and solve problems at varying levels of detail ranging from in-depth scientific analyses to high-level, business valuations with experience in appraisals up to the value of US\$ 17 billion.

Further enquiries: info@qgroup.net.au and see also www.qgroup.net.au