



Quantitative Group Our Skills On *Your* Team

Applied Geostatistics for Geologists and Engineers

A Three Day Course for Mining Industry Professionals

John Vann of Quantitative Geoscience Pty Ltd (QG) presents an 'in-house' course for mining industry professionals on the subject of resource estimation. This three-day course is sharply focussed on concepts and (especially) the connection between characterisation and management of resource risk and improved financial returns. The aims are to allow participants to:

- o Revise basic statistical and QA/QC concepts
- o Crash course in practical aspects of Sampling Theory
- o Appreciate the underlying concepts behind resource estimation
- o Be familiar with the implications and risks of using different resource estimation approaches
- o Fully comprehend the connection between geology and choosing the estimation approach
- o Learn about approaches to characterise and manage resource risk
- o Put these issues in the context of current ASX (and foreign) public reporting requirements

A typical program is as follows:

Day 1: Setting the Context - Introduction; Statistics, Geostatistics and Geology; Refresher on Statistics; QA/QC; Sampling Theory; Financial Implications; Spatial Variation; Stationarity and Domains;

Day 2: Modelling Spatial Variation; Variography; How to Deal With 'Difficult Variograms'; Support Effect; 'the Volume-Variance Relationship'; Change of Support;

Day 3: 'Estimation Error'; Blocks Size and Financial Risk; Additivity; 2D vs. 3D estimation; Sampling Patterns and Estimation Confidence; Kriging; Properties of Kriging; Setting Up Kriging - QKNA; How to Look at the Results;

The course can be expanded to 4 or 5 days to allow for thorough coverage of recoverable resource &/or simulation concepts.



John Vann is a geologist and geostatistician with over 20 years experience of base metal, coal, nickel, iron, gold, bauxite, manganese and copper projects. He has specific expertise in resource estimation, resource classification, risk analysis, project review, banking due diligence, sampling, assaying and quality control issues at most types of mines.

John is Principal and Director of QG and holds a B.App.Sc degree in geology from the Royal Melbourne Institute of Technology and a first class honours degree in geology from the University of New England. In addition he holds the degree of M.Sc (Mining Geostatistics) from the University of Leeds. He is currently completing a Master of Business and Technology (MBT) degree through the University of New South Wales.

John has run well over 150 short courses and seminars on resource estimation, geostatistics, sampling and risk topics since 1993. More than 2000 people have attended these courses and seminars in Australia, the USA, Canada, UK, Indonesia, Zimbabwe, South Africa and PNG. He has authored or co-authored over a dozen scientific papers.

From 1997 - 2007 John was an Australian Institute of Geoscientists (AIG) representative on the Joint Ore Reserves Committee (JORC). He is a fellow of the Australasian Institute of Mining and Metallurgy (AusIMM), and a member of the Australian Institute of Geosciences (AIG), the International Association for Mathematical Geology (IAMG) and the Geostatistical Association of Australasia (GAA).

For more information, or to request a proposal please contact QG:

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Geostatistics

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