

CONFERENCE

Eleventh International Mining Geology Conference 2019, Perth

WORKING TITLE

Economic Analysis: Closing the loop in valuing mining geology

AUTHORS

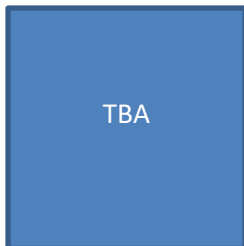
Perry Collier – Principal Advisor - Mine Geology, Growth and Innovation, Rio Tinto



Bio

Perry is a mining and resource geologist with 30 years' experience in open pit mining and grade control, geological data collection, resource estimation and production reconciliation (gold, copper, nickel, uranium, bauxite, coal and iron ore). Perry is also a qualified JORC Competent Person for the reporting of Mineral Resources (copper-gold, uranium etc.). A graduate of Curtin University of Technology in Western Australia, Perry's career started as a graduate mine geologist in the Western Australian goldfields. Over the following fifteen years, he worked in mine and resource geology roles at various copper, gold and nickel mining projects. Perry moved to Queensland in 2001 with MIM/Xstrata as Senior Geologist at the Ernest Henry Copper-Gold Mine before joining Rio Tinto (Brisbane) in January 2006, where he is currently Principal Advisor - Mine Geology.

Bruce Summerville – Manager Resource Geology and Metallurgical Development, Rio Tinto Iron Ore



Bio

TBA

Mark Berry – Director and Principal Geologist, Derisk Geomining Consultants Pty Ltd



Bio

Mark is geologist with over 38 years' experience working for small, medium and large organisations in the minerals industry. His experience spans exploration, feasibility and development, mine operations, management, research and development, consulting and professional development. He has had the privilege and pleasure of working on many projects around the world covering a diverse commodity mix, geological settings and mining methods.

ABSTRACT

Mining geologists receive a scientific education that rarely includes the study of mineral economics, financial evaluation and modelling principles, and the tools used by company management to rank and prioritise investment decisions. Consequently, many geologists face a severe disadvantage when it comes to preparing a justification and economic analysis for an investment in mining geology; for example, additional staff, exploration or infill drilling programs, grade control functions, or new technology. In contrast our mining engineering and metallurgical colleagues are well versed in economic analysis and routinely use this methodology to justify investment in a competitive funding environment.

This paper introduces some of the financial analysis tools widely used in the minerals industry to analyse and rank investment opportunities across the board, and explains why it is important for geologists to have a good understanding of these principles. Examples will be presented to show how geologists can incorporate economic analysis into their justifications for new capital expenditure, as well as annual operating budget cycle.