



derisk

GEOMINING CONSULTANTS

MINING: HIGH RISK OR HIGH REWARD?

Mining is often regarded as a “high risk” industry, also capable of delivering “high rewards” when times are good. Derisk Geomining Consultants, as the name implies, is focused on providing services that minimise technical risk and maximise the value of your most valuable asset – your mineral deposit.

SOURCES OF RISK AND REWARD IN MINING

In mining, sources of risk include exploration, technical, financial, legal, political, environmental, occupational health and social/community risk.

Exploration risk arises from not discovering a viable mineral deposit. Once a viable mineral deposit has been defined, there are many technical risks linked to geological, geotechnical, mining and processing factors. Financial risks are tied to capital and operating cost estimates, currency exchange rates and commodity prices. Legal and political risks can be caused by issues associated with tenement rights and mining legislation, or opponents to mining launching legal proceedings. Ensuring workplace safety is an operational imperative. Ever-increasing environmental obligations demand proactive and effective risk management, and serious risks arise if mining companies do not expertly manage the complexities of social/community engagement and licence-to-operate obligations.



BUT, on the other hand, many of the sources of mining risk are also major sources of opportunity, that when identified and well-managed, deliver high rewards. Benefits include safer workplaces, higher revenues, lower costs, improved sustainability delivering more stakeholder benefits, and strong government and community support for mining.

A SIMPLE WAY TO CLASSIFY RISK AND REWARD

Mining companies typically devote a lot of time and effort to identify and quantify the risk and reward profile of a project. Individual risks and rewards are grouped into logical categories then ranked in terms of seriousness or the scale of the opportunity, often using the principles of likelihood and consequence.

Risk and opportunity registers are generally large and cumbersome documents containing hundreds of identified issues that can be a daunting challenge for company management. To simplify the assessment and subsequent management of risk and reward, Derisk breaks the register into two groups:

- Risk/reward areas that are largely outside the control of a company. These typically include commodity prices and exchange rates, financing terms and conditions, as well as the legislative, social and cultural framework operating within the country where the project is located.
- Risk/reward areas that are directly controlled by a company. This group can then be subdivided into two categories – technical risk areas and non-technical risk areas.





TECHNICAL RISK AND REWARD ASSESSMENT

Derisk specialises in identifying and assessing technical risks and opportunities associated with the exploration, assessment, development and extraction of mineral deposits. Consider the following questions:

- How big is the mineral deposit and what is its potential mine-life?
- How will the deposit be accessed and mined?
- What transport and materials handling options are suitable?
- What mining and processing rate will be appropriate?
- How will the mineralisation be processed?
- What mineral products and specifications are to be delivered into the market?
- What wastes will be produced and how will they be stored or disposed of?
- What environmental issues need to be considered and managed?
- What will the capital and operating costs be?

Almost every input into decisions made about the design and operation of a mine are based on estimates, with each estimate carrying its own level of uncertainty. Uncertainty is the key underlying component of the risk/reward profile. Derisk believes that many companies do not adequately understand or quantify the level of uncertainty underpinning mine design and operation, and we have developed our own system to identify and document the level of uncertainty associated with all key inputs into estimates that feed into technical decision-making processes. When cross-referenced against appropriate company-specific risk rating registers, Derisk can assist mining companies to better assess, rank, and manage technical risks and opportunities.

FOR MORE INFORMATION

Mark Berry (Director and Principal Geologist)

+61 4 0802 9549

+65 9084 4652

mark@deriskgeomining.com

<https://deriskgeomining.com>

DERISK GEOMINING

Delivering Tier One advice and services
without the Tier One price tag



<https://deriskgeomining.com>

