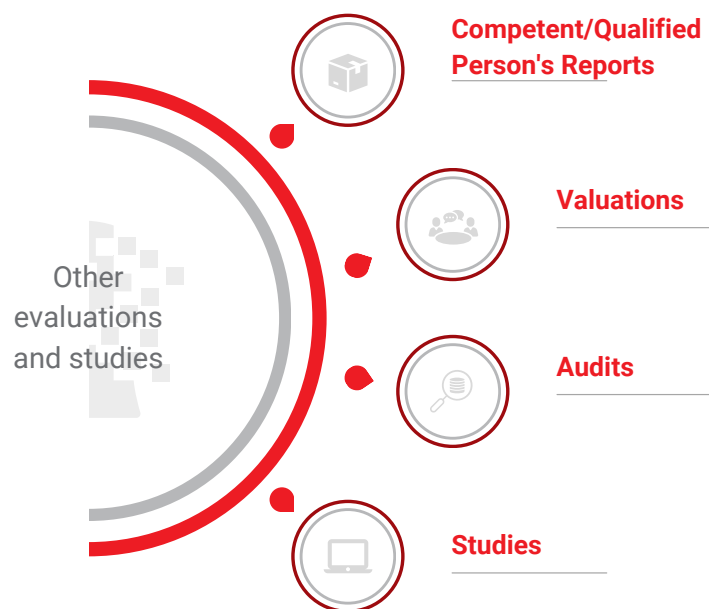


Industry Insight on Due Diligence Exercises

Other evaluations or studies

In addition to the technical evaluation typically conducted in a due diligence process for a mining project, several other evaluation or assessment studies may be included, based on the specific needs and requirements of the project.



➤ **Competent/Qualified Person's Reports (CPRs):** CPRs in the mining industry usually represent an independent assessment and evaluation of a mineral project or mining company's Mineral Resource and/or Mineral Reserve assets. It is typically prepared by a qualified geologist, mining engineer, or other technical experts known as Competent/Qualified Persons who have the necessary expertise and experience in evaluating mineral projects with specific reference to specific commodities and mineralisation styles.

Its purpose is to provide an unbiased and expert opinion on the technical and economic aspects of an exploration or mining project. It is often required for regulatory compliance, stock exchange listings, mergers and acquisitions, and other transactions involving mineral assets.

A CPR typically includes the following components:

- Geological and Mineral Resources Assessment
- Technical Evaluation in terms of jurisdiction, legal aspects, infrastructure, mining methods and Mineral Reserve definition
- Economic Analysis and Financial Asset Valuation
- Risk Assessment
- Reporting and Compliance with regulatory codes including SAMREC (2016), JORC (2012), and NI 43-101 (2011).

The CPR serves as an important document for investors, shareholders, regulators, and other stakeholders who utilise the CPR to make informed decisions about a mineral asset. It provides an independent and expert evaluation of the project's potential, risks, and value, enhancing transparency and credibility.

➤ **Valuations:** A valuation of a mineral asset refers to the process of determining the economic value or worth of the mineral asset or project. It involves assessing the financial value of the Mineral Resources and/or Reserves, infrastructure, equipment, and other tangible and intangible assets associated with the project.

Valuations are typically conducted for various purposes, including investment decisions, mergers and acquisitions, financial reporting, and project financing. The valuation process involves analysing relevant data and factors such as Mineral Resources, commodity prices, production costs, market conditions, and project-specific risks.

The outcome of a valuation is a monetary value or range that represents the estimated worth of the mining project. This valuation provides insights into the project's potential return on investment, and financial attractiveness, and assists in determining an appropriate purchase price, investment value, or financing terms. Within the mining industry, valuations are usually conducted in accordance with specified standardised Reporting Codes such as SAMVAL to ensure transparency.

Valuations in mining projects are usually performed by qualified professionals, such as financial analysts, mining engineers, geologists, or specialised valuation experts. The valuation methodology may vary depending on the purpose of the valuation, the stage of the project, and industry practices. Common valuation methods include:

- Income approach
- Market approach
- Cost approach
- Asset-based approach
- Comparative approach



› **Audits:** In the context of a mining project, an audit refers to a systematic and independent examination of the project's financial, operational, technical, and procedural aspects to assess compliance, effectiveness, and efficiency. The audit process is typically carried out by qualified technical auditors or consulting firms with expertise in the mining industry.

Audits in mining projects can include:

- Financial Audits
- Operational Audits
- Technical Audits
- Compliance Audits
- Environmental and Social Audits

The specific scope and objectives of an audit for a mining project may vary based on the project's nature, size, and stakeholder requirements. The audit findings and recommendations provide valuable insights to project owners, management, investors, and other stakeholders for decision-making, risk management, and improvement initiatives.

At VBKOM, we have a standard auditing tool that our Mineral Resources team uses to highlight any fatal flaws, technical shortcomings, or opportunities.

› **Studies:** Mining studies refer to various assessments, evaluations, and analyses conducted to gather information, evaluate feasibility, and make informed decisions related to mining projects.

Concept Studies

A Concept Study in mining, also known as a Conceptual Study or Scoping Study, is an early-stage evaluation of a mining project. It aims to assess the technical and economic viability of the project and determine its potential for further development based on early exploration drilling results - in some instances even before Inferred Mineral Resources have been declared. The Concept Study provides a preliminary understanding of the project's key parameters, risks, and opportunities.



- > The main objectives of a Concept Study in mining are:
- **Project Evaluation:** The study evaluates the basic technical aspects of the project, including the geological setting, Mineral Resources, and mining methods. It assesses the potential size, grade, and quality of the mineral deposit and determines the initial development options.
 - **Economic Analysis:** A high-level economic analysis assessing the financial feasibility of the project. It estimates the capital and operating costs, revenue potential, and key financial indicators. This analysis provides a preliminary understanding of the project's potential profitability and returns on investment and may assist in determining the need for, or cessation of further exploration activities.
 - **Risk Assessment:** Identifies and evaluates the major risks and challenges associated with the project. This includes geological risks, technical challenges, market risks, environmental and social considerations, and regulatory requirements. Risk mitigation strategies are explored to address potential issues and uncertainties.
 - **Development Options:** Based on the evaluation, the Concept Study outlines various development options for the mining project. This may include different mining methods, processing techniques, infrastructure requirements, and production scenarios. The study considers the trade-offs between technical, economic, and environmental factors to determine the most viable development path.
 - **Decision-Making:** The Concept Study provides the project stakeholders, such as investors, management, and regulatory bodies, with a basis for decision-making. It helps determine whether to proceed with further studies and investment in the project, or if modifications or additional investigations are required.



> Preliminary Feasibility Studies

A Pre-Feasibility Study in mining is a comprehensive assessment conducted at an intermediate stage of project development and usually requires the declaration of at least Indicated Mineral Resources so that Mineral Reserves may be declared. It aims to evaluate the technical and economic viability of a mining project before proceeding to a full-scale Feasibility Study. The Pre-Feasibility Study provides more detailed analysis and data compared to a Concept Study, allowing project stakeholders to make more informed decisions about project advancement.

The main objectives of a Pre-Feasibility Study in mining are:

- **Mineral Resource Evaluation:** The study assesses the size, grade, and quality of the mineral deposit. It includes a detailed geological evaluation, Mineral Resource estimation, and delineation of the deposit boundaries. The study also considers factors such as mineral recoverability and extraction methods.
- **Metallurgical Testing:** This is often included to determine the appropriate mineral processing methods and assess the recoverability of valuable metals or minerals. This testing helps determine the optimal process flowsheet and equipment requirements to potentially maximise expected recoveries.
- **Engineering Design:** Preliminary engineering design work is conducted to define the scale of operations and mining method infrastructure requirements of the project, including the layout of the mine, processing facilities, waste management systems, water supply, power supply, and transportation logistics. The study also considers environmental and social aspects and incorporates them into the design.
- **Economic Analysis:** A detailed economic analysis that evaluates the financial viability of the project. It estimates the capital and operating costs, revenue projections, and financial indicators such as net present value (NPV) and internal rate of return (IRR). The study also considers various economic scenarios and sensitivity analyses, and assists in defining the economically extractable Mineral Resources or resultant Mineral Reserves.
- **Permitting and Regulatory Considerations:** The study examines the regulatory and permitting requirements associated with the project. It identifies the necessary permits, licences, and approvals needed for project development and assesses the regulatory framework and compliance obligations.
- **Risk Assessment and Mitigation:** The study identifies and evaluates the major technical, environmental, social, and market risks associated with the project. Risk mitigation strategies are developed to address these risks and ensure project viability. This includes evaluating environmental impact assessments, community engagement plans, and stakeholder consultations.

> Bankable Feasibility Studies (Definitive Feasibility Studies)

A Bankable Feasibility Study in mining is a comprehensive evaluation conducted to assess a mining project's technical, financial, economic, and legal aspects. It is typically the final stage of project development before a decision is made to proceed with construction and production.

The primary objective of a Bankable Feasibility Study is to determine if the project is feasible from both technical and financial perspectives and to provide sufficient information in order for potential investors, lenders, and stakeholders to make informed decisions.

The study includes a detailed analysis and assessment of various aspects of the project, including:

- **Mineral Resource Evaluation:** A thorough assessment of the Mineral Resources including size, grade, quality, and mineralisation characteristics. It ensures a comprehensive understanding of the deposit's geology, Mineral Resources as well as Mineral Resource Classification.
- **Metallurgical Testing:** The study includes detailed metallurgical testing to determine the optimal mineral processing methods, recoveries, and product quality. This helps in designing the most efficient and cost-effective processing plant.
- **Engineering Design:** Detailed engineering design work is conducted, covering all aspects of the project's infrastructure, including mine design, plant layout, waste management, water management, power supply, transportation logistics, and environmental controls.
- **Financial Analysis:** A comprehensive financial analysis is conducted to determine the economic viability of the project. This includes estimating capital costs, operating costs, revenue projections, cash flow analysis, financial indicators (such as NPV and IRR), and sensitivity analysis. The financial analysis helps in assessing the project's potential returns and risks, and assists in defining the economically extractable Mineral Resources or resultant Mineral Reserves.
- **Permitting and Environmental Compliance:** The study ensures compliance with environmental regulations and assesses the required permits and approvals. Environmental Impact Assessments and mitigation plans are developed to address potential environmental risks and impacts.
- **Market Analysis:** The study includes a detailed market analysis to assess the demand and pricing for the project's commodities. It considers market trends, competition, and market outlook to evaluate the project's marketability and potential revenue streams.
- **Risk Assessment and Mitigation:** A comprehensive risk assessment is conducted, identifying and evaluating technical, environmental, social, regulatory, and market risks. Risk mitigation strategies are developed to manage and minimise these risks.