

1.8 Mineral Processing

Summarise the types of ore proposed to be processed, the characteristics and the potential processes which were tested and evaluated. Describe the basis of the recovery rates and key criteria recommended to be adopted. Outline any future metallurgical test programs.

State the product specification being used as the basis. Describe the basis. Describe the basis of waste disposal methods, quantities and sites selected.

1.9 Waste Management

Summarise the key waste management processes and facilities for each alternative, highlighting the preferred option.

1.10 Infrastructure and Services

For the options considered, state the infrastructure and services requirements for the various options. Describe all criteria for the infrastructure for all the various options.

1.11 Logistics

Briefly describe the logistics plan for each alternative.

1.12 Human Resources - Project Execution and Operations

Describe the organisation structures considered for each alternative and identify the recommended structure. Describe the industrial relations and employee relations strategy.

1.13 Technology and Information Systems

Identify the technology and information systems requirements for each alternative.

1.14 Project Execution

For the options considered, describe the project execution status, what alternative strategies have been considered and the recommended base case.

1.15 Operations

Describe the alternate Operations strategies considered. Identify the recommended base case.

1.16 Closure and Rehabilitation

Describe the closure and rehabilitation strategies for each alternative.

1.17 External Relations

For each project option, list the stakeholders involved in the project.

Describe what the stakeholder's relationship is or is likely to be, and provide a brief overview of the stakeholder management plan.

1.18 Capital Costs

Present a comparison of the capital costs for each alternative, highlighting the preferred option.

1.19 Operating Costs

Present a comparison of the operating costs for each alternative, highlighting the preferred option.

1.20 Marketing

Briefly summarise the marketing plan for each alternative. Present a comparison of the revenue forecasts, product specification and demand and supply forecasts for each option. Indicate the preferred alternative.

2.6 Financial and Production Highlights

The forecast financial and production highlights for each case or scenario assessed must be presented, including the estimated:

- project NPV at nominated discount rate (before and after tax)
- project IRR (before and after tax)
- project total cash flow (before and after tax)
- total capital cost
- payback period from start of full production
- maximum negative cash flow
- mine production tonnages
- ore to be processed
- total primary metal to be produced
- total site operating costs
- unit site costs per tonne of material to be processed
- total cash cost of production per unit of primary metal
- total cost of production per unit of primary metal.

2.7 Key Outcomes

In the subsections below, state the key outcomes for critical functional areas of the project. Include an assessment of the success of the Prefeasibility Study in meeting the objectives set out in Subsection 2.2 above. The outcomes must be presented as key performance indicators and benchmarked against other projects.

2.7.1 Key Performance Indicators

Present the key performance indicators (KPIs) for the selected configuration, in comparison to:

- alternative project configurations studied
- other relevant projects in the area
- other market competitors.

The KPIs must include:

- project output (volume and revenue)
- capital cost and time to implement
- order of magnitude benchmarking of unit capital cost and unit operating cost
- financial returns (if data is available).

Commentary must be provided on the accuracy of the indicators listed below. Any major differences between the KPIs of the opportunity and the benchmarks should be explained, if the data is available and sufficiently valid to support the basis of such an analysis.

2.7.2 Benchmarking

Perform benchmarking on the alternative project configurations, capacities and layouts. The preferred or recommended configuration must be benchmarked against:

- relevant previous and/or current projects
- the alternative project configurations studied
- other market competitors
- other relevant projects in the area.

- model validation.
- Mineral resource estimation results must address:
 - cut-off determination
 - resource classification criteria used
 - economic criteria applied
 - comparison of the current resource with previous estimates, commenting on the differences and the reason for those differences.

Describe the work required to improve the known insitu resource that is to be undertaken from completion of the Prefeasibility Study and prior to the Feasibility Study phase. The description must be in sufficient detail so as to plan the required resources and their timing, and to support the capital and operating cost estimates for such work. State whether such work is to improve the confidence in, and/or add to the existing resource.

Refer to Knowledge Portal

6.7 Ore Characteristics and Metallurgy

Describe the general characterisation of ore and waste rock types with respect to:

- reference and listing of the metallurgical samples taken (i.e. drill core samples, etc.) either as an appendix or separate listing
- ore and gangue mineralogy, mineral species, hazardous or reactive minerals, grain size, texture, etc.
- waste rock mineralogy mineral species, hazardous or reactive minerals, grain size, texture, etc.
- mineral chemistry including scans for minor or deleterious elements
- ore and waste rock geochemistry.

A geometallurgical ore body model must be created.

Refer to Knowledge Portal

6.8 Mineral Resource Statement

Provide a JORC classified Mineral Resource Estimate as a stand-alone statement that can be lifted out of the study for public reporting purposes.

A 'competent person', as defined by JORC Code, must sign the Mineral Resource Estimate Statement, and their consent must be obtained for the publication of the estimate.

Reporting of Mineral Resources must be in accordance with the current version of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves" (the JORC Code).

The majority of the resource in the anticipated mining areas of the deposit must be classified as no less than Indicated Resource.

Refer to Knowledge Portal

7. MINING AND ORE RESERVES

Provide a summary that includes commentary on topics set out in the following subsections.

7.1 Data Acquisition

Sufficient data must be gathered to allow for a confident preparation of mine designs, production schedules and expenditure estimates.

Describe the means by which this data has been acquired and validated.

Refer to Knowledge Portal

Explain the methodology used to optimise the schedule for the entire deposit, and provide schedules for the mining operations, presented as summarised statistics to include:

- ore, waste and low grade volumes and tonnages
- ore feed to process plant (quantity and quality)
- waste disposal movements (quantity and type)
- pre-production activities

The schedules must denote the phases of:

- pre-production prior commissioning of the treatment plant
- commissioning of the treatment plant
- operations, including the project's ramp-up period
- decommissioning

Present the changeover point between Pre-production / Commissioning to the Project Execution phase and commencement of the Operations phase as a clearly defined milestone event.

Refer to Knowledge Portal

7.10 Mine Equipment and Facilities

Describe the preferred mine equipment and facilities required for the mining operations for the project configurations investigated, including the:

- source of information used to justify the selected mine equipment and facilities
- equipment trade off studies used to establish the preferred mine equipment and facilities that address activities including requirements for:
 - materials handling
 - equipment specification and application
 - ore control
 - drill and blast
 - fleet match
 - equipment schedule time, availability and utilisation
 - dispatch control systems
 - Hoisting / haulage facilities to underground operations
- capital and operating cost estimates that conform with the requirements of sections Capital Costs and Operating Costs
- technical risks associated with the mining equipment requirements and, if possible, the method(s) of mitigation
- primary and secondary mining mobile equipment
- mine equipment support infrastructure
- mine services support infrastructure

7.11 Mine Operations and Management

Describe the mine operations required for the alternative project configurations, referring to the section Operations for details to be addressed.

The organisation aspects documented should address issues pertinent to mining such as the:

- preferred mine operating philosophy for the project and, particularly, state a preference for owner operated or contracted mining

The extent of existing infrastructure and services that may be available to support each project option must be stated in general terms.

Confirmation of the current capacity of existing infrastructure or services for each project option must be obtained from the infrastructure owner and/or service provider.

Engineering deliverables for infrastructure and utilities necessary to support the quality of a Prefeasibility Study include conceptual layouts of facilities and maximum and average consumption rates for the major utilities for each project option.

Provide a summary that includes commentary on topics set out in the following subsections.

10.1 Design Criteria

Minimum requirements for services are listed below.

10.1.1 Hydrology and Geotechnical Investigations

For each option, carry out hydrological and geotechnical studies, which are necessary for the preparation of layouts and conceptual designs of drainage and dewatering facilities, earthworks structures and foundations for infrastructure and utilities facilities.

10.1.2 Engineering Design Criteria and Standards

Establish basic design criteria defining the requirements for infrastructure and services to support the project.

10.2 Services

Minimum requirements for services are listed below.

10.2.1 Site Preparation

Prepare conceptual designs for, and a basis for estimating capital and operating costs of, site preparation works for each of the project options to be studied.

10.2.2 Roads and Drainage

Prepare conceptual designs for, and a basis for estimating capital and operating costs of, reclamation and roads and drainage works for each of the project options to be studied.

10.2.3 Power Supply

Evaluate the requirements for power supply infrastructure during the Execution phase. Evaluate whether temporary supplies will be installed or power provided from existing infrastructure.

Provide an outline of significant offsite power supply facilities needed to support the different options for the development and operation of the project, together with the basis for estimating associated capital and operating costs.

The extent of the existing offsite power supply facilities that may be available to support each project option must be stated in general terms.

Confirm the current capacity of existing offsite power supply facilities for each project option with the relevant power supply authority.

Where the project may be required to carry out works on the offsite power supply facilities, engineering deliverables necessary to support the quality of a Prefeasibility Study include maximum and average power consumption rates and conceptual layouts of offsite power supply facilities for each project option.

10.2.4 Power Distribution

Prepare conceptual designs of significant power distribution facilities needed to support the different options for the development and operation of the project together with the basis for estimating associated capital and operating costs.