17.0 Economics

17.1 Introduction

This section estimates the economic impacts of the proposed open cut project on the economies of the Northern Territory and Australia. The impacts are estimated by comparing the economic effects of a "typical-year" of the mine's operation before and after the change in mining method. Also included is an analysis of the typical annual impacts of the two year construction phase.

17.2 Methodology

The economic impact assessment has been undertaken using input-output analysis.

17.2.1 Input-output Tables

An input-output table provides a summary, or a "snapshot", of the transactions occurring within an economy over a selected period. The Australian Bureau of Statistics (ABS) produces input-output tables at the national level. These tables show the consumption and sales patterns of over 100 industries. In simple terms they show, for a given industry, which other industries it purchases from and to which other industries it sells. The national (Australian) input-output tables also show the use of industry production in private and government consumption, the use in public and private investment, and sales to foreigners (exports).

While the ABS produces national input-output tables, they do not produce state or regional tables. However, an unpublished input-output table for the Northern Territory is available.[1]

17.2.2 Input-output Multipliers

Input-output tables provide a snapshot of the economy of a given region. They are therefore very useful in a descriptive sense, and they allow for a detailed analysis of a regional economy to be performed. However, input-output tables are most frequently used to generate input-output multipliers, which are used to conduct economic impact analysis.

Input-output multipliers capture the direct and indirect effects of an economic stimulus on a region. For example, if demand for transport services from the Northern Territory were to increase, input-output multipliers can be used to estimate the total impact of this increased demand on total output from the Northern Territory, as well as the increase in employment, income and value-added.

[1] The Northern Territory input-output table is an unpublished table produced by Prime Research and ACIL Tasman and has a base-year of 2001-02.

Value-added, it should be noted, represents the sum of wages, profits and indirect taxes, and is the standard measure used in Australia to represent the size of an economy. At the regional level, the increase in value-added represents the increase in Gross Regional Product (GRP); at the state level, the increase in Gross State Product (GSP); while at the national level it represents the increase in Gross Domestic Product (GDP).

The total economic impact identified by use of input-output multipliers includes the direct effect of the initial increase in demand and the indirect (or "flow-on") effects. The flow-on effects result from the linkages between industries in the economy. For example, transport service providers in the Northern Territory purchase inputs from other local industries. When demand for their output increases, the transport companies will increase their purchases from other local businesses, who themselves must increase their consumption, some of which will be from other local firms, and so on. These are the flow-on effects that input-output multipliers are able to capture, and it is what makes them such useful tools for economic analysis.

17.3 Input Data

Data used in the input-output analysis included data on MRM's purchases within the Northern Territory and Australia as well as employment data. These data were provided for both the current underground mine and the proposed open cut operations. Also provided were data on civil construction costs associated with the open cut project.

Moving to open cut operations will result in a slight reduction in the purchases made by MRM from $126 million to $118 million per year. In addition, direct employment will reduce from 330 to 270 employees. In the Northern Territory, annual spending by MRM will decrease from $41 million to $33 million, while annual spending on Australian goods and services will change from $96 million to $88 million.

During the construction, Australian companies are expected to capture $68 million of the $72 million spent on the civil program. Companies in the Northern Territory expected to capture $47 million of the construction spending.

17.4 Economic Impacts

17.4.1 Existing Operations

Based on data for local (Northern Territory) and national expenditure during current underground mining operations, MRM's current economic impact has been estimated and the results presented in Table 17.1.

Table 17.1

Annual Economic Impact of Current Operations

Region	Output ($m)	Income ($m)	Employment (jobs)	Value-added ($m)
Northern Territory	357	49	800	184
Australia	561	96	1,940	285

As can be seen from Table 17.1, the existing MRM operation provides a considerable boost to the Northern Territory and Australian economies. The output of all industries in the Northern Territory is increased by $357 million due to the mine's operation (this includes the value of output of the mine itself), while nationally, industry output is up by an estimated $561 million. While the mine provides 330 jobs directly, its operation generates a total of 800 jobs in the Northern Territory economy (including the 330 direct jobs) and 1,940 jobs throughout Australia. These jobs are estimated to provide income of $49 million within the Northern Territory and $96 million nationally. The existing operation contributes an estimated $184 million to value-added (Gross Domestic Product) to the Northern Territory economy and $285 million in value-added to the national economy.

17.4.2 Open Cut Operations

Based on projected data for local (Northern Territory) and national expenditure during production from the expanded mine, the predicted economic impact of the open cut project is given in Table 17.2.

Table 17.2

Annual Economic Impact of Open Cut Operations

Region	Output ($m)	Income ($m)	Employment (jobs)	Value-added ($m)
Northern Territory	329	39	610	175
Australia	523	84	1,700	271

As can be seen from Table 17.2, operating the open cut mine will continue to provide economic benefits to both the Northern Territory and Australia. While these impacts will be less that those from the current operations, they will nevertheless be significant. Should the open cut mine not proceed, the economic benefits listed in Table 17.2 would not occur.

17.4.3 Construction Phase

Economic benefits would also result from the construction activities. Table 17.4 shows the expenditure associated with a typical year of the project's construction.

Table 17.4

Annual Economic Impact of the Construction Phase

Region	Output ($m)	Income ($m)	Employment (jobs)	Value-added ($m)
Northern Territory	46	11	290	21
Australia	97	24	570	47

The construction phase of the project will support an estimated 290 jobs in the Northern Territory (including the 150 on-site construction jobs) and 570 jobs Australia wide in each of the two years of the project.

Value added in the Northern Territory will be greater by $21 million in each year of construction, and $47 million higher in Australia as a whole. Output and income effects similarly favour Australian impacts approximately 2:1 compared with the Northern Territory.