McCAMEY'S MONSTER IRON ORE MINING PROPOSAL

HANCOCK MINING LTD

Report and Recommendations
by the
Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia

Bulletin 317 December 1987

ISBN 0 7309-1210-X

ISSN 1030-0120

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i SUMMARY AND RECOMMENDATIONS

Hancock Mining Ltd proposes to mine high grade iron ore from a scree and erosion fan located south of McCamey's Monster Hill.

The initial output in the first year will be 3 million tonnes which will increase to 5 million tonnes in the second year. The total tonnage over the life time of the project is 34.5 million tonnes. The processing plant will consist of a series of screens to separate the ore from the waste. The product ore will be transported to Port Hedland via a haul road to the Mt Newman to Port Hedland railway and then by rail.

The mine will employ approximately 117 people at full production. These will be housed at the existing camp until houses are constructed in Newman.

The Environmental Protection Authority determined that the project's potential for environmental impact required it to be formally assessed under Part IV of the Environmental Protection Act 1986. The Authority decided that a Notice of Intent was required to assess the proposal.

Upon assessment of the Notice of Intent, the Authority considered that the proposal is environmentally acceptable but has made the following recommendations relating to rehabilitation and seeking further referral of any expanded operations proposed.

RECOMMENDATION 1

The Environmental Protection Authority has concluded that the proposal is environmentally acceptable and recommends that it could proceed subject to the EPA's recommendation in this report and the proponent abiding by the environmental commitments in the Notice of Intent (listed in the Appendix) including:

- unnecessary removal of vegetation will not be permitted;
- run-off will be controlled to prevent erosion and sediment loading of the creeks; and
- rehabilitation will be started as soon as practicable on disturbed areas.

RECOMMENDATION 2

The Environmental Protection Authority recommends that the proponent seeks advice from the Main Roads Department over the construction of the haul road, floodways and location of borrow pits for road material and the proponent construct the crossing at the Great Northern Highway to the specification of the Main Roads Department.

RECOMMENDATION 3

The Environmental Protection Authority recommends that before completion of the project the proponent submits to the EPA for approval a programme for rehabilitation of the haul road.

RECOMMENDATION 4

The Environmental Protection Authority recommends that the topsoil from the process site be removed, stockpiled and use in rehabilitation on the lease area to the satisfaction of the State Mining Engineer.

RECOMMENDATION 5

The Environmental Protection Authority recommends that the proponent refers to the Authority any proposals to hard rock mine or to increase the mining rate beyond 5 million tonnes per annum.

1. BACKGROUND

Hancock Mining Ltd proposes to mine high grade iron ore from a scree and erosion fan located south of a range of hills including McCamey's Monster and Wheelarra Hill. The deposit is located approximately 40 km due East of Newman townsite in the Pilbara Region of Western Australia (Figure 1).

The Environmental Protection Authority determined that the proposal would require assessment under Part IV of the Environmental Protection Act 1986 and that a Notice of Intent would be necessary to assess the environmental impact of the project.

2. PROJECT DESCRIPTION

The project aims to recover high grade iron ore from rock debris strewn on the hillsides (screes) and colluvial deposits. It is planned to mine 3 million tonnes in the first year increasing to 5 million tonnes a year. No hard-rock mining would be necessary. The very shallow scree may be removed and transported by scrapers. Other ore would be removed by frontend loaders or excavators, loaded into trucks and transported to the adjacent processing plant. The ore would pass through a series of screens to separate the ore from waste by sizing. The product ore would be loaded by a stacker into stockpiles. Waste material would be placed in a separate stockpile for removal to the dumps. Ore extraction will occur in pockets of highest grade first, therefore it would be possible to place newly stripped overburden directly back onto mined out areas. The product ore would be transported via a haul road to the existing Mt Newman to Port Hedland railway line and then by rail to Port Hedland.

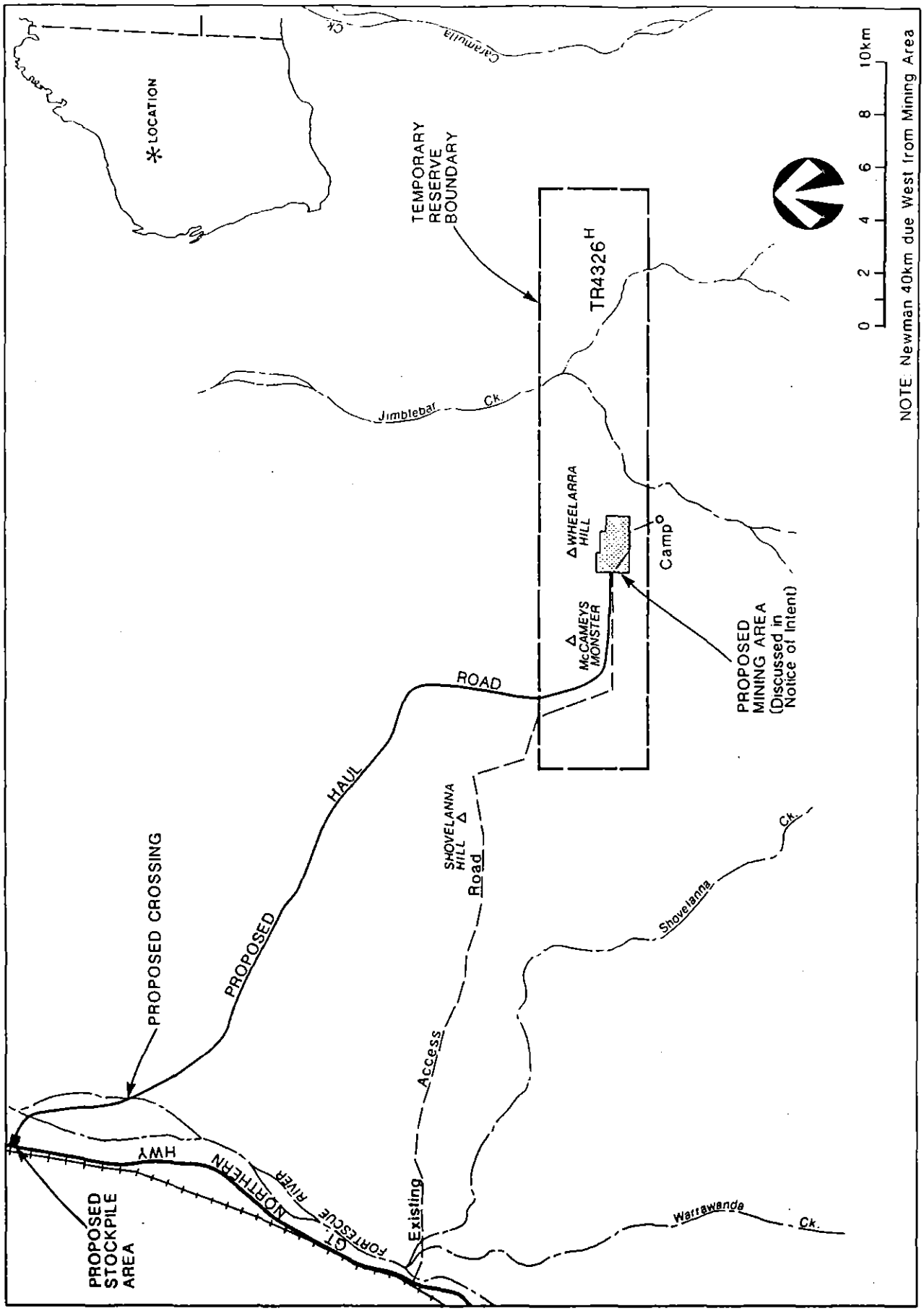
Water for the mining camp, mine site and processing plant would be drawn from bores located between McCamey's Monster Hill and the camp site. The electrical power would be from diesel generators on site; 150 kVA at the camp, 250 kVA at the processing plant. The camp would have backup generators on standby. Fuel for the generators would be stored in raised tanks with bunded pits around the base to catch spills. Normal road access would be by either the existing road from Newman to McCamey's or the haul road. The haul road would cross the Fortescue River about 2 km south of the Kalgan Siding then cross the Great Northern Highway. The stockpile at the railway line would be located on the existing railway easement at Kalgan Siding. The pile would be about 900 m long by 20 m wide:

During the construction stage and for a short period during production, workers would be accommodated on site. During the construction phase permanent housing would be constructed in Newman township. The mine production workforce for a 5 million tonnes a year operation is estimated to be 117 persons.

3. EXISTING ENVIRONMENT

The McCamey's Monster iron ore deposit is located in the Hamersley basin. The climate is arid with an average rainfall of 319 mm. Rainfall is highly variable as it is influenced by cyclonic activity. Evaporation exceeds average monthly rainfall every month of the year. The winds are predominately easterly.

The Brockman Iron Formation contributes 90% of the outcrop within the project area. Colluvial screes emanate from the edge of the Brockman Iron Formation. The bulk of the scree has pebble to occasionally cobble size



LOCATION AND MAJOR FEATURES OF McCAMEYS MONSTER IRON ORE MINING PROPOSAL

Figure 1

lumps of hematite, chert or material of Brockman Iron Formation composition.

The majority of soils in the proposed mine site area are red earths and are expected to have low levels of erodibility.

The mine site area is drained by series of parallel creeks running from the top of McCamey's Monster across the plains.

Good quality groundwater is available throughout most of the hardrock area in the Fortescue River Catchment.

The vegetation of the project area consists of Mulga low Woodlands, and Snappy Gum Tree Steppe.

In the Snappy Gum Steppe the dominant trees are Eucalyptus leucophloia, E.gamophylla, E.patellesis and E.termindis. The dominant hummock grasses are Triodia purglus and wiseana. A wide selection of Acacias are found on the hill tops and upper slopes of the project area.

Mulga Low Woodlandis are dominated by Acacia aneura. Along the tributaries other Acacias, Bloodwoods, Coolabah or River gums are found. One of the species of flora found in the area is Calothamus sp previously unrecorded in the Pilbara and may also be undescribed - it may be considered rare or geographically restricted.

It is expected that the project area would support a typical assembly of animals found right across the Pilbara. A survey was conducted to discover any rare and otherwise in need of special protection species. The most important rare species likely to be found in the area are:

. the pebble-mound mouse;

. the lesser stick-nest rat;

. the rabbit-eared bandicoot; and

. the long-tailed dunnart.

The pebble-mound mouse is restricted to the Pilbara. Two nests were found and were well away from the area to be mined. The lesser stick-nest rat has been gazetted probably extinct. The area to be mined does not contain suitable breakways or caves and thus is unlikely for the species to occur in the mine area. The haul road passes with 800 m of suitable habitats but the surveys did not find any sign of the animal. The rabbit-eared bandicoot was not detected during the surveys. The long-tailed Dunnart was also not found during the survey. However, the absence of this species in the survey work is probably due to the difficulty in capturing the species than a lack of numbers.

Many Aboriginal sites are known in the area, but none specifically at McCamey's or near the proposed haul road route.

4. ENVIRONMENTAL IMPACT ASSESSMENT

The major potential environmental impacts of the proposal would be:

. landscape restructuring;

. soil erosion;

. vegetation and fauna losses; and

. rehabilitation.

4.1 LANDSCAPE RESTRUCTURING

The existing profile of the mine site area would be decreased in altitude by 1 to 5 m if shallow stripping of the scree is carried out. If the area is mined as a pit the highest face would be less than 15 m high. All edge faces would be battered to encourage revegetation. The ore stockpiles at the mine and railway would not be a permanent alteration to the landscape. The waste dumps would form a low hill. On completion of the work the hill would be shaped to an unobstrusive profile and rehabilitated.

The haul road would have culverts or floodways across some creeklines. The flooding across the Fortescue River would be designed to minimize interference with water flow.

RECOMMENDATION 2

The Environmental Protection Authority recommends that the proponent seek advice from the Main Roads Department over the construction of the haul road, floodways and location of borrow pits for road material and the proponent construct the crossing at the Great Northern Highway to the specification of the Main Roads Department.

4.2 SOIL EROSION

Due to the extreme rainfall events, the mining operation has the potential to cause erosion and hence increase sediment loading in the creeks.

Run-on would occur on the upslope of the mine, from upper scree slopes and the high portion of McCamey's Monster. To prevent excessive runoff retaining bunds and walls would be built on the downslope edges of the shallow stripping. The bunds would be contoured to minimize the velocity of the runoff at the end of the bunds. In areas of deeper mining the mine floor would be sloped to direct runoff into a sump. The stockpiles and dumps would be surrounded on the downslope by bunds to prevent excessive runoff and sediment transport.

4.3 LOSS OF VEGETATION AND FAUNA

Vegetation would be removed from the mine site area, haul road, campsite and stockpile at the railway line. No gazetted rare plant species were recorded in the survey of this area. The Calothamus which was found and may not have been recorded until this survey, is found on several hills in the area removed from the mine site as well as the mine site. The plants on the other hillsides are unlikely to be disturbed and so the species will be preserved. Vegetation would only be removed when it is essential to the operation of the mine and installation of facilities.

No habitat of rare or endangered species will be disturbed at the mine site. The sandy creeks suitable to the rabbit-eared bandicoot which would be disturbed by the haul road do not contain the rabbit-eared bandicoot. The keeping of pets, cats or dogs in particular would not be permitted.

4.4 REHABILITATION

At the completion of mining and exploration activities the camp, processing plant and other structures would be removed. Rubbish and unwanted debris would be burnt if combustible and then buried. All pits, sewerage holes and trenches would be filled in. The camp area, mine site and processing plant area would be left clean and tidy. All compacted surfaces would be ripped and contoured to facilitate water retention and hence revegetation.A suitable fertilizer would be applied. The waste dumps would be contoured to a low profile.

RECOMMENDATION 3

The Environmental Protection Authority recommends that before completion of the project the proponent submits to the EPA for approval a programme for rehabilitation of the haul road.

RECOMMENDATION 4

The Environmental Protection Authority recommends that the topsoil from the process site be removed, stockpiled and use in rehabilitation on the lease area to the satisfaction of the State Mining Engineer.

5. CONCLUSION

The Environmental Protection Authority has concluded that the proposal and potential environmental impact from it are acceptable and manageable. The Authority has noted that there will be some loss of fauna and flora in the area of the mining operation. However, no rare or endangered species of fauna will be disturbed and the only species of flora likely to be considered rare or geographically restricted also occurs on several hills in the area but well removed from the mine site.

RECOMMENDATION 1

The Environmental Protection Authority has concluded that the proposal is environmentally acceptable and recommends that it could proceed subject to the EPA's recommendation in this report and the proponent abiding by the environmental commitments in the Notice of Intent (listed in the Appendix) including:

- **unnecessary removal of vegetation will not be permitted;**
- **run-off will be controlled to prevent erosion and sediment loading of the creeks; and**
- **rehabilitation will be started as soon as practicable on disturbed areas.**

APPENDIX 1

ENVIRONMENTAL COMMITMENTS

Hancock Mining Ltd, the proponent, undertakes to fulfill the following commitments to protect the environment and the public during establishment and operation of the McCamey's Monster Scree Iron-Ore Mine.

LANDSCAPE PROTECTION

- The existing landscape will be preserved as much as possible, within the constraints of the actual mining operation.
- Unnecessary removal of vegetation will be avoided.
- Waste stockpiles will be irregularly shaped and of low profile to reduce obtrusiveness.
- Upon decommissioning all equipment and buildings, etc, will be removed, rubbish burned or buried and the area left clean and tidy.

EROSION AND SEDIMENTATION

- Run-on will be controlled by bunding or drains which will lead water into sumps to allow sediment settling.
- Run-off from all roads, plant areas, the mine site, camp area, etc, will be directed, using bunds or drains, into appropriately designed sediment holding sumps from which overflow will be led into existing watercourse.
- Natural vegetation will be retained whenever possible to assist in trapping sediment from sheet run-off.
- Careful maintenance of the existing access road and design of the haul road will reduce erosion.
- The floodway crossing on the Fortescue River will be designed so as to minimise erosion or damage to the banks.

PROTECTION OF VEGETATION

- Unnecessary removal of vegetation will not be permitted.
- Areas not intended for immediate mining will have the vegetation preserved until operations commence.
- Only existing borrow pits will be used as source material to maintain the access road.
- Borrow pits required for installation and maintenance of the haul road will be designed according to the standards set out in Walker (unpublished - Mt Newman Mining Co Pty Ltd).

ENVIRONMENTAL COMMITMENTS (contd)

PROTECTION OF FAUNA

- Following studies on the significant fauna of the area it has been found that the haul road will not disturb any key habitats.
- Cross-country recreational driving, hunting and other activities which may affect fauna will not be permitted.
- The keeping of pets at the mine site and camp will not be permitted.
- All boreholes and costeans will be capped or filled when no longer required.

PROTECTION OF ABORIGINAL INTERESTS

- An archaeological survey has indicated where artefact scatters, etc, are located. These sites will be avoided to the greatest possible extent. If site disturbance is unavoidable application to allow work to proceed will be lodged with the Minister for Aboriginal Affairs.
- The proponent will hold discussions with relevant Aboriginal groups before commencing operations, but the Aboriginal people have known of the proposal for several years and have expressed no interest.

INCIDENTAL ITEMS TO PROTECT THE ENVIRONMENT

- Water supplies will be drawn from bores into the Wittenoom Dolomite. No dams will be constructed and no existing free water will be tapped.
- All sewage will be led into septic tanks and leach drains.
- All combustible rubbish will be burned and the remainder buried.
- Large fuel and oil tanks will be fitted with excess flow valves and be stored in bunded pits. Small amounts of fuel and oils will be stored where accidental spillage can be contained.
- Dust suppression will be exercised, mostly by damping down wherever necessary.

REHABILITATION

- Topsoil and vegetation stripped during operations will be replaced as soon as practicable onto areas to be rehabilitated.
- All faces on the mine, borrow pits, etc, will be battered if low and benched if high.
- Wastedumps will be irregularly shaped to be unobtrusive.
- Borrow pits will be ripped and battered.

ENVIRONMENTAL COMMITMENTS (contd)

- All compacted surfaces will be ripped.
- Fertilizer applications or seeding will be used on rehabilitation areas as required.

DECOMMISSIONING

- All equipment, machinery, rubbish, the camp, etc, will be removed upon completion of operations. Combustible debris will be burned and ash and non-combustible rubbish buried.
- All sewage holes, pits, trenches, boreholes, etc, will be filled or capped.
- The area will be left clean and tidy.