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WESTERN AUSTRALIA

MINISTER FOR THE ENVIRONMENT

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)**

**HEAVY MINERAL SANDS MINE, BEENUP, SHIRE OF AUGUSTA - MARGARET RIVER**

**MINERAL DEPOSITS LIMITED**

This proposal may be implemented subject to the following conditions:

- 1 In implementing the proposal, the proponent shall fulfil the commitments (which are not inconsistent with the conditions or procedures contained in this statement) made in the Environmental Review and Management Programme and subsequently (a copy of the consolidated commitments is attached) to the satisfaction of the Minister for the Environment.
  - 2 Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.
  - 3 Prior to site or road construction works or excavation of the dredge pond, the proponent shall prepare a comprehensive Environmental Management Programme, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority. (See also, conditions 4 and 5.) The proponent shall review (and if necessary update) this programme annually, to the satisfaction of the Minister for the Environment.
  - 4 Prior to excavation of the dredge pond, the proponent shall develop and subsequently implement a comprehensive groundwater monitoring programme, as part of an overall Environmental Management Programme, to the satisfaction of the Minister for the Environment on the advice of the Environmental Protection Authority, the Department of Mines and the Water Authority of Western Australia.
- The proponent shall not cause/allow any additional drawdown attributable to the project to exceed half a metre at the boundary of any neighbouring land.
- 5 Prior to site construction works, or excavation of the dredge pond the proponent shall prepare and implement a comprehensive surface water management plan, as part of an overall Environmental Management Programme, to the satisfaction of the Minister for the Environment on the advice of the Environmental Protection Authority, the Water Authority of Western Australia and the Department of Agriculture.
  - 6 Within the three months following the completion of one year's operation of the dredge, the proponent shall review and report on slimes handling operations, to the satisfaction of the Environmental Protection Authority. Continued operation shall be to the satisfaction of the Minister for the Environment, on advice of the Environmental Protection Authority in consultation with the Department of Mines

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In the event that the review of slimes handling operations indicates unsatisfactory performance in the opinion of the Minister for the Environment, the proponent shall develop and implement within a further 12 months a contingency plan for slimes handling, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority.

- 7 Prior to any site construction works at the mine-site, road construction or to obtain construction materials for earthworks, the proponent shall develop comprehensive dieback management prescriptions, in consultation with the Department of Conservation and Land Management, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.
- 8 In order to facilitate monitoring, review and management of the social impact of the project throughout its life, the proponent shall, prior to commissioning of the dredge, establish formal liaison, monitoring and public reporting processes, to the satisfaction of the Minister for the Environment on the advice of the Environmental Protection Authority.
- 9 The proponent shall not cause maximum noise levels at residential premises surrounding the proposed mine and dry mill to exceed:
  - 50dB(A) from 0700 hours to 1900 hours, Monday to Saturday
  - 45dB(A) from 0700 to 1900, Sunday
  - 45dB(A) from 1900 to 2200, every day
  - 40dB(A) from 2200 to 0700, every dayand shall not cause unacceptable annoyance due to tonal or impulsive components or other characteristics contributing to annoyance, in the opinion of the Minister for the Environment on the advice of the Environmental Protection Authority.
- 10 The proponent shall manage the noise levels associated with the road transport for product haulage to the satisfaction of the Minister for the Environment. In addition, the proponent shall periodically review the noise levels associated with product haulage operations at appropriate locations along the road route to the satisfaction of the Minister for the Environment.

The initial review and reporting shall be undertaken 12 months after commencement of product haulage operations.
- 11 Within one year of the commencement of productive mining the proponent shall develop and subsequently implement a rolling rehabilitation plan (including the decommissioning phase), to the satisfaction of the Minister for the Environment on the advice of the Environmental Protection Authority, the Departments of Mines, Agriculture and Conservation and Land Management. The rehabilitation plan shall be publicly available.

The proponent shall review (and if necessary update) this plan annually, to the satisfaction of the Minister for the Environment.
- 12 The proponent shall be responsible for decommissioning and removal of the plant and installations, to the satisfaction of the Environmental Protection Authority. At least six months prior to decommissioning, the proponent shall prepare and subsequently implement a decommissioning plan, to the satisfaction of the Environmental Protection Authority on advice of appropriate agencies.
- 13 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

- 14 If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority).

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Bob Pearce, MLA  
MINISTER FOR THE ENVIRONMENT

24 MAY 1991

In the attached document Mineral Deposits Limited submits to the EPA responses to the questions raised by the public and Government Departments on the proposed Heavy Mineral Mine at Beenup. The proponent also outlines below the commitments already made in the ERMP together with the additional commitments it has made (printed in bold type) as a result of extra work completed since the ERMP was published. The proponent has also summarized (in part B below) the changes and modifications it has made to the project through public consultation.

## A. PROJECT COMMITMENTS SUMMARY

### 6.0 SUMMARY OF ENVIRONMENTAL MANAGEMENT COMMITMENTS

If approval for the project is granted, the proponent will carry out the following actions before, during and after the proposed operation, according to the particular requirements of each commitment, to the satisfaction of the EPA.

#### 6.1 CONSTRUCTION PHASE

##### 6.1.1 Accommodation for temporary workforce

During the peak construction period, temporary single persons quarters, recreation facilities and messing facilities will be provided adjacent to the dry mill site. Accommodation for married personnel will be provided via existing commercial caravan parks and, subject to Shire Council agreement, at a caravan park to be constructed at the old Bullers Mill site adjacent to the Alexandra Bridge. This caravan park will be handed over to the Shire Council at the conclusion of the construction phase for management as a community facility.

The Company is proposing that its single persons quarters be located on site and that a wet mess be located in this area. Following discussions with the Shire and local business groups, it is no longer proposed to build the Alexander Bridge Caravan Park. It is now proposed that the married accommodation be supplied within Augusta in the Flinders Bay Caravan Park. This would enable families of the construction workforce to integrate with the local community and bring some benefits, from an economic point of view, back into the Augusta township.

## 6.2 MINING

### 6.2.1 Environmental awareness

An environmental awareness programme will be established for the Company's workforce. All personnel working on the project will be required to observe environmental guidelines both within the mine site and in adjoining areas.

### 6.2.2 Groundwater

The mining operation will be designed to avoid substantial draw-down of the water table; if water table draw-down does occur during the summer months, it will be minor and confined to the immediate locality of the dredge pond. During summer, if required, make-up water will be supplied to the dredge pond from several bores in the Lesueur Formation at a depth of 150 to 200 m.

### 6.2.3 Surface water

Existing surface drainage channels that are encountered by the mining operation will be temporarily diverted around the dredge pond. These channels will be established at least 12 months prior to requirement, to enable vegetation to regenerate and stabilize. Silt traps will be constructed on major drainage channels, downstream of the mining operation. Where practical, water from the slimes dam will be decanted and returned to the dredge pond. Providing turbidity is at an acceptable level, excess decant water from the slimes dam will be discharged into existing drainage channels (during the winter wet season).

### 6.2.4 Slimes disposal

Slimes will be directed to settling ponds for disposal after they have dried. A portion of the slimes will be incorporated into the topsoil destined for pasture areas and the remainder will be incorporated into the tailings near the surface.

### 6.2.5 Minimization of disturbance

Clearing of native vegetation will be kept to an absolute minimum. Wherever possible, access roads and easements will follow existing tracks.

### 6.2.6 Site preparation

The treatment of vegetation and soil on land in advance of mining will as described in Section 3.1.9.2 of the ERMP.

### 6.2.7 Aboriginal artefacts

Should any archaeological material be uncovered during the process of earth moving, the Department of Aboriginal Sites of the Western Australian Museum will be immediately notified.

The proponent will report any occurrence of Limestone platforms to the W.A. Museum.

#### 6.2.8 Dust control

The generation of dust from areas such as topsoil, tailings, concentrate heaps and haul roads will be controlled as necessary by the control measures detailed in Section 4.7.2 of the ERMP.

#### 6.2.9 Flora and vegetation of conservation value

The eastern half of Location 4264 will be excluded from mining.

#### 6.2.10 Lighting

If lighting causes direct illumination at neighbours residences, the Company will install appropriate light shields.

#### 6.2.11 Noise Mitigation

The Company will design if necessary a series of sound barriers to prevent the escape of noise from loading areas. It will apply to have the pitch of reversal horns reduced and will avoid, wherever possible, disruptive noise at night. The Company is currently undertaking further base line noise monitoring and will continue with periodic monitoring during both the construction and operation phases.

### 6.3 REHABILITATION

The type of vegetation to be returned to the mined area will be as drawn up after consideration of the recommendations by the final land use Work Party and the Community Consultative Group viz:

- (a) 72% agriculture, including possible community purposes, e.g. a commercial tree crop.
- (b) 13% rehabilitation of the main remnants of native vegetation back to native vegetation.
- (c) 11% planting of native plants along major water courses, to assist in stabilizing the soil and absorbing fertilizer nutrients leached from farming activities.
- (d) 4% planting of a buffer zone of native tree and understorey species along the southern boundary, adjacent to the Scott National Park.

Rehabilitation procedures will be as listed in Section 4.2.2 of the ERMP document.

Detailed rehabilitation plans will be prepared well in advance of the commencement of mining operations and these will be available for public inspection. There will be a continuing programme of evaluating proven rehabilitation techniques and modifying them as necessary for the Beenup situation. Members of the public will be kept informed of this programme through the Consultative process.

**The Company will co-operate in regeneration trials for Rare and Endangered Flora species, Reserve List Species and Species of Interest as appropriate with CALM and the Kings Park Board.**

#### 6.4 Mineral Processing

##### 6.4.1 Water supply

The water supply for the dry mill will be obtained from two bores in the Lesueur Formation at a depth of 150 to 200 m, which will not affect the water table nearer the surface. Much of the water in the plant will be recycled and the discharge of excess water is not planned. As a precaution, a silt trap will be constructed downstream of the settling dam.

##### 6.4.2 Waste disposal

Sand and other waste products which are removed from the concentrate in the mineral processing will be returned to the mine site for disposal. The disposal of other wastes such as garbage and workshop waste will be disposed of at an approved disposal area within the Shire.

##### 6.4.3 Visual amenity

The dry mill and office will be screened from the road by planting of indigenous trees and shrubs.

**The Company proposes to clad its site buildings with appropriately coloured green colourbond, thereby minimizing the visual disturbance with the surrounding land.**

#### 6.5 TRANSPORT OF MINERAL PRODUCT

##### 6.5.1 Transport route

The selection of the preferred transport route, the upgrading of parts of this route as required and the conditions under which the mineral product will be transported will be as described in Section 4.3.2 of the ERMP document reiterated below.

##### 4.3.2.1 Upgrading of roads

The total length of the preferred route will be sealed. All roads will be constructed to MRD or Shire standards as appropriate.

At the intersections where Scott River Road and Sues Road meet the Brockman Highway, the highway will be widened to incorporate a deceleration lane. The intersection of Sabina Road with the Vasse Highway will include an acceleration lane. All intersections will be positioned to provide clear visibility for a distance of 400 m in both directions.

"Stop" signs will be installed at the three intersections. Signs will be placed along the route to indicate the presence of heavy haulage vehicles. Speed restrictions will be imposed in populated areas.

Sound levels at the two houses near the intersection of Scott River Road and Brockman Highway will be recorded under actual operating conditions and appropriate measures will be taken, if necessary, to reduce the sound levels to acceptable levels.

The provision of a sealed all weather road, suitable for heavy haulage, between Capel and the project site, will alter existing traffic patterns. It is anticipated that heavy haulage traffic along the Bussell Highway between Capel and Margaret River will be reduced. To quantify these changes, the proponent is currently undertaking a traffic study. (\*) The study should be completed by April, 1990.

(\*) This study has been completed and given to MRD.

#### 4.3.2.2 Operation of trucks

The proposed hours of operation are 24 hours per day in three shifts, five days per week. No haulage of mineral product is proposed during Saturday and Sunday. As a condition of the haulage contract, the contractor will be required to maintain the vehicles in a safe operating condition. The mineral will be securely covered by a tarpaulin to prevent spillage en-route.

#### 4.3.2.3 Management of dieback

The widening and re-alignment of some sections of the transport route, and the extraction of gravel for road construction, have the potential to spread dieback. A dieback management programme for these operations will be developed by the proponent to the satisfaction of CALM and EPA.

The proponent will carry out the following studies.

- (a) Description and appraisal of the vegetation and flora along the entire Sues Road-Sabina Road route. The condition of the vegetation will be assessed, with particular emphasis on the occurrence of dieback. A more detailed study will be carried out in the proposed Whicher Reserve section, where a number of possible route alternative (Figure 4.3) will be studied to ensure minimum impact, both with respect to dieback control and flora.
- (b) Description of the terrain, drainage and soils with particular emphasis on regional drainage and how the proposed upgrading may affect this drainage.
- (c) Description of the fauna and faunal habitats of areas that would be disturbed by the proposed upgrading.



- (d) Survey the areas that would be disturbed by the proposed upgrading for cultural and archaeological sites.

The proponent will endeavour to obtain gravel from private sources, including an investigation of the iron pan contained within the proposed mining area.

If there is any shortfall in requirements, the proponent will make a formal approach to CALM for its requirements. The spread of dieback will be prevented by using only uninfected sources of gravel in areas currently free of dieback.

### **6.5.2 General**

A new heavy haulage route from the mine to Capel will be developed. This route will use Scott River Road, Brockman Highway, Sues Road and then a route selected by BSD (a consultant to the MRD) to link Sues Road and the Capel Bypass. This route will be constructed to comply with the latest Austroad standards and will meet MRD requirements.

The heavy haulage route from Vasse Highway to the mine will be clearly designated as a heavy haulage route with warning signs.

The Company is willing to meet the costs associated with the haulage of its mineral product. It is finalizing agreement with the Shire's on the proportion of upgrading, sealing and maintenance levels for all haulage roads.

The Company is willing to reconsider the use of rail if it should ever become viable and competitive.

### **6.5.2 Noise mitigation**

Noise levels at the intersection of Scott River Road and Brockman Highway will be reduced to acceptable levels if necessary by the use of measures outlined in Section 4.8.3 of the ERMP document.

## **6.6 CONTROL OF THE SPREAD OF DIEBACK**

### **6.6.1 Dieback survey**

To enable a dieback management plan to be incorporated into the mine management plan, a detailed dieback survey will be carried out over the entire mining area, after approval to proceed is granted and before operations commence.

### **6.6.2 Drainage**

The drainage on the mining area will not be altered after mining. Existing drainage lines will be reconstituted after mining in positions and flow directions similar to the pre-mining situation.

### 6.6.3 Control measures

Vehicles moving from infected to uninfected areas will be washed down. Trucks transporting mineral products from the dry mill to Bunbury will not travel further south than the dry mill. The access of vehicles of mine workers to the mining area will be restricted to raised gravel surfaced roads and raised gravel parking areas.

### 6.6.4 Further studies

Measures to control and contain any dieback in native vegetation areas to be returned after mining, will be studied in the early years of mining, when the rehabilitation will be largely in the form of pastures.

### 6.6.5 Publication

**The Company will make its dieback control strategies available to the public via the EPA Library, the Shire Library and the Company's offices. A dieback survey of the Eastern and Northern sections of the Scott National Park will be completed early in 1991 and this will be made available to the public. Ongoing monitoring of these sections of the National Park will occur. All aspects of the Dieback Management strategy will be to the satisfaction of EPA and CALM.**

## 6.7 AUDIT OF GREENHOUSE GASES

Commitments to reduce the emission of greenhouse gases to as low as practical will be as outlined in Section 4.5 of this ERMP.

## 6.8 MONITORING

Monitoring will be undertaken in the following areas and the results reported as appropriate to the Department of Mines, the Department of Conservation and Land Management and the Environmental Protection Authority. The results from various monitoring programmes will be viewed regularly in relation to the appropriate management programme and the management programme will be modified as necessary.

### 6.8.1 Groundwater

The number of bores being monitored will be increased and during the initial years, these bores will be monitored on a weekly basis.

#### 6.8.1.1 Groundwater Monitoring

The Company has increased its monitoring of bores prior to approval and construction to a fortnightly basis in winter and a quarterly basis during summer, to obtain detailed information on groundwater fluctuations.

## 6.8.2 Surface water

Monitoring of the water quality of the Blackwood and Scott Rivers will continue on a regular basis. The major drainage channels on and leaving the mining area will also be monitored regularly.

### 6.8.2.1 Surface Water Monitoring

Monitoring of the water quality in the Blackwood and Scott Rivers, is currently being undertaken on a fortnightly basis during winter and a quarterly basis in summer. In addition, major drainage channels are also being monitored. This information will be used to assist in the development and on-going monitoring of the surface water management plan.

## 6.8.3 Flora, Fauna and vegetation

A buffer strip within the Scott National Park, in that section where the Park is contiguous with the mining area, will be botanically surveyed before mining commences and monitored annually thereafter.

### 6.8.3.1 Flora and Fauna Monitoring

Flora and fauna surveys of the eastern and northern sections of the Scott National Park will be completed over the period October 1990 to June 1991. The results of these surveys will be available to the public.

The Company will provide some trial nest boxes in areas of native re-vegetation to determine whether these assist in the return of fauna to the rehabilitation sites.

The Company will provide detailed studies of flora and fauna along the proposed transport route, which crosses CALM land, to CALM prior to the route being finalized.

## 6.8.4 Rehabilitation

The progress of rehabilitating areas will be monitored regularly and reported annually.

## 6.8.5 Dieback

Methods for monitoring the presence of the dieback organism in the dredge pond and drainage channels will be researched. Other parts of the mining area will be monitored for dieback as required, dependent on the results of the dieback survey. The buffer strip referred to in Section 6.8.3 will also be monitored for the presence of dieback.

## 6.9 ECONOMIC

### 6.9.1 Employment

The proponent will advertise all permanent positions in the local newspaper, in keeping with the policy of employing suitably qualified local residents where possible.

Electrical and mechanical apprenticeships offered by the proponent will be available for suitable local school-leavers.

Where competitive with alternative suppliers, local business activities will be supported.

The proponent is an equal opportunity employer.

**The Company will provide training programmes for plant operators who have no appropriate experience.**

**The Company will favour local people when employing its permanent workforce.**

**The Company will provide an induction programme for its construction and permanent workforce to highlight sensitive environmental and local issues.**

### 6.9.2 Infrastructure

The capital cost of infrastructure for the project will be borne by the proponent, in conjunction with other major users of the infrastructure facilities.

Upon obtaining approval for the project, agreement will be reached with the Shire to ensure that the Shire is not financially disadvantaged by the project.

**A total funding package is being finalized with the Shire to enable them to cater for the incoming population.**

### 6.9.3 Agricultural production

Areas of the pastoral land (937.3 ha), currently owned by MDL, that are not committed to the mining operation, will remain available for agricultural production. Post mining areas of rehabilitated pasture will be made available for agricultural use as soon as is practical.

### 6.9.4 Tourism

The potential for tours of the operation will be investigated in conjunction with the Augusta-Margaret River Tourist Bureau. Any funds generated from the tours will be for the benefit of the Tourist Bureau or local charities.

## 6.10 SOCIAL

### 6.10.1 Workforce

Suitably qualified local residents will be employed where possible. This will provide direct interaction between existing residents and employees new to the area. The proponent will provide the necessary training for plant operators, rather than rely on obtaining personnel who already have the appropriate work skills.

### 6.10.2 Accommodation

During the construction phase, single persons quarters will be provided on site to minimize pressure on existing rental accommodation.

The viability of constructing a caravan park for use by married persons during the construction phase, and then handing the management of the facility over to the Shire Council, will be further investigated.

Consultation with the Shire and the Beenup Consultative Group will continue, to determine means of minimizing the impact of the incoming construction and permanent operational workforce on existing housing.

**The Company is proposing that its single persons quarters be located on-site and that a wet mess be located in this area. Following discussions with the Shire and local business groups, it is proposed that the married accommodation be supplied within Augusta in the Flinders Bay Caravan Park. This would enable families of the construction workforce to integrate with the local community and bring some benefits, from an economic point of view, back into the Augusta township.**

### 6.10.3 Social infrastructure

The need for additional social facilities to meet current population growth and the increase in population due to the project will be investigated in conjunction with the Shire Council and the Beenup Consultative Group.

It is hoped that the Beenup Consultative Group will play an active role in assisting newcomers to assimilate to their new environment.

MDL personnel currently involved in consultation with the community will continue to be involved through the construction phase and into the operational phase, to maintain continuity of the consultative process.

**The Company will provide annual updates on anticipated workforce changes to the Education Department prior to the new academic years to enable the Department to undertake informed planning.**

## 6.11 MANAGEMENT PLANS

A surface water management plan and a Dieback management plan will be submitted and approved by the EPA. These plans will be available to the public for inspection.

### B. PUBLIC CONSULTATION

Public consultation has continued since the publication of the ERMP. A number of changes and modifications to the plans originally considered by the Company, have occurred due to public input. These developed during and after the preparation of the ERMP.

- a) No lowering of the water table is proposed: This is a major change to the proponents original plans and is now the basis of its water management programme.
- b) Monitoring of surface waters: Following discussions with local fishermen, farmers, the Consultative Group and attendance at the Blackwood Conference, the proponent held discussions with the Waterways Commission to commence monitoring of the Scott and Blackwood Rivers. It has also included extensive monitoring of the surface drainages from the mine/mill areas impacted by the proposal.
- c) Flora, Fauna and Dieback studies of the National Park: Discussions with locals and CALM have shown there is little information available on the Scott National Park. The proponent has commissioned studies of the eastern and northern sections of the Park to commence in October 1990.
- d) Publication of Monitoring Results: The proponent has agreed to make all monitoring programmes and the National Park studies available to the public.
- e) Construction Workforce: Original proposals to house married construction workers at a new caravan park at Alexander Bridge has been changed following requests from Augusta Business people, the Shire, and numerous local residents. It is now proposed that the married construction workers will be located at the Flinders Bay Caravan Park in Augusta.
- f) Noise Studies: Following expressions of public concern, arrangements were made with the EPA for a two week continuous noise survey to be carried out at the nearest neighbour's property. A similar survey will also be conducted in summer.

g) Tree Planting: The proponent has agreed to commence the planting of about 4,000 trees as sight and noise screens in the autumn of 1991 at the dry mill site and at other appropriate locations around the mine site.

h) Continued Consultation: Although the present form of the Beenup Consultative Group will now change, the Company is committed to a continued consultative process. Discussions with the Shire Council are continuing to develop a consultative process that is acceptable to the Company, the Shire and the community.

i) Local Employment: The Company has received over 80 letters enquiring about permanent employment. There have been many local applicants with mining or trucking/farming experience and therefore it is confident that the commitment to employ locally as much as possible will be very successful.

j) Transport Route: One of the factors taken into account in selecting the Sues Road transport route as its preferred option was the extensive input received from the public. This came via local community meetings, direct letters to the Company, the Beenup Consultative Group, the local press and numerous local individuals.