DECOMMISSIONING AND CLOSURE PLAN

KEYSBROOK MINERAL SANDS PROJECT

MAY 2006

PREPARED FOR

OLYMPIA RESOURCES LIMITED

BY

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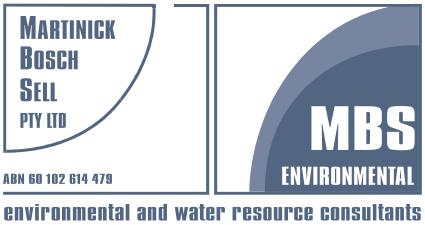

TABLE OF CONTENTS

FIGURES

TABLES

1. INTRODUCTION

1.1 KEYSBROOK PROJECT

In 2003 Olympia Resources Limited (Olympia) discovered the Keysbrook mineral sands deposit in the southwest of Western Australia. The mine area is located approximately 70 kilometres south of Perth and four kilometres west of Keysbrook (Figure 1).

The mine area covers 1,234 hectares. The dominant industry of the area is dairy and beef cattle farming, though there is a small area of intensive horticulture and horse keeping and agistment is common.

The mine area is situated approximately 50 percent in the Shire of Serpentine-Jarrahdale and 50 percent in the Shire of Murray. Both shires are dominated by rural landscapes with small to medium sized towns. The main accesses are off the South Western Highway at Elliott Road and Readheads Road.

The proposed timing of operations is to complete the environmental assessment process by mid 2006, with construction of plant and infrastructure following soon after. Proposed commencement of mining operations is early 2007, with an expected mine life of up to eight years. The project will require a workforce of about 30 to 35 persons, which will be sourced locally where possible.

Approximately 4.25 million tonnes of ore will be mined and 115,000 tonnes of heavy mineral concentrate (HMC) will be produced per annum over a mine life of up to eight years. The HMC will be trucked to Picton. This represents approximately 2,200 tonnes per week or six to seven 50 tonne truckloads per day.

1.2 PURPOSE AND SCOPE OF THE DECOMMISSIONING AND CLOSURE PLAN

1.2.1 Overview

The purpose of the Decommissioning and Closure Plan (DCP) is to describe the rehabilitation and closure strategies necessary to adequately address environmental issues to the satisfaction of regulatory authorities and Olympia at the completion of operations. The strategies are designed to ensure maintenance free closure over the long term.

The four basic steps involved in closure planning are:

1. The removal and disposal of all infrastructure not required for other uses.
2. The remediation of any soil or water contamination.
3. Rehabilitation of remaining disturbances.
4. Post-closure maintenance and monitoring.

The project components discussed within this DCP are summarised below and illustrated in Figure 2. These are:

- Open cut mine and associated facilities.
- Wet concentrator processing plant and associated facilities.
- Workshops and stores.
- Offices and administrative facilities.
- Contractor yards.
- Water management facilities.
- Roads, powerlines, fences, drains and communications equipment.

1.2.2 Relevance to Other Plans

The DCP is included in the Public Environmental Review (PER) as a component of the proponent's environmental management activities associated with the Keysbrook project approval process.

The DCP will be revised every two years during site operations to ensure it remains accurate and relevant. It is anticipated that subsequent revisions of this document will contain more detailed information concerning actual infrastructure, rehabilitation, closure criteria and potential environmental issues as the project moves from the current planning stage through to operation.

2. BACKGROUND

2.1 PROJECT DESCRIPTION

Figure 2 shows the overall site layout. The main components of the Keysbrook project are:

- Open cut mining operations to depths averaging two metres, to a maximum of five metres.
- Topsoil stockpiles.
- A mobile screening and feed preparation plant
- A wet concentration plant.
- Bulk fuel storage.
- Production borefield for process water, dust suppression water and potable uses.
- Ancillary infrastructure including a water storage dam, pipeline and powerline networks and access roads.
- Mine administration offices and contractors' workshops.

Detailed descriptions of infrastructure and operating processes are contained within the Keysbrook PER (MBS Environmental, 2006).

2.2 RATIONALE FOR SITE INFRASTRUCTURE

The plant has been sited to be close to the ore body. The design follows process requirements and maintains ancillary infrastructure and support services in close proximity to the plant.

The plant siting and design has also addressed environmental requirements using the principles of:

1. Avoidance of significant features.
2. Integrating natural contours and drainage lines where possible.
3. Maximum utilisation of resources in the one area.

3. STATUTORY AND POLICY REQUIREMENTS, AND INDUSTRY GUIDELINES

3.1 ENVIRONMENTAL PROTECTION ACT 1986

The DCP is consistent with the following documentation relevant to the Keysbrook project and assessed under the *Environmental Protection Act 1986*:

- Keysbrook Public Environmental Review (MBS Environmental, 2006).

Closure related commitments in this document principally relate to:

- Undertaking progressive rehabilitation.
- Effective and timely closure consultation with landowners.
- Developing a DCP concurrently with mining operations.

3.2 LANDOWNER AGREEMENTS

The Keysbrook project is located in an area of private freehold land in multiple ownership. The land in the mine area is on pre-1898 titles. These titles impart ownership of the mineral rights to the landowner, not the State.

The area potentially available for mining will be governed by the number of land access and compensation agreements that can be entered into between Olympia and individual landowners. Olympia may also purchase properties in the mine area. It is considered highly likely that agreements will not be entered into with all landowners in the mine area. Where agreements cannot be made, these properties will be excluded from mining operations.

3.3 OTHER RELEVANT ENVIRONMENTAL LEGISLATION

Beyond specific approval documentation, key environmental legislation relevant to mine closure in Western Australia includes general provisions under the following:

- *Environmental Protection Act 1986.*
- *Mines Safety and Inspection Act 1994.*

Other relevant legislation relevant to mine closure includes:

- *Aboriginal Heritage Act 1972.*
- *Agriculture and Related Resources Protection Act 1976.*
- *Bushfires Act 1954.*
- *Contaminated Sites Act 2003.*
- *Dangerous Goods (Transport) Act 1998.*

- *Explosives and Dangerous Goods Act 1961.*
- *Land Administration Act 1997.*
- *Occupational Safety and Health Act 1984.*
- *Rights in Water and Irrigation Act 1914.*
- *Soil and Land Conservation Act 1945.*
- *Town Planning & Development Act 1928.*
- *Waterways Conservation Act 1976.*
- *Wildlife Conservation Act 1950.*

The Department of Environment (DoE) is the primary regulatory authority responsible for overseeing the closure of the Keysbrook project. Authorities involved in consultation with the DoE include the Department of Conservation and Land Management (CALM), Department of Water (DoW) and the Department of Industry and Resources (DOIR).

3.4 GOVERNMENT AND INDUSTRY GUIDELINES

Key government and industry guidelines relevant to mine closure in Western Australia are listed in Table 1.

This document conforms to the Conceptual Closure Plan as defined in Section 2.3 of the ANZMEC/MCA's Strategic Framework for Mine Closure (ANZMEC/MCA, 2000). Subsequent reviews and the final DCP will be further developed to conform to this document, as well as Government and Industry Guidelines.

Olympia will review its DCP in the light of results of rehabilitation research programs at Keysbrook during the project life and ongoing industry best practice as they are presented through such forums as the Department of Industry and Resources (DoIR) Golden Gecko Awards.

Table 1: Key Government and Industry Guidelines for Mine Closure

Guideline	Site Characteristic
Australian Minerals Industry (AMI) Code for Environmental Management (MCA, 2000).	Framework including consultation, progressive rehabilitation and reporting.
Strategic Framework for Mine Closure (ANZMEC/MCA, 2000) (a joint government and industry guideline).	Framework including consultation, progressive rehabilitation and reporting.
Draft Criteria for Mine Closure within the Context of the Department of Minerals and Energy of Western Australia (2001).	Framework on closure process.
Mine Closure Guideline for Mineral Operations in Western Australia (Chamber of Minerals and Energy WA Inc. 2000).	Framework including consultation, progressive rehabilitation and reporting.
Draft Guidance for the Assessment of Environmental Factors No.6: Rehabilitation of Terrestrial Ecosystems (January 2006).	Framework for rehabilitation, establishing closure criteria and mine closure.
Mine Closure Policy (MCA, 1999).	Policy on mine closure.
Mine Rehabilitation Handbook (MCA, 1998).	Stakeholder consultation and financial provisioning.
Assessment Levels for Soil, Sediment and Water (DoE, V3 Nov 2003).	Threshold levels for contaminated soils.
ANZECC/ARMCANZ: Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000.	Establishing water quality criteria using previous monitoring data and site-specific factors, to establish standards to be achieved at closure.
Guidance for the Assessment of Environmental Factors: Rehabilitation of Terrestrial Ecosystems. Draft No. 6 (EPA 2006)	Closure strategy and description of objectives, targets and review during mine operation.
The Commonwealth Environmental Protection Agency series ‘Best Practice Environmental Management in Mining’.	Industry examples of mining practices.

4. STAKEHOLDER CONSULTATION

4.1 STAKEHOLDER IDENTIFICATION

Stakeholders are defined as individuals, government agencies, community groups or others who have the potential to be affected by mine closure. Stakeholder consultation is a critical component of the closure planning process as the interests held by stakeholders in an area often precede an operation and remain long after its closure.

The Keysbrook stakeholders identified to date are listed in Table 2 below.

Table 2: Keysbrook Stakeholders

Community	Statutory	Corporate	Employees
Private landowners within the mining area	Department of the Environment and Heritage	Olympia Resources	Staff
Adjacent landowners	Environment Protection Agency	ASX	Contractors
WA Conservation Council	Department of Environment	Customers	Consultants
The Wildflower Society of Western Australia	Department of Conservation and Land Management	Analysts	
Keysbrook and North Dandalup local businesses	Main Roads	Shareholders	
Media	Western Power	Financial institutions	
Politicians	Water Corporation	Mining industry peers	
Local Community groups	Shire of Serpentine-Jarrahdale	Future Shareholders	
Landcare Groups	Shire of Murray		
Birds Australia.	Department of Industry and Resources		
Keysbrook North Dandalup Action Group (KNAG)	Department of Consumer and Employment Protection		
Peel Harvey Catchment Council	Department of Planning and Infrastructure.		
Peel Development Commission	Bunbury Port Authority		
	Department of Water		

4.2 RECORD OF PUBLIC CONSULTATION TO DATE

No specific consultation concerning Keysbrook closure planning has been undertaken to date. Consultation with the identified stakeholders has been undertaken concerning the Keysbrook project in general (Table 3).

This consultation included:

- Individual meetings, discussions and correspondence with stakeholders.
- Meetings with government agencies and special interest groups to discuss the proposal.

Table 3: Record of Public Consultation

Groups Consulted	Channels	When	Comments/Issues
Private Landowners	One-on-one Newsletters Meetings Web-site	Ongoing (July 2005 – present)	Comprehensive discussions, project briefing, land access, compensation, environmental impact and rehabilitation.
Adjacent Landowners	One-on-one Project briefings Newsletters Web-site Public meetings	Ongoing (October 2005 – present)	Project briefing, gathering and responding to queries and concerns raised.
State Government Departments	Meetings Project briefings One-on-one Newsletters Web-site	Ongoing (August 2005 – present)	Project briefing, administrative inquiries and advice.
Shires	Meetings Project briefings One-on-one Newsletters Web-site	Ongoing (August 2005 – present)	Project briefing, administrative inquiries and seeking advice.
Community Groups	Attending meetings Project briefings Newsletters One-on-one Web-site	Ongoing (October 2005 – present)	Project briefing, gathering concerns and issues, discussing community support opportunities, consulting with opposing groups.
Environmental Groups	Attending meetings Project briefings Newsletters Letters	Ongoing (October 2005 – present)	Project briefing, gathering concerns and issues, conservation and rehabilitation planning, discussing community support opportunities.
Corporate Stakeholders	Project briefings Media releases Web-site news	Ongoing (August 2005 – present)	Providing timely and accurate information.

4.3 CONSULTATION PROCESS FOR CLOSURE PLANNING

Consultation with the identified stakeholders concerning closure of the Keysbrook project will be undertaken according to the ANZMEC/MCA, principles outlined in the Strategic Framework for Mine Closure. This includes:

- Stakeholders will be consulted throughout the life of the mine to ensure effective consultation.
- A targeted communication strategy will be implemented to reflect the needs of the stakeholder groups and interested parties.
- Adequate resources will be allocated to ensure that the consultation process can be undertaken effectively.
- Communities will be included in the consultation process.

The consultation programme will be designed to:

- Inform the public about the proposed development of the mine.
- Record potential concerns, issues and recommendations.
- Provide feedback.
- Establish meaningful and ongoing dialogue.

5. CLOSURE OBJECTIVES AND COMMITMENTS

5.1 KEY OBJECTIVES

The overall objective of the DCP is to establish a safe, stable landform and return the land to its pre-mining land use of agriculture.

Specific objectives of the DCP also include:

- Remove surplus infrastructure and rehabilitate the site.
- Remove all rubbish and contaminated material.
- Re-establish a self-sustaining ecosystem.

5.2 CLOSURE CRITERIA

Closure criteria are an agreed standard or level of performance that enables progressive assessment of the site in meeting the objectives, and ultimately demonstrate successful closure (ANZMEC/MCA, 2000). The overall objective of the closure and rehabilitation plan is to establish a safe, stable landform with a self-sustaining vegetative cover similar in to that in the surrounding landscape so that pastoral activity can resume.

Closure criteria will be developed in consultation with stakeholders to define the measurable goals for rehabilitation and closure (see Section 5.1). The agreed criteria will enable quantitative assessment during the life of the project to provide an indication of whether rehabilitation and closure objectives have been or are likely to be achieved. The criteria will be developed and periodically reviewed in liaison with regulatory authorities including the DoE, CALM and the Department of Agriculture (DoA). The agreed criteria and the detailed actions necessary to satisfy the criteria will be detailed in subsequent versions of this document.

5.3 POST-CLOSURE MONITORING AND MAINTENANCE

Once the rehabilitation and closure work has been completed, a post-closure monitoring programme will be initiated, with the aim of confirming that the rehabilitation and closure has been effective and the closure criteria satisfied (Table 4). In some cases this monitoring programme will be a continuation or slight variation of those conducted during operations.

In general terms, post-closure monitoring will include:

- **Physical stability:** visual confirmation by the inspecting personnel that there are no unplanned drainage lines developing and no undue erosion.
- **Chemical stability:** a continuation of the water quality monitoring programmes employed during the operational phase of the mine, including sampling of surface

runoff, ground water and soils for levels of contaminants that exceed the guidelines adopted for closure.

- **Revegetation:** monitoring to confirm that the vegetation cover density is likely to become comparable with that on similar areas in the region that have not been disturbed by mining.

It is expected that the mine closure exercise is likely to span a period of approximately two years and will include a period of post-closure monitoring and maintenance.

During this period, a small monitoring team will visit the site to take scheduled samples and make assessments regarding the progress of revegetation and the effectiveness of closure measures put in place. The team will assess if remedial work is required, and at the end of the first year post-closure an appropriate maintenance team will carry out essential repairs and maintenance.

Monitoring the rehabilitated areas will ensure that any areas requiring remedial work are identified. Maintenance procedures will be carried out where necessary and may include:

- Replanting areas that may not have regenerated.
- Repairing any erosion problems.
- Weed control.

The frequency of monitoring will decrease as closure progresses and will cease when the closure objectives and closure criteria have been achieved.

Table 4: Summary of Closure Monitoring

Time	Criteria	Monitoring	Standard
At closure	Rehabilitation works	Confirm that specifications of works have been completed, e.g. required earthworks, removal of infrastructure, drainage system in place.	• Final DCP. • Draft Criteria for Mine Closure within the Context of the Department of Minerals and Energy of Western Australia (2001). • Mine Closure Guideline for Mineral Operations in Western Australia (Chamber of Minerals and Energy WA Inc. 2000).
6 months	Water	Groundwater and surface water.	Groundwater: Parameters (e.g. SWL, TDS) meet required criteria. Surface: Parameters (e.g. TSS, pH) meet required criteria prior to discharge to the environment.
12 months	Rehabilitation works	Implement remedial works on year 1 program (if required), e.g. replanting, reseeding, erosion remediation.	Final DCP.
	Water	Groundwater and surface water.	Groundwater: Parameters (e.g. SWL, TDS) meet required criteria. Surface: Parameters (e.g. TSS, pH) meet required criteria prior to discharge to the environment.
	Flora	Initial plant establishment; density and diversity.	Final DCP.
18 months	Water	Groundwater and surface water.	Groundwater: Parameters (e.g. SWL, TDS) meet required criteria. Surface: Parameters (e.g. TSS, pH) meet required criteria prior to discharge to the environment.
24 months	Flora	Initial plant establishment; density and diversity. Implement remedial works (if required): e.g. replanting, reseeding.	Final DCP.
	Water	Groundwater and surface water.	Groundwater: Parameters (e.g. SWL, TDS) meet required criteria. Surface: Parameters (e.g. TSS, pH) meet required criteria prior to discharge to the environment.

5.4 REPORTING

Comprehensive records of the planning and implementation of all rehabilitation and closure works will be maintained for each rehabilitated area and will include:

- Data on the pre-disturbance condition of each site.
- Information on the vegetation and topsoil removal and storage techniques utilised.
- Details on the rehabilitation treatment(s), including:
    - The rehabilitation earthworks.
    - The species used in the planting and seeding programme.
    - Any fertiliser or soil ameliorant applied.
- The results of the rehabilitation monitoring programme.
- The scope of any remedial work (such as re-ripping, re-seeding and weed control).

6. REHABILITATION AND CLOSURE MEASURES

The actions necessary to achieve the end land use objective and ensure the closure and rehabilitation criteria are met are grouped into general and specific measures. General measures are the default measures applied as required across the site to satisfactorily address the issues. Where required, area specific measures are detailed for areas of the operation that have unique issues that may not be adequately managed using the general rehabilitation and closure measures.

6.1 GENERAL REHABILITATION AND CLOSURE MEASURES

In the absence of closure or rehabilitation issues requiring specific closure or rehabilitation actions, the following default measures will be applied and used in the closure process.

6.1.1 Demolition

All plant and permanent structures will be dismantled or demolished and removed. Recoverable materials may be sold if a suitable market can be found at the time of decommissioning.

All inert rubble and materials resulting from the demolition exercise will be removed from site to an appropriately licensed landfill off site.

All surface pipelines, power cables/lines and security fences will be removed and materials will be sold or otherwise disposed off site.

Plastic pond liners will be removed for reuse at another site or, if in a condition too poor to be reused, will be disposed at an off site landfill facility.

6.1.2 Clean Up and Remediation

The largest hazardous material (by volume) required on the site will be diesel, used the mining equipment and small power generators.

A register will be maintained for all hazardous materials on site.

At closure, remaining chemicals, hydrocarbons and contaminated materials will be removed offsite for disposal at a licensed facility.

It is recognised that some minor spillage of hydrocarbons (fuels and oils) will occur during operations and these shall be dealt with as part of the mine's ongoing environmental management plan. All hydrocarbon-contaminated soils remaining at closure will be excavated and removed from site to an approved waste disposal facility.

6.1.3 Revegetation

Following demolition of infrastructure and site clean up, the site will be regraded to re-establish existing drainage lines. Previously stockpiled topsoil will be respread over the reformed area.

Planting and seeding will be undertaken. The species selected for the revegetation programme will depend on the site-specific conditions (e.g. pasture or native vegetation; topography, soil conditions). Planting and seeding will be undertaken immediately prior to the expected onset of seasonal rains.

Stock exclusion fencing around the rehabilitated area will be retained for up to two years to allow the vegetation within the rehabilitated area to become established and the landform stabilised. When monitoring against closure criteria indicates the rehabilitation no longer has management requirements the removal of fences will be carried out by Olympia if so requested by the pastoralist.

6.2 AREA SPECIFIC REHABILITATION AND CLOSURE MEASURES

For the purpose of this DCP, the mine has been divided into six management areas. The general rehabilitation and closure activities applicable to all areas are described in Section 6.1 above and the specific closure measures applicable to the nine management areas are listed below:

1. Open cut mine and associated facilities.
2. Process plant and associated facilities.
3. Offices and administrative facilities.
4. Contractor yards and workshop.
5. Water management facilities.
6. Roads, powerlines, fences and drains.

At this stage of the Keysbrook project development it is not currently possible to fully detail the infrastructure components for each management area. The final DCP will include a more detailed description of the facilities and management measures necessary to achieve the closure objectives.

6.2.1 Open Cut Mine and Associated Facilities

The area defined as the “Open Cut Mine and Associated Facilities” is comprised of the following:

- Open cut pit.
- Screening and feed preparation plant.
- Ancillary pumps, pipelines and powerlines within the open pit.

No area specific closure measures were identified.

6.2.2 Process Plant and Associated Facilities

The area defined as the "Process Plant and Associated Facilities" is comprised of the following:

- Wet concentrator plant.
- HMC stacker.
- Ancillary pumps, pipelines and powerlines within the confines of the process plant.

No area specific closure measures were identified.

6.2.3 Offices and Administrative Facilities

The area defined as the "Offices and Administrative Facilities" is comprised of the following:

- Offices.

No area specific closure measures were identified.

6.2.4 Contractors Yards and Workshop

The area defined as the "Contractors Yards and Workshop" is comprised of the following:

- Fuel and oil storage facilities.
- Equipment workshop.
- Washbay.
- Stores yard.

No area specific closure measures were identified.

6.2.5 Water Management Facilities

The area defined as the "Water Management Facilities" is comprised of the following:

- Process water dam.
- Water collection sumps and drains.
- Borefield.
- Septic tanks and drains.

In addition to the general provisions, the following specific provisions apply:

1. The water dam can either be lined with a plastic liner or a layer of clay from the process plant. A decision on which method has not yet been made. If the clay layer is selected, decommissioning will involve excavating the floor of the water dam to break up the clay layer and filling and grading the excavation back to pre mining landform

levels. If a plastic liner is selected, removing the liner is the preferred option. However, sediment from pit dewatering and plant recirculation water precipitates in the water dam over time and can bury the liner under a layer of sediment. At decommissioning, removing the sediment layer to recover the plastic liner can be problematic if the sediment becomes too deep. Mechanical methods used to remove the sediment layer can rupture the liner and render it useless for reuse. If this occurs, the liner may be cut, folded and buried in situ.

2. All earth drains will be backfilled with loose earth from the immediately adjacent area.
3. Pumps will be removed and bores will be decommissioned according to the Agriculture and Resource Management Council of Australia and New Zealand (1997) Minimum Construction Requirements for Water Bores in Australia.

6.2.6 Roads, Powerlines, Pipelines and Fences

The area defined as the "Roads, Powerlines, Pipelines and Fences" is comprised of the following:

- On-site access roads.
- On-site power and lighting network.
- Substation.
- On-site pipeline network.
- Fences.

No area specific closure measures were identified.

7. REFERENCES

Agriculture and Resource Management Council of Australia and New Zealand (1997). Minimum Construction Requirements for Water Bores in Australia.

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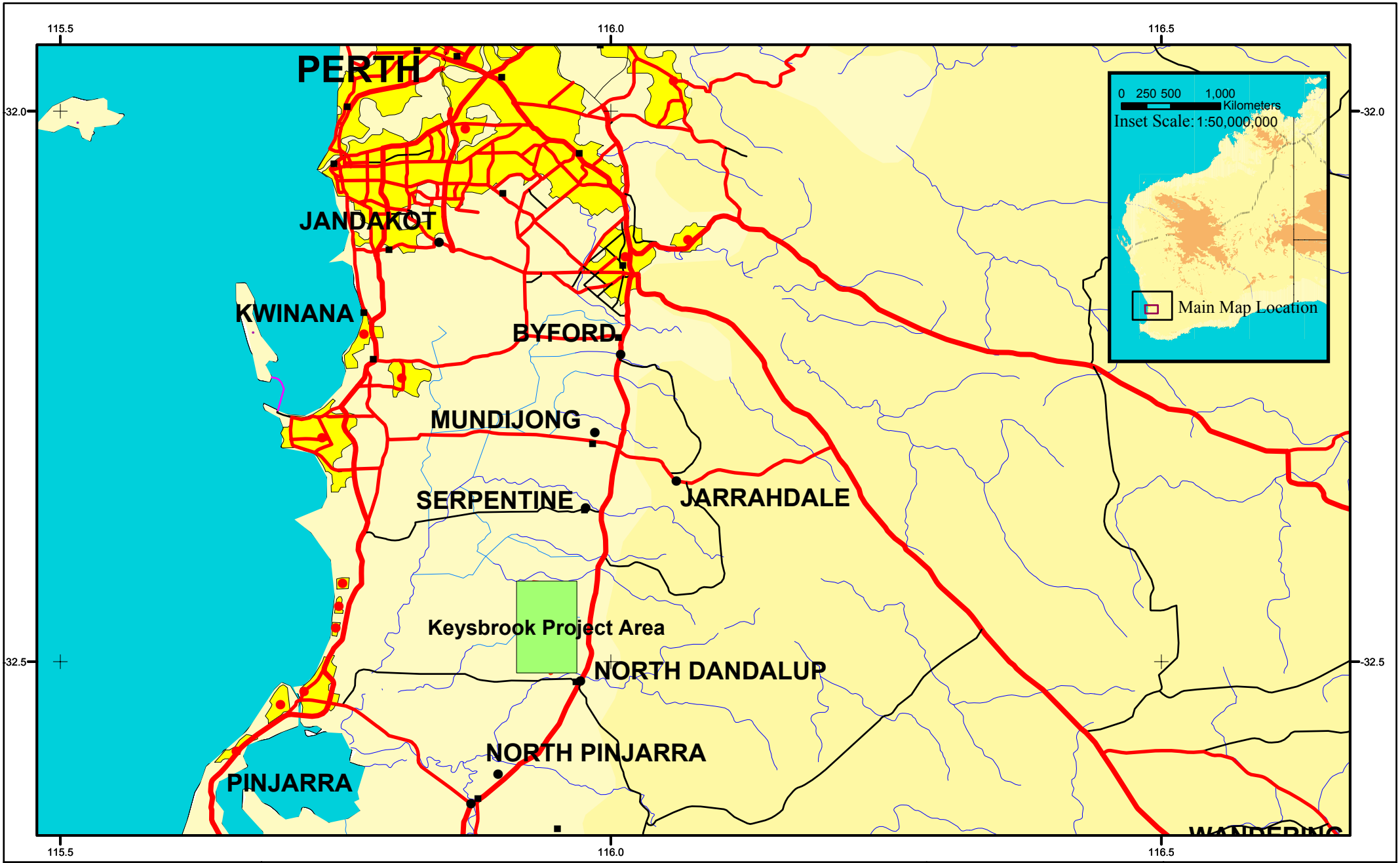
FIGURES



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Olympia Resources
Keysbrook Project

Location Plan

Figure 1

Figure 2- Generalized Mineral Sands Mine Layout