

## Quarterly Report to ASX

for the period

1 April to 30 June 2014

### Highlights

#### **WIM150 Project Victoria – Australian Zircon 80% Owner and Operator**

- **Project Funding** Financial advisers Gresham Advisory Partners hosted meetings for the Company with prospective cornerstone investors and debt and equity providers. Discussions are ongoing.
- **Optimisation complete**  
Optimisation of the Project defined in the 2013 Bankable Feasibility Study was completed and subjected to a Value Engineering review. Two further bulk samples were processed using industrial and pilot-scale equipment. Physical and chemical characteristics of the optimised products were determined and priced to market. Capital and operating cost estimates were derived and entered into the Corporate and Project financial models. Preparation of the final Optimisation report is in progress.
- **Supply and Offtake Agreements**  
Marketing discussions are ongoing. The Company has previously announced execution of a contract to sell **37.5%** of its share of production to WIM150 partner Orient Zirconic Australia Pty Ltd for the life of the mine.
- **Environmental and Community Engagements**  
Environmental studies required for completion of a finalised Environmental Effects Statement are in progress, as is engagement with relevant Federal, State, and Local government agencies, landholders and the local community generally.
- **Pilot plant Zircon Upgrade trials**  
Engineering work continued through the Quarter and will be followed by production trials. This work is scheduled for completion by the end of July.

## 1. Operations

### 1.1 Project Finance

Financial Advisers, Gresham Advisory Partners hosted meetings for the Company with prospective cornerstone investors and debt and equity providers. Discussions are ongoing.

### 1.2 Optimisation

A review of the Project was completed under the following headings:

- **Groundwater**  
An aquifer was identified by drilling which flowed water potentially suitable for use in the process plant. Definition of the resource will be undertaken during final design stage of development. Project water requirements are currently provided for under Memorandum of Understanding for surface water with the local water authority. Groundwater usage for ore processing is less expensive, both in capital and operating cost terms, than surface water.
- **Mine Scheduling**  
The results of Mineral Resource and Ore Reserve drilling undertaken late in Bankable Feasibility Studies were brought into account for mine scheduling purposes. A more efficient and more value creative sequence of mining schedules has been prepared.
- **Mining Method**  
Favourable results from stabilisation of co-deposited sand and slime tailings trials prompted redesign of the mining method which will now use scrapers for movement of overburden. Overburden will be picked up ahead of the mining face and replaced directly on top of stabilised tailings behind the mining void, with a consequent reduction in operating cost.
- **Ore-loading scrubbing and pumping**  
Capital equipment and operating practices pertinent to ore-loading, scrubbing and slurry-pumping were reviewed. Value-accretive improvements were made to both equipment configuration and operating practices.
- **Tailings Stabilisation**  
Parameters which will permit a more efficient use of rheology modifier were established as a consequence of successful settling tests. The nett effect of these findings is to enable overburden to be replaced directly on top of consolidated tailings. A further benefit will be an increase in the amount of water to be recovered from tailings for reuse in the process plant.
- **Value Engineering**  
Engineering construction and practice across the full spectrum of operational activity was critically reviewed. Improvements to operational effectiveness and efficiency were identified.

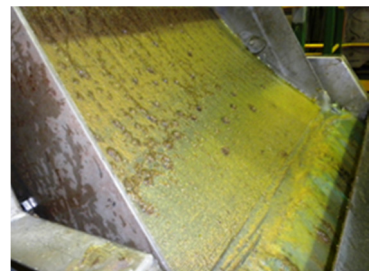
- **Mineral Processing**

Improvements in both recoveries to product and product quality were achieved in mineral processing studies which made use of two bulk samples, one of 2.6 tonnes and one of 2.34 tonnes:

Testwork included the following steps:

- Coarse screening and cyclone desliming.

- 250 micron screening of deslimed ore pulp facilitated improved recovery of valuable heavy metals to Product



- Spiral concentration of heavy minerals in Rougher and Cleaner Spirals showed improved recoveries to Heavy Mineral Concentrate when trialled with pre-screened ore pulp.



- Recovery of heavy minerals from Spiral middlings and tail streams improved through use of Kelsey Jigs in the wet concentration circuit



- Froth flotation was confirmed as an effective means of recovering zircon to a raw zircon concentrate.



- Pilot-scale engineering trials of the zircon - upgrade stage are presently underway. The image opposite is of **zircon product** from an earlier phase of Optimisation study testwork.



- Froth flotation and gravity cleanup was confirmed as an effective means of recovering **Rare Earth Phosphate** to product.



- Magnetic and conductivity separation was confirmed as an effective means of recovering **Sulphatable Ilmenite** to product.



- Gravity and conductivity was confirmed as an effective means of separation and recovery of **T95 product** (rutile).



- Gravity and conductivity was confirmed as an effective means of separation and recovery of **T93 product** (HiTi).



- Gravity and conductivity was confirmed as an effective means of separation and recovery of **T80 product** (leucoxene).



The physical and chemical characteristics of each of the recovered products were determined.

Annual rates of production of each mineral product, capital and operating costs and product prices were estimated and entered into Project and Corporate Financial Models with the following results:

### **1.3 Supply And Offtake Agreements**

Marketing discussions are ongoing. The Company has previously announced execution of a contract to sell **37.5%** of Australian Zircon share of production to WIM150 partner Orient Zirconic Australia Pty Ltd for the life of the mine.

### **1.4 Environmental And Community Engagement**

Studies required for completion of a finalised Environmental Effects Statement are ongoing, together with engagement with the relevant Federal, State, and Local government agencies, landholders and the community generally. Seasonal surveys for federally listed species of fauna are underway, structured in accordance with Federal Government survey guidelines.



The WIM150 Project landscape is generally subdued



## 1.5 Pilot Plant Zircon Upgrade Trials

Engineering trials to determine induction furnace load and discharge characteristics are underway and are scheduled for completion in mid July. This work will be followed by production trials using 4 tonnes of Murray Basin zircon together with requisite reagents. Upon completion, WIM150 zircon will be trialled through the optimised configuration.

Trialling WIM 150 zircon through the Optimized zircon upgrade Pilot Plant will signal completion of the WIM 150 mineral processing testwork programme. Results are expected to confirm preceding results.

The engineering design aspects of this work mark the beginning of Final Design – the development phase which precedes Construction.

## 1.6 Work Planned

- Discussions with potential funding partners will be progressed.
- Reporting of completed Testwork and Engineering studies will be finalised.
- Zircon upgrade testwork will be completed and engineering and testwork results will be reported. Results will be integrated into the Final Design engineering programme prior to plant construction.
- Environmental studies will continue to be pursued and engagement with Government agencies and with the community will continue.
- Engagement with additional prospective offtake partners will begin.
- Work will progress through Final Design.



## 1.7 WIM150 Joint Venture

The WIM150 Joint Venture between Australian Zircon NL and Orient Zirconic Resources (Australia) Pty Ltd crystallised on 3 September 2013.

Joint Venture participating interests are:

- Australian Zircon NL **80% and Operator**
- Orient Zirconic Resources (Australia) Pty Ltd **20%**; Orient Zirconic is an end-user of zircon and it is Operator of the Mindarie zircon and titanium mineral sand mine in the western Murray Basin. Orient Zirconic has contracted to purchase 30% of Project production, in addition to the 20% of production which attaches to its 20% equity interest.

## 1.8 WIM150 Project Status

Australian Zircon reported to the ASX (26 July 2013) that **Proved and Probable Ore Reserves of 552 million tonnes of 4.3% total heavy mineral** had been defined at WIM150. This Ore Reserve is included in a Measured, Indicated and Inferred **Mineral Resource base of 1,650 million tonnes of 3.7% total heavy mineral** as reported to the ASX on the 18 June 2013.

Both the Ore Reserve and Mineral Resource estimates quoted in this announcement should be read as summaries of the original announcements. Australian Zircon confirms that the data contained in this release complies with the requirements of ASX Listing Rule 5.23.2:

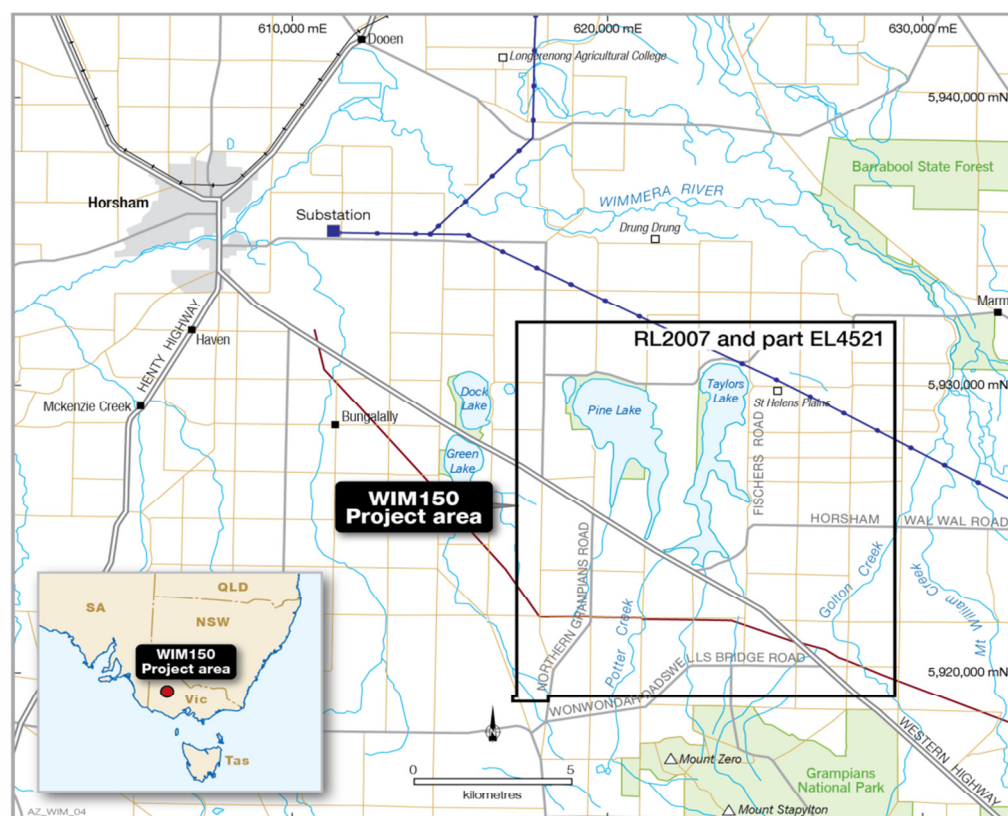
*"The entity confirms in the subsequent public report that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed."*

Independent Mining Expert Optiro Pty Limited has determined a Waste/Ore ratio - after removal of soil and subsoil - of **0.5 to 1**. WIM150 is also well-located with respect to infrastructure.

State Electricity Victoria mains power, the Gas Pipeline Victoria trunkline, the Grampian Wimmera Mallee Water trunkline, the Melbourne - Adelaide standard gauge railway and the Melbourne - Adelaide Western Highway all pass close to the planned development.

A range of social and industrial amenities, including permanent and temporary accommodation, health care, schooling, skilled labour and engineering facilities are available in the nearby regional centre of Horsham.

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## 2. Finance

### Support from DCM

The Company's major shareholder - DCM DECOMetal GmbH 'DCM' - continues to provide funding for the Company's ongoing operations.

### Cash Position

At the end of the Quarter, the Company had cash at bank of \$356,929.

All references to dollars in this report relate to Australian dollars unless otherwise stated.

## 3. Corporate

### ASX

The Company's shares are listed on the Australian Securities Exchange (ASX) with the code **AZC**. Trading in the shares, however, is currently suspended. The Company's balance sheet reflects a substantial negative equity position, and resolution of this matter with DCM, the major creditor, is required before consideration can be given to resumption of trading. Discussion with DCM on this matter is continuing.

### Corporate Information

#### Directors

Jeremy Shervington	Non-Executive Chairman
Gerhard Kornfeld	Non-Executive Director
Thomas Styblo	Non-Executive Director
Johann Jacobs	Non-Executive Director

#### Company Secretary

Graham Seppelt

#### Senior Management

David Clarke	Project Coordinator
Andrew Reeves	Project Manager
Emma Vogel	Development Manager
Darren Klingner	Technical Services Manager

#### Further Information

Visit [www.auzircon.com.au](http://www.auzircon.com.au)

or contact:

Mail: Australian Zircon NL  
PO Box 8242, Station Arcade South Australia 5000

Phone: +61 8 7325 6500

Facsimile: +61 8 8212 6818

Email: [info@auzircon.com.au](mailto:info@auzircon.com.au)