



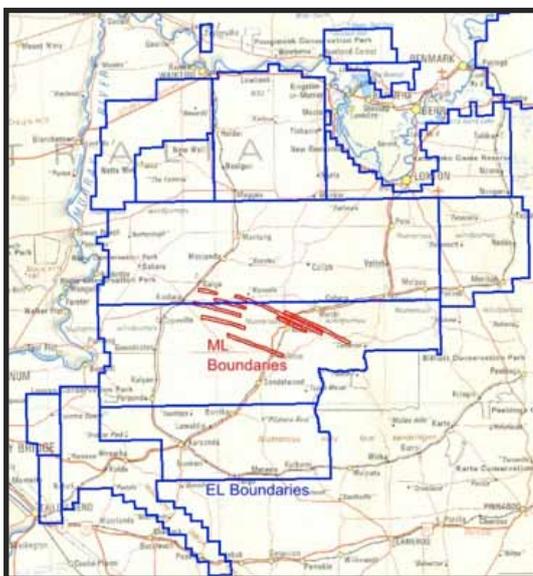
## Fact Sheet

**Murray Zircon Pty Ltd is the newest mineral sands player in the South Australian mining sector and has set its sights on becoming a sustainable mineral sands producer for the long term.**

### What is Murray Zircon?

Murray Zircon Pty Ltd (MZ) was formed in 2011 as the initial entry in the mineral sands mining in Australia by Guangdong Orient Zirconic Ind Sci & Tech Co. Ltd (OZC).

MZ's assets include exploration licences (ELs) covering more than 11,000 square kilometres, nine mining licences (MLs), and a mineral sands processing facility (Primary Concentrator Plant and Mineral Separation Plant) located at the Mindarie Project. (See separate fact sheet for Mindarie Project.)



Above: Exploration Licences (EL) and Mining Licences (ML)

### What are mineral sands?

Mineral sands are natural beach sands containing economic quantities of heavy minerals including zircon, rutile and ilmenite. Long, narrow strands of these ancient beaches located 5-15 metres below the current ground surface are mined and the heavy minerals removed

using gravity separation to make a Heavy Mineral Concentrate (HMC). HMC is then further processed to separate the various heavy minerals into individual product streams of zircon, rutile and ilmenite.

### What are heavy minerals used for?

Heavy minerals are used for a wide variety of commercial and industrial applications in both low-tech and high-tech industries.

Zircon is used in a wide range of products including ceramics, electronics, aviation equipment as well as in antiperspirants. Rutile is predominately used in paint pigments, welding electrodes, refractory materials, ceramics and also in sunscreen. The principal uses for Ilmenite are as a pigment in paints and paper, as a flux in steelmaking and as refractory material to line high temperature furnaces.



Top Left: Heavy Mineral Concentrate

Top Right: Zircon

Bottom Left: Rutile

Bottom Right: Ilmenite



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### What is Orient Zirconic?

Guangdong Orient Zirconic Ind Sci & Tech Co. Ltd (OZC) is one of China's largest zircon processing companies. OZC also produces the most diverse line of zirconium-based products in China. As the largest shareholder of MZ, OZC intends to purchase the zircon produced by MZ for use in its various zirconium products manufacturing facilities in China.

### What are MZ's mineral resources?

Murray Zircon has estimated mineral resources totalling 165 million tonnes or ore grading 3.2% Heavy Mineral (HM) in the measured and indicated categories in accordance with the JORC Code. This level of resources is sufficient to support a mine life of 15 years or more depending on production levels. In addition, MZ has an active exploration program targeting additional resources and reserves.

### What is the Mindarie Project?

Murray Zircon's flagship asset is the Mindarie Mineral Sands Project. It is located 150km east of Adelaide in the Mallee Region of South Australia.

Following MZ's formation in 2011, the Mindarie Project was redeveloped with significant improvements to the primary concentration plant (PCP) and the installation of new slurry pumping systems and slurry mining unit (SMU) as well as the construction of a new mine.

The Mindarie Project also includes a 55-man mining camp constructed in the fourth quarter of 2012.

Mining at Mindarie restarted in October 2012 and commissioning of the SMU and PCP started in December 2012.



Above: Primary Concentration Plant (PCP) at Mindarie

### Environmental

A key requirement in the regulatory approval process for Murray Zircon for mining and processing to begin at the Mindarie Project was the lodging of a Program for Environmental Protection and Rehabilitation (PEPR).

The PEPR contains all the details of the proposed mining methodology including all the measures to be taken to protect the environment as well as the monitoring and reporting steps to demonstrate protection.

In addition, the PEPR contains specific procedures and controls to ensure full rehabilitation of mining areas to pre-mining conditions before the land is returned to the landowners. (A copy is available at [www.murrayzircon.com.au](http://www.murrayzircon.com.au)).



Above: Rehabilitated Mine Area at Mindarie

### Additional Information

[www.murrayzircon.com.au](http://www.murrayzircon.com.au)