KALBAR RESOURCES LTD

Fingerboards Mineral Sands Project

The FACTS about Mineral Sands Mining

The mineral sands industry has a demonstrated track record of mine rehabilitation across Australia. The unique nature of mineral sands mining allows the removal of a small fraction of the ore as concentrate and leaves between 90-98% of the material for total rehabilitation of the mine site. Proven rehabilitation practices result in a return of the land to productive agriculture or native bushland within a few years.

What are Mineral Sands?

Mineral sands are ancient beach sands that contain concentrations of valuable minerals.

Zircon, Rutile, Ilmenite and rare earths are all mineral sands products that are essential to many household, industrial and technological applications, including:

- Ceramics, including tiles, bathroom fixtures and tableware.
- Paints, pigments, toothpaste, sunscreen, cosmetics, and foodstuffs.
- Transport, communications and aeronautics, including aircraft frames, spacecraft, and computers.
- New technologies, including electric vehicles, mobile devices, televisions, medical prosthetics, water filtration, wind and solar power.

How are mineral sands mined and extracted?

Mineral sands are usually mined using open cut methods. Top soil and overburden is removed and stored. The ore is then removed using conventional earthmoving equipment.

Mineral Sands mining is not comparable to the mining of coal, gold, copper or other metals.

The Wemen mine during production in 2003 (left) and after rehabilitation in 2017, returned to irrigated horticulture (right).

Mineral concentrate (the heavier particles of sand) are extracted using gravity and magnetic processes. No harmful chemicals are used.

Approximately 96% of the ore is then returned to the mine void, overburden and topsoil replaced and the land is revegetated to return it to its previous uses.

How long does rehabilitation take?

Previously mined areas are usually rehabilitated within 3 years of mining. Unlike other forms of mining, mineral sands mining involves the progressive rehabilitation of the mined areas as the mining progresses.

Are there any examples of rehabilitated mineral sands mines?

There are many examples of rehabilitated sand mines in Australia.

The Wemen mineral sands project in an irrigated farming area near Mildura. The land owner is the largest grower of carrots in Victoria. The land is back in full agricultural production.

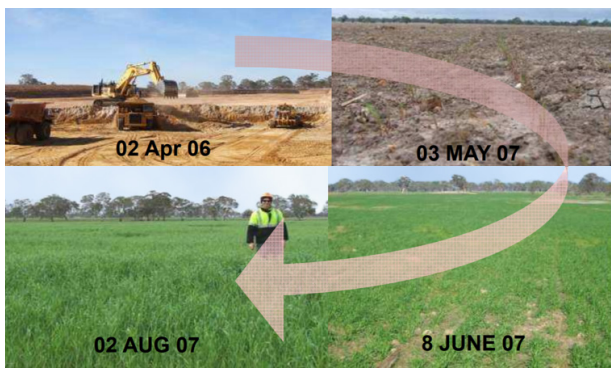
The Yoganup mine in south-west WA, 10 kilometres from the town of Capel. Iluka Resources mined 1.9 million tonnes of heavy mineral concentrate from the site, which was previously a dairy farm. The dairy farm contained two watercourses. In addition to reconstructing the waterways, a riparian and farm tree belt vegetation planting program created new habitat for bird and aquatic life. The land was returned to its former use as a dairy farm.

A safe and proven mining industry in Australia

Australia has been a major mineral sands producer for almost one hundred years. Mineral sands mining has occurred all around the country in many different agricultural and environmentally-sensitive settings.

Yoganup mine during mining (left) and after mining (middle). The restored Tiger Gully at the Yoganup mine (right).

The Echo deposit in the Wimmera, Victoria in 2011 (left) and rehabilitated in 2016 (right).



Rehabilitation of the Iluka mineral sands mine at Douglas (South) in Western Victoria.

Mineral sands are used in a wide range of everyday products and are vital to sustainable technologies.

Contact us

If you have any questions or require further information, please contact us.

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