RioTinto

Bundoora Technical Development Centre

THE THE DESIGNATION

The role of partnerships in delivering complex metallurgical projects

October 2021

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Jadar

Greenfield Project





Unique mineral





Battery grade products





RioTinto ©

Technical Development with an implementation focus

Only central development laboratory within Rio Tinto for Group-wide multi-commodity support with a low barrier to entry for our partners

Column leaching facility

External view of the Bundoora Technical Development Centre



Advanced orebody characterisation

Sample preparation







Jadar pilot plant



Flexible test work areas



Our Core Capabilities

Our Purpose: Supporting growth and closure studies, orebody discovery and asset related process, water and tailings development and support work

Process Development

De-risking complex metallurgical processes, cross-commodity insights to process development



Leaching pilot plant (up to 300 tonnes)

Geometallurgy

Advanced characterisation techniques for orebody discovery and metallurgical insights



OBK via quantitative mineralogy

Water, Waste & Tailings

Innovative approach to water recovery, tailings disposal and dewatering costs, and minimising environmental impact/ footprint





Dewatering design and optimisation

We maintain our competitive advantage by continuing to develop these core capabilities









Process Development: New mineral, unique process

De-risking through orebody knowledge, testwork, modelling and partner engagement

Process Development

Process development approach includes:

Geometallurgy analysis, small scale testwork, continuous piloting, modelling, vendor tests, product refining



Bringing cross-commodity insights to process development

Geometallurgy

Unique minerals: metallurgical insights through advanced characterisation techniques



OBK: knowing where the Li is and how best to extract it

Water, Waste & Tailings

Tailings importance: rheology, consolidation and geochemistry properties for TSF design



Understanding the tails characteristics and site options

RioTinto C

We supply materials essential to a low-carbon economy







Lithium Used in rechargeable batteries, powering green technologies

B

Borates

A vital ingredient of energy-efficient building materials and fertilisers, which help to feed the world's growing population



We supply materials essential to a low-carbon economy

Cu

Copper Primary conductor in the world's electrical infrastructure

A

Aluminium Light, strong, flexible, corrosion-resistant and infinitely recyclable Fe

Iron ore Used in steel, the fundamental building block of industry and infrastructure

B

Borates A vital ingredient of energy-efficient building materials and fertilisers, which help to feed the world's growing population TiO₂

Titanium dioxide Used in a wide variety of everyday products Lithium Used in rechargeable batteries, powering green technologies

