

# WIM Resource Avonbank

Iron Ore processing

## In 2020 Mineral Technologies delivered a relocatable modular plant for WIM Resource in Victoria, Australia.

Following successful testing, Mineral Technologies provided key metallurgical support for Mineral Separation Plant (MSP) testwork and assisted with the production of final, saleable zircon, rare earth and titanium mineral concentrates.

- Overall footprint (excluding thickener and feed hopper/transfer conveyor) similar in size to a standard tennis court.
- Fully relocatable 10tph pilot plant.



#### **Project Profile**

### WIM Resource - Avonbank



#### **Services Provided**

- Metallurgical testing
- Flowsheet development
- Engineering design and supply of a relocatable pilot plant
- Process equipment supply
- Site construction and commissioning of the relocatable pilot plant
- Site Operation

#### **Highlights**

- Fully relocatable 10tph pilot plant
- Pilot plant designed to meet Avonbank's fine particle size of 50-60 microns
- Pilot plant helped WIM Resource confirm separation of heavy minerals from the ore in line with required grade and recovery specifications
- Pilot plant easily transportable on flatbed semi-trailers or shipped as break bulk (not in a container)
- Overall footprint (excluding thickener and feed hopper/transfer conveyor) similar in size to a standard tennis court

#### Latest Technology

The pilot plant at Avonbank incorporates MG12 and HG10i spirals operating in a four-stage (rougher, scavenger, cleaner and recleaner) circuit. The equipment is housed in a modular frame which is easily relocatable.

#### **Smart Engineering**

WIM Resource engaged Mineral Technologies to deliver a process solution for the Avonbank test-pit project to demonstrate extraction of heavy mineral concentrate in line with grade and recovery targets.

The project began with extensive metallurgical testing at Mineral Technologies Australian testing laboratory. With small particle sizes averaging 50-60 microns (as opposed to the more typical 100-200 microns) metallurgists used the full range of industry standard testing procedures to explore options to process the valuable minerals which included titanium, zircon and rare earths.

Working within WIM Resource's challenging delivery schedule, Mineral Technologies developed a process flowsheet and designed a relocatable modular plant, incorporating MD spirals and associated facilities, that could be quickly assembled and commissioned onsite. To meet WIM Resource's tight project budgets, Mineral Technologies delivered the relocatable pilot plant on a long-term rental agreement.

The project delivery team included metallurgists, engineers, manufacturing and logistics specialists providing onsite technical expertise to assemble and commission the pilot plant. The pilot plant was commissioned within two weeks with assistance from local contractors.

Following successful testing, WIM Resource engaged Mineral Technologies to deliver key metallurgical support for Mineral Separation Plant (MSP) testwork and to assist WIM Resource with the production of final, saleable zircon, rare earth and titanium mineral concentrates.

Local publisher *The Weekly Advertiser* featured a news story about the project which included a video of the pilot plant in operation. Visit this link to view the news story and video.











