

Massive magnetite play changing the Pilbara

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CHINA is taking a long-term view with the Sino Iron magnetite project in Western Australia's Pilbara, with exports expected to begin next year. Kate Haycock reports from Cape Preston.

When CITIC Pacific Mining exports its first tonne of magnetite concentrate from the Sino Iron project at Cape Preston, it will change both the nature of Australia's iron ore industry and the Pilbara.

Few new projects in Australia come close to matching the size, expense and technically challenging nature of the project.

From the ultra-class mining fleet utilising the biggest trucks and shovels in the world, the huge in-pit crushers, six of the world's biggest AG mills and ball mills, the highly efficient gas-fired power station and the plan to build a 2.6km breakwater at Cape Preston, to the new port infrastructure and 25km slurry pipeline, the development will end up costing around \$US3.85 billion (\$A4.9 billion).

And while magnetite is more expensive to produce than the mainstay of the Pilbara – haematite or direct shipping ore – the vagaries of the iron ore price do not concern CITIC Pacific Mining's chief executive officer, Barry Fitzgerald.

“Surety of supply is key,” he told journalists yesterday on a tour of the project.

“This is a 25-year project and we have the rights to an additional 4 billion tonnes, and this means this project is a long-term, stable supply of quality iron ore.

“I think we need to look beyond the next year or so and see this as a long-term production.”

Fitzgerald also said he believed the Chinese iron ore market would continue to grow and be stable in the long term.

CITIC – owned by a Hong Kong-listed trading house and miner, which is in turn owned by a Chinese state-backed firm – is looking to export around 27.7 million tonnes of magnetite product each year from the operation over a 25-year mine life.

“CITIC Pacific has a large specialty steelmaking capacity in China and we see ourselves as being a vertically integrated processing facility, so we will have the iron ore mine, we have the steelmaking in China, and we have also purchased some vessels to allow efficient transportation between here and our mills in China,” Fitzgerald said.

The project will mine a massive magnetite pit some 3.5km long, which in size terms is nothing new in the Pilbara. However, the district has traditionally exported higher-grade DSO, not magnetite.

Magnetite generally grades around 30% iron while haematite, in some parts of the Pilbara, can grade up to 63% iron.

As a result, **magnetite** ore needs additional processing to create a product that can be used in steel mills.

At Sino Iron, the **magnetite** ore will go through a multi-stage process of crushing, grinding and concentration. Some of the concentrate will then be transported via a slurry pipeline to the port facilities and shipped directly to China.

CITIC also plans to build a 6Mt per annum capacity pellet plant at Cape Preston, which will create direct reduction pellets that can be used directly in steel mills.

The concentrate and the pellets cost substantially more to make than it does to dig up and ship haematite (direct shipping ore), which requires minimal screening before being sent to steel mills.

However, the pellets in particular are generally higher grade than DSO and offer benefits for steel mills, including reduced electricity usage and reduced costs, and so fetch a higher price than DSO.

“The **magnetite**, while it has to be processed, ends up as a consistent high-quality product, so we have a stable, long-term, high-quality supply,” Fitzgerald said.

Carbon savings

CITIC’s CEO was also keen to point out that while it takes more power domestically to produce the **magnetite**, the power savings for the end user are significant – a factor which will become increasingly important in a carbon-constrained world.

To this end, a group of potential **magnetite** producers, including CITIC, has created the **Magnetite** Network (MagNet) to lobby the federal government over how **magnetite** mining and processing will fit into the proposed emissions trading scheme.

“**Magnetite** actually has a lower carbon footprint on a worldwide basis between production and the mining of iron ore and production of the first tonne of steel,” Fitzgerald said.

He told journalists he was confident the government would not embrace a punitive system and CITIC had been speaking with the government to explain the new industry.

“We want to make sure that we’re not unduly penalised as an industry and we’re given the opportunity to make sure the processing we do in Australia does have the corresponding reduction in China.”

Aggressive targets

Also impressive has been the project’s timeline – first earth was turned around a year ago, and Fitzgerald said yesterday the company was still planning on first production in the third quarter of next year.

However, CITIC has hit some slowdowns in its schedule, which even Fitzgerald admitted was “tough and aggressive”.

“There’s no doubt our target has moved backwards from where we were ... we’ve had a whole pile of issues come up,” he said.

At least some of these delays were due to Western Australia’s notoriously slow approvals process, but Fitzgerald said issues were to be expected with a project this size.

Even with production expected to start next year, it will take some time for the Sino Iron project to reach full completion, with the pellet plant not coming into production until 2011-12.

Additionally, Fitzgerald said the project’s capital costs had also increased but this reflected the increasing scale of the operations, which could potentially be expanded further if CITIC exercised the rights over the remaining 4 billion tonnes in its agreement with Australian mining magnate Clive Palmer.

CITIC only inked the original agreement over the tenement area with private company Mineralogy and its larger-than-life chief executive Palmer in 2006.

CITIC paid \$US215 million for the rights to mine an initial 1 billion tonnes from the project, and then another \$200 million for the next 1Bt.

Tomorrow *MiningNews.net* will take a closer look at the technically impressive mining operation planned for the Sino Iron project.