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# ONBARK ZINC LVANISED INTO ACTION

Australian explorer Ironbark Zinc anticipates that its globally significant zinc-lead project in Greenland will one day fill a growing gap in the market.

**AUSTRALIA** 

**ZINC IS THE** world's fourth most used metal globally, with 50% of it going towards galvanising – a zinc plating process that prevents steel, used in everything from construction materials to vehicles, from rusting. Global zinc consumption is expected to increase by about 3.5% each year, due in no small part to Chinese steel producers increasing their galvanisation in order to meet western standards.

Chinese steel producers currently galvanise just 4% of the total steel they produce, compared with 18% of steel produced in the western world. Where the Chinese do galvanise, they use just a quarter of the zinc that western brands use per unit of steel. As Chinese manufacturers increase their exports to western countries, they will need to increase the galvanisation of their steel products to match western standards. It follows that the country's demand for zinc will continue to rise as China's international trade grows.

Meanwhile, global zinc supply is depleting. Many of the world's largest zinc mines are running out of ore and heading towards closure in the short to medium term. One of the world's top five largest zinc mines, with a production rate of 200,000tpa and operated by Xstrata, shut earlier this year. Even when taking into account the mines scheduled to start production within the next five years, it is estimated that global zinc supply will fall by 11% in that period. These forecasts give Australian exploration company Ironbark Zinc Limited (ASX: IBG) great confidence in the future profitability of the zinc mine it is developing in Greenland and in its base metals projects in Australia. Managing Director Jonathan Downes predicts some "very strong prices in the near future" as zinc falls into deficit.

#### **Greenland**

Ironbark's most significantly advanced asset is the Citronen Zinc-Lead Project in northern Greenland, which, with more than 13 billion pounds of contained zinc and lead metal, represents one of the world's largest undeveloped zinc-lead resources. Downes says the project is "globally significant" and "by far" the company's top priority.

"We've spent US\$50 million on Citronen, taking it through the feasibility study," he adds. "We've done 65 kilometres of diamond drilling on it, metallurgical test work and pilot work on several tonnes of material, so it's a very advanced project and one we've put the bulk of our resources into."

Greenland has a number of operating mines and a history of zinc and lead mining; at one point, it hosted the world's highest-grade lead-zinc mine of its time. Downes recently visited the country's new mining school, opened as part of its drive to grow its minerals industry. The Greenland government has a "pro-active mining mentality," he says,





and only one regulatory bureau for the extractives industry, the Bureau of Mining and Petroleum (BMP). This makes project applications simpler and contributes to the country's standing as a "low-risk investment environment."

Greenland's supportive government was part of what attracted Ironbark to the Citronen project, but the largest attraction was its geology. "It's very prospective and also relatively underexplored," comments Downes.

"We were invited to participate in buying the Citronen project, which at the time was a very large lead-zinc project that was only half-delineated. It was discovered in 1993 but the owner went bankrupt in 2000 when the base metal prices collapsed. We jumped at the opportunity to develop a quality project that was already half discovered."

Earlier this year, after six years working in the country, Ironbark was awarded the Greenland Prospector and Developer of the Year Award. Downes attributes this achievement to the company's ability to "operate in a very environmentally friendly manner," containing the site and minimising environmental impact. "I see it as a very kind acknowledgement of Ironbark's work and efforts," he adds.

## <u>Citronen in numbers</u>

Ironbark released a Feasibility Study for the

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Citronen Zinc-Lead Project in April that showed it was set to become a "long life, robust, simple mine that utilises off-the-shelf technology," says Downes. "There's nothing complicated about it."

The current plan gives Citronen a 14-year mine life, over which period it is estimated to make US\$5.65 billion in revenue. Its Net Present Value is \$609 million (\$354 million post-tax) and its Internal Rate of Return 32% (22.2% post-tax). Its capital cost is estimated at \$429.3 million including contingency (\$484.8 million with first fills included) and operating cost \$0.68 per pound of zinc.

Although the project site is remote, with no useful existing infrastructure save one small airstrip, its location is advantageous for export. "We're very well situated on a permanent rock outcrop above deep open water, which provides access to both North America and Europe," explains Downes. This position will allow Ironbark to ship product directly from the mine, rather than transporting it to a port via a specially built road or rail line. However, the company will still need to build a port, a larger airstrip than the one existing, a full accommodation camp and a means of power generation. The mine will necessarily utilise a fly-in, fly-out workforce.

Ironbark aims to award the EPC contract for Citronen to China Nonferrous (NFC), one of China's largest state-owned enterprises. In addition to undertaking engineering, training and commissioning on the mine, NFC has committed to facilitating funding for 70% of the EPC contract. NFC also retains the option to purchase up to a 20% stake in the Citronen project. Further support comes from strategic partners Nyrstar, the world's largest lead and zinc smelter house, and GlencoreXstrata, who owns 11% of Ironbark and put US\$50 million into an M&A facility designed to promote Ironbark's growth.

One of the Citronen mine's largest advantages is the "clean concentrate" it will produce, free from the deleterious elements such as arsenic or manganese that plague other mines, says Downes. He says the mine itself will also be "very clean" as there will be no chance of acid mine drainage and ore could be processed on permanent barges. These ships will also hold most of the construction components and mine equipment.

Ironbark hopes to be mining at Citronen as early as 2014, processing in 2015 and employing full-scale production in 2016.

#### <u>Australia</u>

Ironbark has a number of less-developed base metals projects in Australia, the most prominent being the Peakview Project in New South Wales and the Captain's Flat Project outside of Canberra. On 1 May 2013, the company released rock chip



results for the Peakview Project that identified high-grade gold and copper at the Fiery Creek and Macanally Prospects, which although historic remain largely untested by drilling.

Peak gold results included 253g/t, 94.8g/t, 91.5g/t and 53.4g/t, while peak copper results included 14.9%, 7.6% and 6.6%. Encouraged by these results, Ironbark is now awaiting government approval to drill at Peakview.

"We have had an extraordinary amount of success there – it's a very substantial length of workings," says Downes. "It's a narrow system, or there are several narrow lodes near to each other, and we're very excited by the extraordinary tenor of the results we've received."

According to Downes, the Captain's Flat Project is part of a large geological system from which Weston Mining historically achieved high-grade drill results of up to 5% copper. Early drill work here by GlencoreXstrata intercepted several zones of mineralisation in drill hole JRDD1201 at the



Jerangle Prospect, including 2.6m at 10g/t silver, 0.2% copper and 6% lead and zinc.

"We've identified some very broad mineralisation and we're trying to work out the orientation of the system to identify where the higher grade copper zones are," explains Downes. "At this point we're unravelling a mystery, but it's still very encouraging."

## Filling a gap

Over the next 12 months, Ironbark aims to complete the EPC contracting for the Citronen Project with China Nonferrous and to complete the project's financing, in addition to gaining drilling exploration results at its Australian projects. "Equally important to all that is our focus on closing some M&A to add value to the company overall," Downes adds.

"We're dedicating quite a bit of our time and effort into utilising this M&A facility from GlencoreXstrata. There are some very interesting opportunities out there, as the tough market conditions have put many companies under stress. We'd love to get an operating mine into the company at an early stage, while we commission our big mine [Citronen]. I think that would be a very sensible transition for our business."

Looking further into the future, Downes sees a significant gap in the market into which Ironbark aspires to grow. "There's a huge vacuum of mid-cap-sized mining companies in Australia now," he remarks.

"Simultaneously, there are very few mining companies focused on lead and zinc operating in Canada. We aspire to step into that space and grow into a multi-operation, high-value mining company." **IR**]

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