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Talvivaara sulphide nickel mine financing

Luke Cornish

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Banks are sometimes asked to arrange financing for a project on a very tight timetable due to external factors affecting the project - this is what was asked of lenders financing Talvivaara Mining Company's operations in Finland

The MLAs managed to arrange a funding package just three months after being mandated in order to pre-empt an imminent IPO - and that after taking a cold, hard look at one of the most innovative technical mining projects in Europe.

The project centres on the extraction of ore from two polymetallic deposits in Kuusilampi and Kolmisoppi, in Sotkamo, Eastern Finland. The deposits comprise one of the largest known sulphide nickel resources in Europe with 266 million tonnes of ore.

Nickel production at the mining sites is expected to commence in 2008 with Talvivaara expecting an annual output of about 33,000 tonnes.

Continuing at that rate, the company has the potential to supply more than two per cent of the world's annual nickel production by 2010.

On top of that, the Talvivaara mines will also produce 60,000 tonnes per annum of zinc and 10,000 tonnes per annum of cobalt as by-products of the nickel extraction process.

Bioheapleaching will be the main technology used to extract metals from the sulphide nickel ore deposits - which Talvivaara bought from Finnish stainless steel producer Outokumpu in 2004.

Linked into the deal, is an option for Outokumpu to acquire a 20 per cent stake in the company, which it exercised as well as buying a 4.9 per cent stake at a 20 per cent discount.

Technology

Extraction by bioheapleaching technology is unproven for use with sulphide nickel deposits, adding an element of risk to the US$680 million project.

Yet bioheapleaching is already widely used for copper and gold mining and Talvivaara has demonstrated the viability of the technology for use with nickel extraction via large on-site pilot trials.

It is a process where metals are leached from ore as a result of bacterial action. It occurs in nature when triggered spontaneously by micro-organisms in the presence of air and water.

Several physicochemical and microbiological process parameters can be modified in order to enhance and speed up the metal recovery process.

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A primary or secondary sulphide is associated with pyrite which, when oxidised, has the potential to release sufficient quantities of heat.

Cultures of bacteria used in the Talvivaara bioheapleaching process are naturally growing in the ore. The bacteria are endemic to the area and well-adjusted to the prevailing environmental conditions.

Under the auspices of the National Technology Agency of Finland, Outokumpu has developed the process using the Talvivaara ore begun in 1987 at a laboratory in tekes

Financing

Nordea, Societie Generale, Standard Bank and Unicredit/HVB are mandated to arrange the US$320 million of financing for the project in February of this year.

The banks were told that the financing needed to be completed prior to Talvivaara launching its IPO on the London Stock Exchange at the beginning of June.

With each lender underwriting US$80 million of debt, financial close was reached 7 May - a little more than three months after the banks were mandated. That debt will be syndicated in the coming months.

However, project financing for the Talvivaara mines was conditional upon a successful IPO, which was completed on 1 June raising the US$360 million to be used as equity for the project.

Altogether, market capitalisation of Talvivaara was about £557 million (US$1.1bn) after the IPO was completed.

The sponsor was JPMorgan Cazenove, sole global co-ordinator and bookrunner with Nordea Bank acting as co-lead manager.

At 47:53, the debt:equity ratio was conservative, due to the fact that bioheapleaching is a new technology when used for sulphide nickel recovery.

With a single tranche facility with an eight-year tenor, the loan covers a two year construction period. During the construction phase pricing on the loan is set for Libor plus around 350bp, with this dropping by about 50bp once construction work is complete.

Asked about future plans, Talvivaara chief executive Pekka Pera said that the company would not rule out refinancing the project in the future as the company expects deposits at the location to last for more than 24 years.

Norilsk Nickel - the world's largest producer of nickel - has signed a 10-year offtake agreement with Russia 's for its entire output of nickel and cobalt, which will make up 80 per cent of the mines' production.

Knowing it had to get construction work started before the sub-arctic winter set in, Talvivaara was eager to wrap up the financing and the IPO so that it could order long-lead items for the development of the mine.

Nickel

Extraction iof Nickel is spread across four continents, with sizeable operations in Australia, Canada, the Dominican Republic, Finland, Norway, Russia, Venezuela and Zimbabwe.

Roughly 65 per cent of nickel is used to make stainless steel with a further 12 per cent used for superalloys and nonferrous alloys. Aerospace companies consume the most nickel-based superalloys for turbine blades, discs and other parts of jet engines. They are also used by power companies for use in combustion turbines.

Following power, the next most prominent uses are:

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- alloy steels
- rechargeable batteries
- catalysts and other chemicals
- coinage
- foundry products
- plating

Upward movement in the price of nickel have been exacerbated in the past two years by low reserves and an increase in demand led by China and India's rapid economic expansion.

Chief analyst with Metal Bulletin Research Andrew Cole said that the main reason the price of nickel has increased so much over the past 12 months is because a number of significantly delays to mining projects have been, creating a desperate supply shortage.

Key next-generation projects have faced serious setbacks, leading to a situation where exceptionally strong demand growth has coincided with major supply shortfalls resulting in an extraordinarily bullish market. This has reduced global inventories of the metal to critically low levels and sent prices through the roof.

With growth continuing, market investors and speculators have recognised the nickel bull market and have jumped on the bandwagon. This had exaggerated the underlying fundamentally-driven price rise to create an impressive spike to levels nobody would have anticipated just 12 months ago, Cole said

It seems, however, that the nickel bull market has had its day now, because it has come down to US$40,000/tonne from highs around US$55,000/tonne a few months ago. This represents some of the speculative froth coming out of the market.

The timing for this project could therefore not be more critical and the recent activity with global prices for nickel made financing this deal in record time a necessity.

The project at a glance

Project Name	Talvivaara sulphide nickel mines
Location	Sotkamo, Eastern Finland
Description	Sulphide nickel mining operation that will also produce zinc and cobalt
Sponsors	Talvivaara Mining Corporation
Operator	Talvivaara Mining Corporation
Project Duration (Including construction)	26 plus years
Construction Stage	2 years
Offtake Agreement	10-year offtake agreement with Norilsk Nickel for 100 per cent of nickel produced
Total Project Value	US$680 million
Total equity	US$360 million
Total senior debt	US$320 million
Senior debt pricing	Libor plus about 350bp during construction dropping to Libor plus 300bp for remaining six years of loan
Debt:equity ratio	47:53
Mandated lead arrangers	Nordea, Societie Generale, Standard Bank and Unicredit/HVB
Legal Adviser to sponsor	Norton Rose
Legal adviser to banks	Mayer Brown
Technical and commercial adviser	Metso Minerals
Date of financial close	7 May, 2007

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