

Excelsior Mining – Copper Star Rising?

For the last year the copper market has gone from bad to worse and now seems to be in slight recovery mode. This has undoubtedly been helped by a panicked slew of closure notices on mines that were issued last year when even Glencore's survival was in doubt. How many of the mooted closures were actually carried out still remains problematic and it's almost certain that none of the "planned divestitures" ever took place. The owners didn't want to sell and now with the uptick they do not need to. Psychologically though the announcements put a floor under the metal (just below \$2 per lb) and now the tangible reduction in stocks in LME warehouses gives even more reason to be cheerful on the outlook (well, less suicidal rather than cheerful).



Be that as it may there is always a need for pipeline (and affordable pipeline at that). With the tendency (and orthodoxy) of the gargantuan mine in recent decades, the flow of smaller more doable projects was choked off and even those tended to still have capex in the multiples hundreds of millions of dollars. That is still a bridge too far in the straightened financing conditions of recent times. So when we stumbled on Excelsior Mining (MIN.v) that had managed to chop its capex by 80% through some predatory asset buying at a bankruptcy auction and can boast of a cash cost at a third of the current metal price, we thought we had found a rare bird indeed.

The North Star Project

The current properties of Excelsior Mining Corp. (TSXV:MIN | OTCQX:EXMGF) consist of its traditional Gunnison copper

project and the more recently acquired Johnson Camp Mine, which is immediately adjacent. The Gunnison property consists of 9,560 acres located 65 miles southeast of Tucson Arizona within the copper porphyry belt with access to electrical power on the property, previously developed infrastructure, and supported by an abundant water supply.



The main target is the so-called North Star, with a Probable Mineral Reserve of 4.46 billion pounds (775 million short tons grading 0.29% Cu) contained, within a Measured & Indicated Resource of 4.95 billion pounds (866 million short tons grading 0.29% Cu). These were at a 0.05% cut-off.

The Johnson Camp Mine was acquired from the court-appointed receiver of the owners, Nord Resources, in October of last year. Mining operations has ceased in 2010 and it had meanwhile been producing small amounts of copper from residual leach pads. The mine had been in receivership since 2014.

This property consists of 59 patented lode mining claims, 117 unpatented lode mining claims and fee simple lands. The existing facilities includes a 4,500 gallon per minute solvent extraction plant, a tank farm, an electrowinning plant with 88 electrowinning cells with capacity of 25 million pounds of copper cathode per annum, solution storage ponds, a truck shop, core storage building, offices, warehouse, laboratory, mechanical shop, a primary and secondary crusher, and various other equipment.

The acquisition included the Johnson Camp Mine with all fee title property, all patented and unpatented mining claims, all improvements, equipment, certificates of deposit, reports and records. The assets were transferred to Excelsior free and clear of all liens, and all back-taxes were paid by the Receiver from the proceeds of sale. The total consideration was US\$8.4 million made up of:

- US\$5.2 million due on or prior to closing
- US\$1 million due on or before December 31, 2016
- US\$2.2 million due on or before December 31, 2017

The Strategy

With capex being the noose dangling in front of most start-up miners these days, Excelsior has been able to turn Nord's misfortune into its advantage picking up all the processing plant it needs for quite literally a song.

According to the company the SX-EW plant at Johnson Camp is in good working order, and once the Gunnison Project to the south is permitted and ready for production, it expects that the copper solutions can be easily processed through the existing Johnson Camp facilities. This has allowed Excelsior to significantly reduce the upfront capital requirements and the time required for the start-up of the Gunnison Project. It also intends to have its geologists examine the potential of Johnson Camp, especially since this is the first time in its 130-year history that the entire Johnson Camp district has been consolidated under single ownership.

The Updated PFS

Last month Excelsior Mining released the Updated Prefeasibility Study for the Gunnison copper project in SE Arizona. The study incorporated the Johnson Camp acquisition and staged production plan. Initial production is targeted at 25 million pounds of copper cathode for capital costs of \$45.9mn. There will be a ramp-up to full production of 125 million pounds per annum. This staged approach lowers the initial capital costs and reduces overall financing risk.

Highlights of the North Star Gunnison Copper Project "Acid Plant" option include:

- Pre-tax Net Present Value of \$1.2 billion (post-tax of \$829 million) at a 7.5% discount rate (using a copper

- price of \$2.75/lb)
- Pre-tax Internal Rate of Return of 57.9% (post-tax of 44.8%)
 - Pre-tax payback period of 3.7 years (after tax payback period of 4.3 years)
 - Initial estimated capital cost (excluding sustaining capital) of \$45.9 million (including a 20% contingency)
 - Average life-of-mine operating costs of \$0.70 per lb
 - Over 850 million pounds of copper added to the probable mineral reserve; an increase of 24%;
 - In-situ Recovery mine life of 27 years
 - Sensitivity copper price analysis demonstrates a pre-tax IRR of 30.8% and a post-tax IRR of 26.2% using a \$2.00 per pound copper price

The PFS includes all the technical work that was recently completed and required for the Bankable Feasibility Study which is being prepared for year's end.

The economics of the latest plan compare favourably to Excelsior's 2014 PFS, with its massive \$284.74 million capital cost. In exchange there has been only a slight increase in operating costs. The company is now targeting early 2018 for the start-up of production.

Permitting & Timeline

Excelsior has submitted permit applications to both the Arizona Department of Environmental Quality (ADEQ) and to the Environmental Protection Agency (EPA). The ADEQ is responsible for issuing the Aquifer Protection Permit and the EPA is responsible for issuing the Underground Injection Control Permit. These are the two primary operating permits that Excelsior will need to obtain prior to commencing operations. Excelsior is working with both the ADEQ and the EPA and expects to receive draft permits by early 2017. Subsequent to a public review period, Excelsior has stated that it anticipates receiving all operating permits by mid-2017.

Financings

At the time of the Johnson Camp buy Excelsior also announced it had entered into a concurrent financing, with an affiliate of Greenstone Resources L.P., a private equity fund specialising in the mining and metals sector. This financing was for total gross proceeds of US\$12mn. The financing consisted of a private placement of common shares (at CAD\$0.23 cts) for gross proceeds of US\$4 million and the sale of 2% gross revenue royalty on the Gunnison Project for gross proceeds of US\$8 million. There was also a small private placing of USD\$3mn associated with the transaction.

Greenstone's stake post-deal represented approximately 40.14% of Excelsior's issued and outstanding common shares.



Arizona on the Mind

The largest copper development in Arizona in recent memory was the Mineral Park mine of Mercator Minerals. Excessive debt played a crucial role in the demise of its owner, with the heavy burden pushing the company to seek a merger with a Russian group. However the failure of this announced merger with InterGeo had an ultimately fatal effect tipping it into bankruptcy. It was not clear what is happening now but the Mineral Park property is a long term producer and should be of interest to someone wanting to secure one of the few producing copper mines in the US.

In January 2015 a Delaware bankruptcy judge signed off on the sale of the Mineral Park mine for \$10mn to Origin Mining Co. LLC (an affiliate of Waterton Global Resource Management Cayman Corp.) overruling opposition from creditors (including Trafigura) that argued that auctioning the assets separately would yield a greater return than a private transaction.

This deal freed up \$3.5 million in cash collateral for the

debtors and Origin assumed \$9 million in environmental liabilities. Trafigura had tried to counterbid and had been over-ruled.

Once again we find the fingerprints of Waterton on a failed mining company. Purely coincidental, we are sure. Mercator's demise was definitely a loss to the markets.

More felicitously, Augusta Resource Corp (TSX:AZC, NYSE:AZC) was subject to a friendly offer from Hudbay Minerals (HBM.to) in 2014 which ended up being successful. Augusta was a base metals company focused on advancing the Rosemont Copper deposit near Tucson, Arizona. Rosemont hosts a large copper/molybdenum reserve that would account for about 10% of U.S. copper output once in production.

Another Arizona property formerly on our radar was the Oracle Ridge Copper Project, owned by Oracle Mining (OMN.to), which was halted and has seemingly gone terminal. This asset is located near Tucson, Arizona, USA and operated as a copper-silver-gold mine from 1991 to 1996, by Lundin Mining. The mine was closed due to production problems. Historical references indicate that the main problems were that the crushing and grinding circuits were inadequate for the tonnage of ore the mine was attempting to process, and the low copper price. The historical mill facility has been removed and as the Project advances, evaluation of a new plant will be necessary.

Previous mining operations have left an intact, developed underground mine with an estimated +11 miles (17 kilometres) of underground workings. Mineral processing was historically carried out using the flotation method after the ore had been crushed and ground. As an underground operation, the historical Oracle Ridge mine generated a small environmental footprint in comparison with typical open pit copper mines. It will be interesting who moves in to pick up this asset.

Conclusion

The task for Excelsior now is to find an offtaker who will stump up some cash to bring the rather modest capex to fruition as a producing mine. Management have certainly shown that they can do things on the cheap and if they continue in this vein then 2018 should see the North Star mine reach the ranks of producers.

On the broader scale we should see some mothballed larger mines return to production but after the wild ride of recent years the mega-project should become a rarer phenomenon and, as we have predicted in the gold space, it will be the a new age for five years or more in which most projects on the drawing boards will be mid- to small-sized.

Passport Potash's Holbrook project may contain over two billion tons of potash

✘ Passport Potash Inc., 'Passport', (TSXV: PPI | OTCQX: PPRTF) is working on a 127,000 acres potash project in the Holbrook Basin (the Holbrook Project), a previously explored potash property in Arizona. Passport holds a joint exploration agreement with the Hopi Indian Tribe and expects to develop some 13,000 acres of land privately held by the Hopi. Last June, Passport closed a non-brokered private placement offering for 9.5% of its convertible debentures, obtaining gross proceeds of USD\$ 500,000. The debenture will mature on May 29, 2018, accruing interest at 9.5% per year through Concept Capital Management (CCM). The company has a first-class property, featuring good infrastructure, electricity, roads and a railway line. The property has an area of 81,315

acres (329.21 square km.) but of these only 40% have been explored. There is also the possibility to explore the adjacent Fitzgerald Trust land, which would add some 41,000 acres (or 165.92 square km). This goes to show just how much potential exists.

Passport has commissioned the German engineering firm ERCOSPLAN Geotechnical and Mining to prepare an NI 43-101 resource estimate. Passport's next step will be to start the preliminary economic assessment (PEA). Once up and running, Passport expects to produce at a rate of two million tons per year. The Holbrook Basin itself is considered to be very rich in potash and estimates have suggested there are some 2.5 billion tons of potash when taking the additional areas in consideration. This suggests that the Holbrook project could be one of the largest potash projects in North America, especially considering the area occupied by Passport within the Basin. The resource deposits are located at depths ranging from 800-1200 ft (243 – 360 meters), which is considered to be relatively shallow by industry standards.

The report describes an initial resource potential estimated at 125.6 million metric tons of “mineralized material with an average Potassium Chloride (KCl – potash) grade of 14.29% (equivalent to an Indicated Resource of 17.96 million tons of KCl) and 587.8 million tons of inferred mineralized material with an average KCl grade of 12.20% (equivalent to an Inferred Resource of 71.71 million tons of KCl).” The results have encouraged Passport to make further investments – which will be possible also thanks to the announced debenture – such as to deliver the relevant pre-feasibility study. The debenture represents a strategic investment, as it will help the Company extend drilling exploration to the eastern area of the property.

The Holbrook Project is relatively cheaper than others in the United States as it can rely on an evaporation process – the same used by Israeli and Jordanian potash producers in the

Dead Sea. Passport has drilled more holes to extend the indicated and inferred resources as part of its resource definition.

The establishment of good relations with the local Hopi community is one of the keys to the success of this project. Passport has set up a cooperative agreement between itself and the Hopi Tribe, which owns much of the land (not reservation land) adjacent to the current Passport property, for the purpose of conducting further exploration. Passport has appointed R. Dennis Ickes (a co-founder of the Office of Indian Rights in 1973 and an expert of policy related to Indian affairs in the United States) to secure the cooperation of the Hopi Tribe in view of the Holbrook project tremendous potential for expansion.

The United States is one of the largest consumers of potash in the world and the property in Arizona is very well linked to all major transportation routes, including highways and railways for land transport to the Cornbelt States and the major US ports in California, Texas and Louisiana for international export. Arizona is also a very mining friendly State and some of the world's largest mining companies are running important projects there including BHP Billiton and Rio Tinto, among others, which are producing copper.

