

# Why Chesapeake's Zinc Might be in the Sights of Chinese Miners

It has long been taken as a given that a large mine with gold as the predominant metal should be of interest to a mega gold miner. However in the last year the old theories have been overthrown as gold and silver have remained bogged down in broader disinterest while base metals have roared back to life, in the process, altering the long-ago calculated economics of many gold projects in such a way that the base metals now become the most tempting part of a project.

As we have noted before the Zinc component at Chesapeake Gold Corp.'s (TSXV: CKG | OTCQX: CHPGF) ("Chesapeake") Metates project is a tempting inducement for those who think beyond the gold space. In this piece we shall look at how Zinc's storming performance over the last 18 months has changed not only the project economics but also the roster of potential buyers for the project.

## Going All Sensitivity

It is interesting to ponder what different prices might do to the Metates model. We took the price scenarios of the last PFS of Chesapeake and reengineered them to show the original base case inputs and using the current metals prices. The relative static performance of gold and the less ebullient silver price became mere sideshows when the new Zinc price was added in. As can be seen from the table below the old economics have been left in the dust by the new reality of a Zinc-powered project.

<b>Financial Results Summary - Base Case</b>		
<b>Metal Price Assumptions</b>	<b>Base</b>	<b>Current</b>
Gold (\$/oz.)	\$1,250.00	\$1,280.00
Silver (\$/oz.)	\$20.00	\$17.05
Zinc (\$/lb.)	\$1.00	\$1.45
<b>Pre-Tax Economic Indicators</b>		
NPV @ 5% (\$000)	\$1,848,359	\$3,108,502
IRR %	11.1	14.4
Payback (yrs)	8.7	7.3
<b>After-Tax Economic Indicators</b>		
NPV @ 5% (\$000)	\$778,136	\$1,776,499
IRR %	7.8	11.0
Payback (yrs)	10.2	8.5
<b>Pre-Tax Cumulative Net Operating</b>		
Phase 1 - years 1-4	\$983,828	\$1,225,363
Phase 2 - years 5-27	\$8,725,108	\$11,163,415
Phase 2 - years 28-LOM	\$1,737,133	\$2,294,757
<b>Total - All Metals LOM (\$000)</b>	<b>\$11,446,069</b>	<b>\$14,683,535</b>

As can be seen the total revenues soar, the NPV goes crazy and the years until payback show a meaningful fall. Moreover for a base metal major ownership of Metates would give them a seat at the big table with the likes of Glencore because of the size of the base metal output. Indeed Metates is a rebalancing force in the Zinc mining league tables for whoever grabs it. Pondering the ranks of base metals miners out there that might be able to pull this off the most likely candidate appears to us to be the entity known as MMG, which is less well-known to the Canadian mining fraternity than it is in Australian parts.

## **MMG**

The company was born out of one of the great debacles of 2008 when OZ Minerals, the ASX-listed miner created out of Oxiana and Zinifex during the bull market, came to grief and had to dispose of assets in a rush and out of this was born a Hong Kong-listed entity called Minmetals Metals Group (MMG).

This took a gaggle of the best assets of OZ Minerals while the rump Australian company was left with essentially one live and

kicking project (Prominent Hill) to sustain it. MMG went on to buy the Las Bambas copper project in Peru in 2014 and that has become its main focus as other assets in its producing portfolio run down towards the end of their mine lives. Chief amongst these expiring assets was the massive Century Lead/Zinc/Silver Mine in Queensland that shipped its last ore in early 2016. This closure largely removed MMG from the Zinc space ironically just as Zinc started to take off (maybe not uncoincidentally).

## **Las Bambas**

MMG has been otherwise distracted in recent years by the development of its copper mega-mine. This is located in Cotabambas, Apurimac region of Peru. Originally it belonged to Xstrata but the Chinese government made it a condition of giving the OK to the super merger of Glencore and Xstrata that this asset be divested. As the only cashed up buyer with the inclination to stump up the money was a Chinese group, the government had effectively shaken down Glencore to get their hands on this major potential source of supply while lessening Glencore's ability to dominate the copper space. Two birds killed with one stone.

The Las Bambas mine is a joint venture project between the operator MMG (62.5%), a wholly owned subsidiary of Guoxin International Investment Co. Ltd (22.5%) and CITIC Metal Co. Ltd (15.0%).

In December 2015 Las Bambas achieved its first production of copper concentrate as part of commissioning activities for the mine. First shipment of copper concentrate to customers departed the Port of Matarani in January 2016.

Las Bambas completed construction in the first quarter of 2016, and progressively ramped-up with commercial production achieved at the beginning of July 2016.



In full production Las Bambas will be one of the world's largest copper mines, with an annual nameplate throughput capacity of 51.1 million tonnes. Las Bambas produced 330,227 tonnes of copper in copper concentrate during 2016, and is expected to produce between 420,000 to 460,000 tonnes of copper in copper concentrate in 2017.

Las Bambas is mined from an open pit with the ore is crushed and transported on a 5.5km overland conveyor to a conventional flotation plant where copper concentrate is produced, then to a molybdenum plant for further processing. The Copper concentrate is then transported by truck and rail to the Port of Matarani in Arequipa where it is shipped to customers worldwide.

The parallels between this epic project and that of Metates are poignant. Indeed the slurry line at Metates makes La Bambas's conveyor pale into insignificance. In any case the addition of Metates to the MMG stable would fill out its pipeline and make it a major player again in the Zinc space.

## Conclusion

With everyone having seen Metates for so long as only of interest to a gold producer it comes as somewhat of a shock to try and contemplate another type of buyer. We have been waiting for Godot (i.e. Goldcorp) for so long that there is the danger that we do not recognize a potential buyer when it comes along. While Goldcorp might look like the obvious buyer MMG looks like the synergistic acquirer for this asset to regain its seat at Zinc's "top table" with the likes of Glencore.

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# Gold In Focus: Chesapeake's Mammoth Motherlode at Metates

Chesapeake Gold Corp. (TSXV: CKG | OTCQX: CHPGF) ("Chesapeake") are well-known for holding 100% interest in the now world famous Metates project. The Mexican land package is one of the largest undeveloped gold, silver & zinc deposits in the world, boasting probable reserves of 18.5 million ounces of gold, 526 million ounces of silver and 4.2 billion pounds of zinc – all of which are currently experiencing significant price rises, meaning that Randy Reifel's latest play is now worth seriously more than first thought.

Reifel has a long history of making money for shareholders. He has been an independent director of Goldcorp since 2006, but more importantly, he has a strong history of successfully developing projects within Mexico. In fact, in 2002 Reifel sold a Mexican gold project for a cool \$400 million which not only went into production just three years later, but became the largest gold mine in the country. Now, with metals markets

undergoing a resurgence, Chesapeake could very well attract the lustful eyes of a senior company since Metates is easily one of the top 5 gold, silver and zinc sites in the world.

As the Metates resource is so very large, the CAPEX required to launch the project in its entirety is not going to be easy to come by without senior money, but a starter project from one of their nearby regional sites (of which there are many) could provide the cash flow required to kickstart processing of the motherlode. Over the last year, the company has assembled a further 68,000 contiguous hectares surrounding a nearby regional target known as "Yarley". Exploration has identified six key targets in the area, which not only revealed some truly impressive gold and silver assays, but also the presence of a V-shaped geological formation that appears to be two intersecting deep-seated mineralized faults.

The anomaly measures 6 kilometres in length, up to 600 metres wide and over 300 metres deep, and represents the greatest chance that Yarley has of being the starter mine the company is looking for in order to fund the launch of their monster project. And Remember, the metals prices used in the resource estimate were from a few years ago (\$1,200/oz Au and \$25/oz Ag), before the precious metals markets began their latest uptrend, and as such, Metates and its surrounding regional areas are worth far, far more today than they were only a year ago.

The surge in precious metals prices and the discovery of new targets at Yarley smells to me of an impending runaway bull rush on Chesapeake. Seen as their projects have a combined mine life of several decades, a small spark is really all that's required to send Chesapeake into the financial stratosphere, wherefrom they shall rain down gold and silver as Mexico's largest players for the foreseeable future and most likely beyond. Chesapeake has always been strong on maintaining a decent cash balance and so continued exploration is not going to be an issue; the question is simply from which

area to begin producing.

The V formation at Yarley's central prospect is extremely enticing because, when searching for metals such as gold and silver, they are almost always found in their greatest quantities within geological fractures, or veins, that have gradually been mineralized over millennia by hydrothermal activity. To discover an intersection of two such structures on your property, then, is like checking your bank balance and discovering twice what you had hoped for. Chesapeake have committed to fully exploring the formation as a matter of priority, and results should be available within the next couple of months.

But already, the area around the anomaly has returned significant grades. One particular sample taken from the central prospect over 2 meters returned values of 19.5 g/t gold and 505 g/t silver, leading me to believe that this newly mapped area could indeed be the chosen one. I have waited a long time to see Mr Reifel and Chesapeake reveal their goods to the world, and once Metates gets the jump-start it deserves, it will be almost unstoppable

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## **Deconstructing Silver Standard in Argentina**

One doesn't have to have too great a memory to recall the glory days of silver both before the 2008 crash and then the resurgence thereafter (when the metal hit \$50 per oz momentarily). Back at that time one of the 800lb gorillas of the silver space was Silver Standard Resources (TSX: SS0 | NASDAQ:SSRI) and it was a ubiquitous presenter in New York,

constantly doing the rounds and keeping its mammoth market cap in play.



At the time its main play was a project (not a mine) called Pirquitas in the far northern province of Jujuy in Argentina. The project eventually came into production and has carried Silver Standard through the dark times, both for silver and for perceptions of Argentina. Now Argentina is (almost) sexy again and silver is back on centre stage (though not as booming as the Tin Foil Hatters would like). And yet machinations are afoot to “distance” Silver Standard from the project that has long been its mainstay.

In this piece we shall look at what is going on to try and divine if this is the creation of a major new champion of the Argentine mining space or the steady retreat of Silver Standard from its traditional stamping ground.

### **The “Latest” Deal**

In October 2015, the current main vehicle of the Grosso Group, Golden Arrow Resources (TSXV: GRG; FSE:GAC; OTCQB:GARWF) and Silver Standard entered into a business combination agreement for the joint development of Golden Arrow’s Chinchillas

project and “an agreement to combine the producing Pirquitas Mine and the Chinchillas project, located approximately 35 kilometres apart in Jujuy Province of Argentina, into a single new operation.” The joint venture would be 75% owned by Silver Standard and 25% owned by Golden Arrow.

During the 18-month preliminary period, Silver Standard would invest up to approximately US\$12.6 million “at Chinchillas to advance the project and evaluate the feasibility of developing a combined mining business with its existing Pirquitas operation.”



## **The Grosso Group**

This outfit is headed by Joe Grosso who might be called the doyen of Argentine mining. He was one of the early pioneers of the mining sector in Argentina in 1993 when mining was opened to foreign investment, and was named Argentina's 'Mining Man of The Year' in 2005. He proved to be a useful vector for foreign miners wanting local knowledge during the opening of the Argentine mining sector and fully formed strategic alliances and negotiated with mining industry majors such as Barrick, Teck, Newmont , Viceroy (now Yamana Gold) and Vale S.A., and government officials at all levels.

Rummaging through the dustbin of our mind (well, actually searching our back catalogue of research) brought us to our avid support (in the middle of last decade) for Aquiline in its legal battle over the *La Navidad* deposit with the Grosso Group company IMA (then IMR.v). IMA ended up losing out to Aquiline, then Aquiline was snapped up by Panamerican Silver for around CAD\$626 mn, if memory serves us right, only to have Panamerican mothball the project despite its enormous potential.

Then rolling on to after the 2008 crisis, IMA was reduced to a cashbox and became subject to the predatory moves of a certain Southern Californian guru who engineered its merger into a threeway structure with Kobex and International Barytex in a deal, which we opposed, that created a super cash-box that then did nothing with the money during one of the greatest bargain basement sales in mining history.

## **The Argentine Assets**

Silver Standard's Pirquitas property is a well-known mine. It is positioned at an elevation of 4,100 meters above sea level and is accessible by all-weather roads. The open-pit mine achieved commercial production in December 2009. Ore is crushed and treated in a gravity pre-concentrator prior to

processing in a conventional mineral flotation plant. The silver and zinc concentrates produced from the plant are shipped to third party smelters.

The mine delivered record silver production in 2015 with 10.3mn ounces of silver and 9.4mn pounds of zinc. For 2016 the production guidance was between 8-10mn ounces of silver and up to 5mn pounds of zinc.

The Probable Mineral Reserves amounted to 16.5mn ounces of silver at an average grade of 220.1 g/t and 7.7mn ounces of silver in stockpiles at an average grade of 109.1 g/t as at December 31, 2015. The Indicated Mineral Resources of 53.8mn ounces of silver at an average grade of 122.4 g/t, 18.2mn ounces of silver at an average grade of 241.1 g/t at Pirquitas Underground and 8mn ounces of silver in stockpiles at an average grade of 107.3 g/t as at December 31, 2015.

Here is the San Miguel open-pit at Pirquitas.



The Chinchillas property is a less-well-known quantity in comparison. It has near-surface mineralization providing the

potential for an open-pit mining scenario, plus conventional metallurgy that has shown high recoveries of silver, lead and zinc to concentrates in bench-scale testing, and access to infrastructure including highways, power and water. The project which hosts a resource of 100mn ounces of silver (155mn ounces in AgEq) in the Measured & Indicated categories and 44mn ounces of silver (90mn ounces AgEq) in the Inferred category.

However, it's vital to note in light of the storming Zinc price that this resource dates from April 2016 when Zinc was a whole different ball of wax. This project has a Measured and Indicated Zinc component of 401mn lbs with a further 548mn lbs Zn in the Inferred category. With silver having fallen and Zinc having risen, the AgEq equation would register substantially more ounces now and Zinc would be a greater part of the economics. This is the type of stuff that gets our pulse racing.

This updated resource estimate is the result of the Chinchillas Project pre-development activities, funded by Silver Standard, which are being undertaken to evaluate the feasibility of creating a combined mining business with Silver Standard's Pirquitas mine.

### **What has Happened?**

The two major events in the last two months have been the retreat of the silver price from over \$20 and, probably more importantly, the change of government in Argentina. After nearly a decade and a half of irregular iconoclastic governments in Argentina ruled most recently by the dynasts of the Kirchner family and before that the Duhalde regime the country has returned to a certain orthodoxy with the election of Mauricio Macri as President in the last quarter of 2016. While not reinserting Argentine directly into the good books of mining investors it has certainly made thinking about the possibilities not being grounds for insanity. Foreign exchange

rules and foreign purchasing restrictions have been freed up thus removing two of the major bugbears of foreign miners operating in the country. This reopening has coincided with the Lithium boom which has placed Argentina at the centre of the action because of its ample supply of *salares* in its northwestern provinces.

With these developments in the foreground the Silver Standard/Golden Arrow alliance has been pattering along in the background. In 2016, work completed included: a Phase VI drill program, an upgraded resource estimate, metallurgical studies, engineering studies, environmental monitoring, and community relations programs. The Environmental Report, which is the major mine permit application, was submitted to the authorities in September.

Joseph Grosso, chairman, president and CEO of Golden Arrow, went on record in December as saying “as of the end of September 2016, Silver Standard has invested approximately US\$11mn to advance the project towards pre-feasibility”. He also noted that “currently at Chinchillas, there are two drills working to complete detailed geo-mechanical and hydrogeological programs in and around the designed open pit by mid-December. Exploration work is also continuing both at Chinchillas and regionally, to delineate additional potential ore feed for the proposed operation.”

The price action at Golden Arrow seems to echo what has happened with the silver price over the last six months more than any developments on the ground with its Silver Standard deal.



## Conclusion

Supposedly J.P. Morgan was once asked how he became so wealthy and his response was “I sold too early”. The question here is whether Silver Standard “sold too early” in engineering the transaction discussed above. We think not. Production is over the hill at Pirquitas and its best chance of extending its own mine’s life and gleaning extra value out of its smelter at the mine. Without an extra source of feedstock, a decision on whether to shutter it will need to be made in the next two months. The obvious solution is to ramp up Chinchillas and start sending a stream of Silver (and Zinc) ore in the direction of Silver Standard’s processing facilities at Pirquitas. We are constantly asked where the next big Zinc mine is coming from and have hitherto been saying Chesapeake’s Metates project or shrugging our shoulders. However with the silver and zinc planets aligning in Jujuy the combined operation of Pirquitas and Chinchillas adds a major dark horse in the race to production.

As to which of the players to go for, the choice is between Silver Standard with 75% of the combined operation (but with a \$1.5bn market cap) or Golden Arrow with a \$69mn market and 25% of the action. While Silver Standard has two other producing

mines (Marigold and Seabee, which are rather ironically both gold mines), Golden Arrow would appear to be the purer play, the cheaper stock and the better leverage to the renascent Argentine mining sector.