

# Breaking the Chinese stranglehold on Antimony

In only one metal that we know of is the US master of its own destiny and that is Beryllium. Too often since the end of the Cold War the US has felt it could rely upon the “comfort of strangers” when it comes to guaranteeing its supply of metals to keep itself on top of the global economic heap. Bizarrely this “comfort” is offered mainly by China, a country with an avowed goal of pushing the US off the top of the heap.

When it comes to “strategic” or “critical” metals the powers that be in the corridors of Washington (though not the Pentagon) seem to be sanguine that if there are deposits somewhere in Canada or Latin America then these might somehow count as mobilisable in the event of a shooting war. The fact that it takes years to get a mine into production these days seems to have eluded these fireside strategists.

As we know the US has dropped the ball on Rare Earths and may be on the verge of allowing some of the largest sources of Lithium (in Australia) to fall into Chinese control and in a broader array of metals with specialized usages the US is equally as vulnerable such as Tin, Antimony and Gallium to name a few.

In this note we shall look at one of these metals, Antimony, that looks like the “fish that got away” due to sheer mediocrity and paucity of imagination.

## **Antimony in North America**

Certain regions of the world are more gifted with certain minerals and North America certainly drew the short straw when it comes to metals like Antimony and Tin. Canada and the US have had a few on-off mining efforts in Antimony and Mexico has been more propitious. One of the stranger deals to have

been approved in the current decade was the approval given to the Chinese to buy the Beaver Brook Antimony mine in Newfoundland at the height of the Antimony price boom. Seemingly this slipped under the radar while pundits were busy frothing at the mouth over Rare Earths dependency. With little aplomb the Chinese swiftly shut down the mine with a few feeble excuses and “then there was none” as far as Antimony production north of the border was concerned.



The less informed would then pipe up “but there is US Antimony” and we must confess that we too did see this as the Great White Hope for Antimony production in North America. After all they did own one of those very rare beasts, a smelter with licenses, located in the wilds of Montana and they also had “production in Mexico”. Well if we could be suckered with this sales *spiel* then it would be harsh of us to accuse others of being gullible too. However the marketing effort certainly did make it look like something interesting was going on and that there might be salivation in sight for “domestic” supplies of Antimony in North America. Alas, it was not to be..

## **Reality Bites**

We shall concentrate here on US Antimony because compared to Beaver Brook which was only a mine, US Antimony had the ability to mine AND process the metal within North America. However that is only in theory for the practice has turned out to be disappointing.

After guzzling the Kool Aid with gusto for a few years, a nagging suspicion entered our brains that something about The US Antimony story did not add up. The official story is that US Antimony “... operates smelters in Thompson Falls, Montana and at Madero, Coahuila, Mexico, a gravity- and flotation mill in Guanajuato, Mexico, a mine at Los Juarez, Queretaro,

Mexico, and a zeolite operation at Preston, Idaho. The company primarily buys in Mexican ore to process, though a certain amount also emanates from Teck's Canadian refineries".

The cornerstone of the Mexican operation is the Puerto Blanco gravity-flotation mill in Guanajuato, Mexico. The mill is fed by a collection of mines that UAMY acquires ore from. Then there is the Madero roaster at Coahuila.



These assets and their role have produced some confusion in investors' minds because many think that UAMY is a miner, when in fact it is mainly a processor. The mines it principally sources from are Los Juarez, Soyatal, Guadalupe and Wadley.

The company was also bringing in material from the Hillgrove mine in Australia, during the first quarter of 2015, UAMY discovered that its IMMEX certification had expired and that the Mexican subsidiary would be required to renew it. Without its IMMEX certification, UAMY is required to pay the Mexican national sales tax of 16% on all items it imports into Mexico, including our capital items and the concentrates it is receiving from Hillgrove. IMMEX requires that UAMY exports a minimum of 60% of everything it imports into Mexico. It then had to scramble to get these back into place.

As for the mines in Mexico there is a symbiotic relationship with the owners/operators of these mines that includes the company funding their working capital shortfalls from time to time and in some cases having offtake agreements with the miners. It even has some long-standing agreements that allow it to acquire some of these mines.

One of the major mysteries for us is why USAC never moved to clean up this untidy structure through a decent sized financing and acquiring the mines and then operating them to industry standards and to its own needs at any given time.

## Montana – For Real?

Rumour has it that UAMY's roaster in Montana is grandfathered under some EPA waiver. The company says that it is processing material containing Sb from Teck's Trail smelter. Other versions claim it is mothballed. Short of putting on the snowshoes and trudging through the snowy wastes, the average investor has no real way of knowing what the truth is in relation to this asset.

## Venerable or Vulnerable?

The old problem of a founder overstaying their welcome and not securing a succession is in evidence at this company. Despite having only a small amount of stock the founder has managed to position his son in the small circle that is the board and administration of the company. Reports indicate that the CEO is in his late seventies. The fact that he still flies his own light plane in the Rockies was offered as evidence of "young at heart" whereas to us this spelled potentially a leaderless organization should a pigeon fly into the propellers.

We were told that investor presentations are not done because he "doesn't do groups" so that is the rationale for conference calls only. This then does not go down well when hearing difficulties mean that the executive in question cannot understand what the investors are saying. This leads to some Marx Brothers-like interchanges on the investor calls.



Added to this is a certain *naiveté* with relation to investors which has resulted in institutional holders keeping their distance. We were surprised on one call to hear the volumes of Antimony described in terms of sackloads and truckloads, terminology which is essentially meaningless. On a more serious level though we raised a complaint that the company made no reference to its Wadley property in its 10Q after it

had taken on the very onerous and expensive lease on an asset it had indistinct plans to actually mine. This was later remedied, but with over \$30,000 per month going out in rental payments this was a meaningful commitment that required mention.

When the issue of the company's vulnerability through having such a veteran CEO is raised we are told that there **IS** a succession. A look at the company website informs us that the successor is 65 and in light of the endemic tardiness in updating the website we wonder if he isn't older by now. The question then is if the CEO is so long in the tooth and the successor is already identified (and also no spring chicken), then why is the current incumbent not superannuated into a chairman role and the baton passed to the "next generation"?

## **Conclusion**

So it looks like the fate of the Antimony industry in North America is being left in the hands of a Chinese monolith and a company that is scarcely fit for purpose. It almost makes one nostalgic for the old concept of the "command economy" (though not the Chinese command economy).

Back at the corporate level, US Antimony has become like an astronaut that went out on a spacewalk and found his cable mooring him to the space craft cut. We have seen this image in innumerable science fiction films (most recently in Gravity) as the drifting spaceman flails his arms and drifts off into the nothingness. If the company cannot "heal thyself" then it looks like the task will be left to a corporate raider. Taking this one down looks pretty easy. The credibility is shot and the management would not be able to make a coherent defence.

Meanwhile over at Beaver Brook, all action seems to be in abeyance with the asset reportedly for sale but with the Chinese needing to be paid a large amount of money to save face considering the excessive rice they paid in the first

place. Seems they are having a Mexican stand-off with themselves. That puts the main chance of Canada returning to the tables of Antimony producers deep in the permafrost of corporate apathy.

The question is whether the outcome of any bloodletting at UAMY (and/or a new owner at Beaver Brook) would be the emergence of a REAL Antimony play in North America that might contribute to breaking the Chinese stranglehold on the metal.

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## **Antimony giant Twinkling Star winding down another perfect storm is rising...**

It is well known that the Bingham Canyon mine and a handful of South African gold mines date back to the days of Queen Victoria. The Antimony space though is typified by long-lasting mines, as I have written before, with Mandalay's Costerfield mine outside Melbourne having operated on and off since the 1860s, the Consolidated Murchison Mine in South Africa has functioned (also sporadically) since the 1940s and the industry giant, Twinkling Star in China having a history going much further back.

But all good things must come to an end and Twinkling Star is staggering on its last legs and Cons Murch was recently put into care & maintenance (yet again). This creates something of a perfect storm which may drown those short the very illiquid antimony metal market and leave many end-users with their "just-in-time" practices wrong-footed.

**The 800lb Gorilla of Antimony**

The granddaddy of Antimony mining is the Hsikwangshan Twinkling Star Antimony Mine at Lengshui Jiang in China. It was originally found in 1541, when mining began artisanally, and it has been mined “formally” since 1897. This mine alone has produced around 25% of global supply in recent decades. It is this mine that gave China the 90% market dominance in the Antimony space it has enjoyed since the 19<sup>th</sup> century. Admittedly this mine is special in that it is not only long-lasting but also high volume. The mine is owned by Hunan Non-Ferrous (HNC), the world’s largest Antimony producer, which itself is a satellite of China Minmetals. We have heard that the latter is now trying to fold the whole of HNC into its own corporate structure. As an aside we might note that the Beaver Brook Antimony mine in Newfoundland that was opened several years ago, was bought very soon after but HNC and then shuttered. Official reasons related to grade but many felt it was an attempt to remove a “rogue” player from the market.

### **Some Technical Details**

Twinkling Star is a “Supergiant” Sb deposit. Statistics on the mine are somewhat sketchy, much as was the case with Bayan Obo when the Rare Earth boom broke. This should be seen in the context that Twingling Star is a “national treasure” like Bayan Obo as it has long-cemented Chinese dominance. The numbers that we do have are that 801,000 tonnes of Sb produced in the period 1897-1990. Reserves (back in 2002) were 570,000 tonnes of Sb, but that is now mostly depleted and it is estimated that there are less than four years of ore remaining. Even that production is now in declining amounts per annum, at high production costs because the ore face is now located so far from the mine entrance.



Geologically speaking the mine consists of:

Four major deposits hosted in series of antiforms in 2km wide

x 9km long belt

- No igneous rocks for 25 km<sup>2</sup> around ore field, except for a small ultramafic dike
- Mostly stratiform, carbonate-hosted and, to a lesser extent, black shale-hosted
- Collapsed breccias in limestones at shale contacts provide an important lithological control

However, even Antimony mines don't last forever and it is a widely held view that this mine is now in terminal decline with higher extraction costs and declining grades. Costs are rumoured to be \$2.50 per lb, thus requiring a meaningful uplift in market prices to make mining the residual reserves a worthwhile endeavour.

The key thing to note is that there is no other Antimony mine in history that has even vaguely been of this size and it is highly unlikely that another such will come along.

### **Some Other Pressures Building**

As mentioned earlier the Cons Murch mine went into care & maintenance mode in late 2014 after the sale to Stibium (which was then going to list on the AIM) fell through. So Village Main Reef, the JSE-listed current owners mothballed it. Cons Murch is the perennial canary in the coal mine and its closure represented the effect of Sb dropping below \$9,000 per tonne and the high costs of u/g mining in South Africa. However as a harbinger in the industry it will also inevitably reopen as soon as Sb prices spike. It is (was) the West's major producer at 5,000 tonnes per annum so its effect is not insignificant.

Meanwhile the Hillsgrove mine in Australia is back in production. However information is scant as the operators are private and the only noise on the airwaves about this is the probably apocryphal utterances of US Antimony boosters that claim that UAMY's Mexican roaster is "processing containers of



ore from Hillsgrove". Hmm. Make up your own minds on that one.

The more relevant development relates to Burma. Long mired in civil war, the rebel tribes in the north of the country stumbled upon artisanal Sb mining as a good way to pay for guns and a growing tide of material, in recent years, has made its way to China across the unsupervised border. DERA, the German equivalent of the USGS or BGS, has estimated that up to 14,000 tonnes was exported (smuggled?) from Burma in 2011. There are two negative dynamics for Sb supply here. The first is the obvious one that artisanal mining is almost always the easiest pickings and when the task involves declining grades or going underground or creating deep open-pits for extraction then the effort peters out. These rebels were clearly over-exploiting whatever resource they had to hand which is a recipe for a steep drop-off in production at some point. More interesting though is the gradual opening of the Burmese economy and political stabilization. With the recent signing of accords between the government and some of the most prominent rebel groups this could put an end to artisanal pillaging of the metal supplies out of Burma and put the trade on some sort of more professional (and regulated) basis.

All of this spells less supply and less selling by desperados.

### **And the Effect**

A picture supposedly tells a thousand words so here goes:



Source: Argus Minor Metals

In fact, though one of my trading sources in Shanghai said the metal is trading at \$9,200 per tonne, having added 6% in just one day.

### **Conclusion**

So it looks like another one of Antimony's Perfect Storms is brewing. However the last time the Sb price spiked to over \$14,000 was largely on rumour and artificial constriction of supply. The demise and closure of Twinkling Star would be a much more permanent reordering of the global Antimony market place with the traditional Chinese dominance of the metal suffering a big and possibly mortal blow. This in turn would position non-Chinese sources to grab a bigger market share. However the latter is easier said than done when the West has allowed the bulk of its mines to fall into disuse..

The death of a star is usually followed by a super nova as it explodes and then implodes ending as a black hole. Though in some cases a stars may just shrivel to become a white dwarf. Twinkling Star seems destined to become a black hole, followed by an explosion in the price of the metal left bereft of its large mine source. Those end-users not well supplied from alternative sources may find themselves in turn sucked into the alternative universe on the other side of this black hole and that alternative universe may well consist of a few years of absolute shortage of supply.