# MODULE 3- ZINC MINING IN THE USA

This is a relatively easy topic to discuss since most zinc production in the USA is from Alaska, namely the Red Dog and Greens Creek mines. Remaining production is from the Tennessee zinc mines, the Missouri lead belt, Hecla's Lucky Friday mine in Idaho and Teck's reopened mine in Washington State. Production from the Balmat area of New York State remains on care and maintenance but will have a tough time justifying reopening.

Nyrstar currently has their Tennessee mines up for sale. The Middle Tennessee Zinc Mines are currently closed. The difficulty for Nyrstar however is that these mines feed their Clarksville smelter. This smelter needs very clean feed such as that produced from the states mines. The East Tennessee mines only partially fill this smelters needs.

Table 1 summaries recent mined zinc output in the USA and estimates future output to 2022. There is a real possibility the Middle Tennessee zinc mines will reopen but I do not share this same optimism for the Balmat mine. The Pend Oreille mine will be exhausted in 2020. Grades at the Red Dog mine will steadily decrease. A gradual decline in country output is therefore illustrated.

**Table 1 USA Zinc Mine Output- Actual and Projected**

| Mine | Owner | Status | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Middle Tennessee | Nystar | c&m | 32 | 48 | 50 | 47 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| East Tennessee | Nystar | op | 49 | 61 | 71 | 63 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| Missouri Lead Belt* | Doe Run | op | 49 | 42 | 55 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Balmat | Hudbay | c&m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red Dog | Teck | op | 572 | 529 | 551 | 596 | 567 | 558 | 540 | 525 | 510 | 501 | 491 | 488 |
| Pend Oreille | Teck | op | 0 | 0 | 0 | 0 | 31 | 40 | 40 | 40 | 40 | 10 | 0 | 0 |
| Greens Creek | Hecla | op | 60 | 58 | 43 | 54 | 56 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Lucky Friday | Hecla | op | 7 | 0 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Total | | | 769 | 738 | 774 | 812 | 817 | 769 | 751 | 736 | 721 | 682 | 662 | 659 |
| USGS | | | 769 | 738 | 784 | 832 | | | | | | | | |

*Doe Run operates six lead/zinc mines but public data on output is not available. Figures listed are an attempt to balance USGS reported annual output with the total reported individually.



Doug Beattie, Mining Engineer (Retired)

**Status of Current or Recent Producers**

**Teck Resources**

**Red Dog**

This prolific open pit mine will regain the title as the world's largest zinc mine by output shortly due to the pending exhaustion of the +600,000 tpa Rampura Agucha zinc open pit in India. Nevertheless, this mine has been sending ore to the mill consistently above reserve grade meaning a gradual reduction in zinc output will commence shortly without an increase in mill throughput. Table 2 illustrates reserves vs 2015 production results. Mill head grade has consistently been 1-2% above reserve grade.

**Table 2 Red Dog Reserves as of January 1, 2016 and 2015 Production Results**

| | Tonnes | Zn% | Pb% | Ag (g/t) |
|---|---|---|---|---|
| **P+P Reserves** | 56,600,000 | 14.6 | 4.1 | 78.3 |
| **2015 Production** | 4,026,000 | 16.7 | 4.8 | nr |

nr= not reported

Teck has provided zinc output guidance to 2020 which illustrates this gradual production decrease and has indicated they have been looking at means of preventing this reduction for some time. From the March 2, 2016 Annual Information Form (www.sedar.com) :

> *"Red Dog's production of contained metal in 2016 is expected to be in the range of 545,000 to 570,000 tonnes of zinc and approximately 115,000 to 120,000 tonnes of lead. From 2017-2019, Red Dog's production of contained metal is expected to be in the range of 500,000 to 550,000 tonnes of zinc and 100,000 to 110,000 tonnes of lead. The mine life is expected to continue to 2031. We are currently examining ways to moderate projected declines in production following 2020, and have initiated a study to examine throughput increase."*

Though this mine will continue to produce remarkable zinc output, this will steadily decrease with time. In a tight concentrate market, this could mean more Red Dog output heading to the Trail zinc plant to replace concentrate no longer available elsewhere (such as from Teck's Pend Oreille mine). The net impact could be a scramble by Asian and European smelters to obtain concentrate elsewhere.

I suspect Teck will talk themselves into an increased milling capacity at considerable capital cost to arrest the decline providing there are no environmental (creek loadings etc.) and NANA issues. This is not the right answer in my mind though since I think if they take a "sorry folks we're out" approach instead when dealing with the custom smelters, this will contribute to a zinc price rise which will translate ultimately into higher free cash flow. Canadian miners are boy scouts however. Price takers, not price influencers or setters. Which is why Noranda, Inco and Falconbridge are no longer with us.

**Reference:** Red Dog Mine Review, NI 43-101 Report, March 9, 2007 www.sedar.com

Note that the potential for underground mining also exists at Red Dog. For instance, the deep Anarraaq deposit has an inferred resource of 17.2 MT grading 15.8% Zn plus Pb and Ag. Teck has made no statements that I can recall stating their intention to eventually head underground but I suspect at some point they will.

**Pend Oreille**

This underground zinc mine, located in Washington State has been a swing producer and at times a loss leader for Teck. Teck reported a $9M loss before depreciation and amortization for this mine in 2015 based upon $47M in revenue. The concentrate produced here is shipped to Teck's Trail smelter in British Columbia meaning this smelter does not have to source concentrate from elsewhere. It is uncertain what the treatment terms the smelter charges the mine internally. It is these captured synergies however that often justify continued mining during low zinc prices. But it is this sort of backward thinking by smelters who also own loss making mines (think Nyrstar) that has contributed to market oversupplies of both concentrate and slab zinc in the past. It is also a key reason why many resource companies avoid the zinc mining space. There are too many companies willing to run mines at a loss. Nevertheless, this 40,000 tpa producer is expected to close roughly mid-2020 due to ore exhaustion. Table 3 lists remaining reserves and 2015 production results.

**Table 3 Pend Oreille Reserves as of January 1, 2016 and 2015 Production Results**

| | Tonnes | Zn% | Pb% |
|---|---|---|---|
| **P+P Reserves** | 2,800,000 | 7.1 | 1.1 |
| **2015 Production** | 593,000 | 6.0 | 1.5 |

**Hecla Mining**

**Greens Creek**

Hecla considers this to be a silver mine. Therefore zinc output will likely continue unabated except at exceptionally low sliver prices. This underground 2,000 tpd mine is located on Admiralty Island near Juneau Alaska. Cut and fill and longhole stoping are the mining methods. Table 4 lists remaining reserves and 2015 production figures. The mine produced 56,000 t of zinc in concentrate in 2015. The ability to replace mined reserves with new discoveries has been good in the past. This mine is a steady producer and I do not expect many surprises over the production period assessed.

**Table 4 Greens Creek Reserves as of January 1, 2016 and 2015 Production Results**

| | Tonnes | Zn% | Pb% | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|
| **P+P Reserves** | 6,500,000 | 8.1 | 3.0 | 2.8 | 382 |
| **2015 Production*** | 738,850 | 8.7 | 3.3 | 3.4 | 419 |

*Figures converted to metric units.

Using unit cost figures provided in the 2015 Annual Report, the following costs have been derived in Table 5.

**Table 5 2015 Total Costs Per Tonne Ore- Greens Creek**

| Area | 2015 Cash Costs | Cost/tonne USD |
|---|---|---|
| Mining + milling | $82.9M | $112.22 |
| Other cash costs (G+A) | $41.4M | $56.05 |
| Treatment costs (offsite) | $63.3M | $85.68 |
| Concentrate freight | $8.8M | $11.90 |
| Total | $196.4M | $265.85 |

Costs were derived by multiplying the cash cost per oz of silver reported in the 2015 Annual Report by the annual silver output before by-product credits. G+A= general and administrative costs.

Unit costs (mining + milling + G + A) are more than double Hudbay's 777 costs (Module 2) which is an expected outcome due to economies of scale, mining methods , power costs and general remoteness. These costs are therefore of relevance when judging the adequacy of costs presented in typical PEA's for similar underground mining situations.

The zinc produced at the mine is in a bulk concentrate that can only be treated by a handful of smelters worldwide. Bulk concentrates are predominantly a combination of zinc and lead and are produced at operations where the zinc and lead are so intermixed that poor recoveries would result if separate

concentrates were produced. Treatment terms for bulk concentrates are typically much worse than for separate zinc and lead concentrates however. Concentrate must also be shipped to Asia or Europe.

Have a look at what I did for a living here . (OK,OK, what I told others I wanted done that day.)

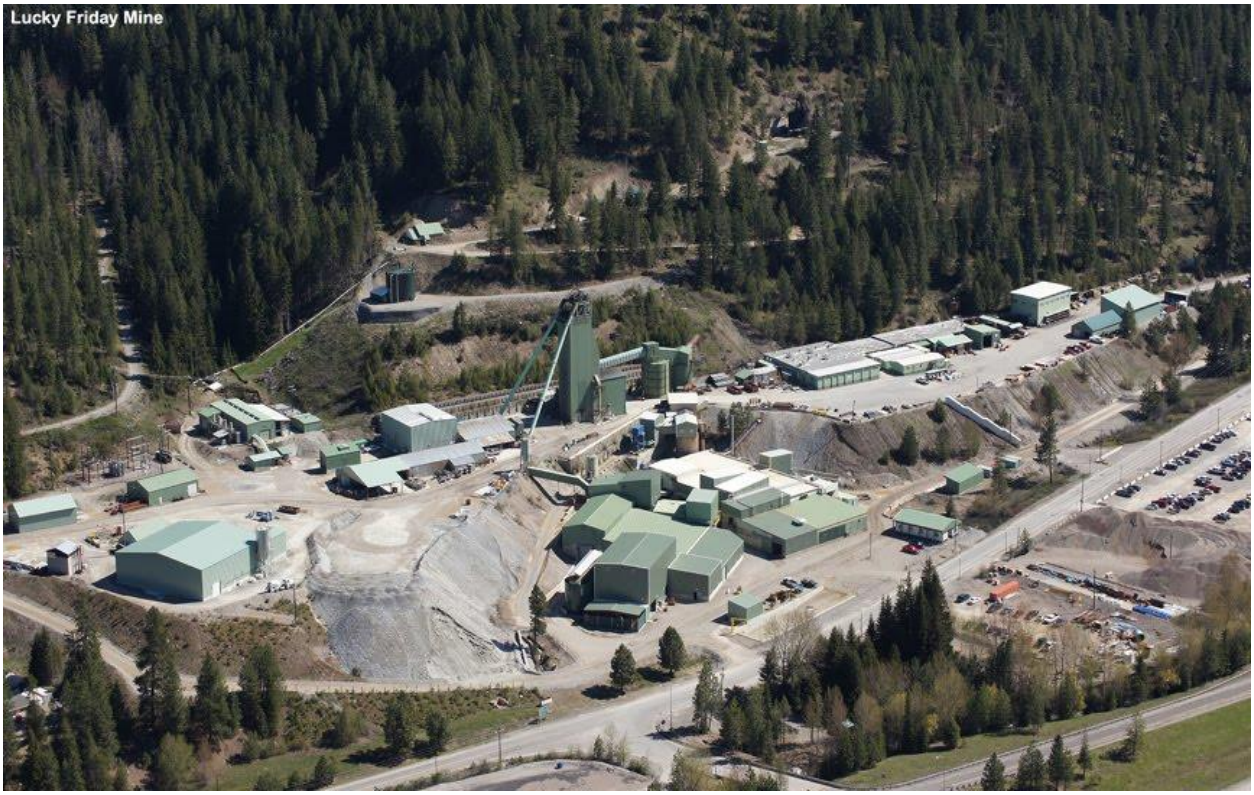
**Lucky Friday**

Zinc is a byproduct of silver/lead mining at this very deep narrow vein cut and fill mine in Idaho. Zinc output is not sensitive to zinc price. This mine will likely continue to produce for a least another generation. Annual zinc production will likely not vary much from 2015's 7,400 tonnes of zinc in concentrate. Concentrates are sent to Teck's Trail smelter for processing. Table 6 illustrates the low annual tonnage mined due to the need to be very selective.

**Table 6 Lucky Friday Reserves as of January 1, 2016 and 2015 Production Results**

| | Tonnes | Zn% | Pb% | Ag (g/t) |
|---|---|---|---|---|
| **P+P Reserves** | 4,600,000 | 3.2 | 9.3 | 482 |
| **2015 Production*** | 270,000 | 2.98 | 6.55 | 332 |

*Figures converted to metric units.



**Nyrstar**

**Middle Tennessee Zinc Mines**

The Gordonsville, Cumberland and Elmwood Zinc Mines are collectively referred to as the Middle Tennessee Zinc Mines (MTM). They are currently owned by Nyrstar who acquired them out of the bankruptcy of Strategic Resource Acquisition Corporation (now Portex Minerals). The mines were placed on care and maintenance by Nyrstar in December 2015 when zinc prices dipped below operating costs. Mining commenced in 1975 and was continuous until 2003. The largely successful attempt by SRA to re-establish mining was thwarted by low zinc prices related to the financial crisis of 2008. Nyrstar recommenced mining in 2010. The mines are currently for sale.

The mines use predominantly large scale room and pillar mining methods with minimal ground support to mine near horizontal tabular limestone containing on average 3-3.5% Zn. Limestone and aglime are sold as low value byproducts. Minor amounts of germanium and gallium have also been produced previously. It appears relatively easy to replace reserves through additional surface and underground exploration so the price of zinc is the key determinant whether these mines operate or not into the distant future. Table 7 therefore lists reserves and resources in relation to 2015 production.

**Table 7 MTM Reserves and Resources as of January 1, 2016 and 2015 Production Results**

| | **Tonnes** | **Zn%** |
|---|---|---|
| **P+P Reserves** | 1,680,000 | 3.7 |
| **M+I Resources** | 3,400,000 | 3.4 |
| **Inferred Res.** | 16,100,000 | 3.4 |
| **2015 Production*** | 1,482,000 | 3.25 |

*note: the mines were placed on care and maintenance in December 2015.

Direct operating costs for these mines were **$US42-45/tonne** ore milled prior to closure. Mill head grade historically averages 3.3% Zn with an excellent 94% zinc recovery into a concentrate grading 64% Zn. 2014 and 2015 zinc output was 47,000 tonnes zinc.

Assuming a new owner will receive 85% payment for the zinc and treatment charges are $US200/t zinc concentrate, the revenue per tonne of ore mined at $1/lb. zinc would be:

Tonnes ore mined/tonne concentrate: 64%/(3.3% x 94%) = 20.6 tonnes

Revenue per tonne of zinc concentrate:

64% x 85% payable x 2204.5 lb/tonne = 1,200 lb. zinc/ tonne conc.

$1,200 lb. x $1/lb. = $1,200

Minus treatment charge= $200

Zinc revenue= $1,000 /tonne concentrate

Zinc revenue= $1,000/20.6 = **$48.50/tonne** milled.

Not included above are concentrate transport costs, royalties, taxes, finance costs, exploration costs, corporate costs, amortized acquisition costs nor a provision for sustaining capital.

According to SRA, the existing germanium plant can only be operated when the milled tonnage rate is considerably higher than where Nyrstar was operating at. Other byproduct credits appear negligible.

An acquirer of these assets would therefore want reasonable assurance of long term zinc prices greater than $1.50/lb. in order to cover all charges and provide an ample return. Invariably, a small wannabe miner or a desperate smelter seeking feed comes along that thinks they know better. I will leave it at that. SRA made their numbers work by assuming annual production 50% higher than Nyrstar's actual production with unit costs roughly 40% less. Spreadsheet financial models usually look pretty slick and all arrive at the same superlative IRR and NPV but the devil is in the detail. And the devil resides underground.

My gut feel is that an acquisition will be made here in the next two months. Perhaps Glencore will get their puppet, Trevali, to acquire this asset so they can capture the concentrate at the threatened Valleyfield smelter. This would entail further Trevali shareholder dilution no doubt. No skin off Glencore's hide though.

**Reference:** A Technical Review of the Middle Tennessee Zinc Mine Project, NI 43-101, May 10, 2007

Portex Minerals Inc. (formerly SRA) www.sedar.com

**East Tennessee Zinc Mines (ETM)**

Nyrstar also owns these mines. Ore from the Young, Coy and Immel mines is milled at the Young mill. Nyrstar bought these mines from Glencore in 2009 for $126M. Glencore owned the mines for three years but never entered commercial production. Variations of the room and pillar method are used. Note the crane for scale in the photo below (!!).

The advantage these mines have over the Middle Tennessee Zinc Mines is slightly higher grade, higher mill throughput and the need to supply very clean zinc concentrate to Nyrstar's Clarksville Tennessee zinc plant in order to keep it operational. Production at this smelter was 124,000 tonnes of zinc metal in 2015 but this is projected to fall to 115,000 tonnes in 2016 due to the closure of the Middle Tennessee Zinc Mines (largely replaced by externally sourced concentrate). Table 8 illustrates current reserves, resources and 2015 production. Reserve replacement is a relatively straightforward affair which is why reserves are not more than 18 months of production. Therefore, resources are also listed.

**Table 8 ETM Reserves and Resources as of January 1, 2016 and 2015 Production Results**

| | Tonnes | Zn% |
|---|---|---|
| **P+P Reserves** | 2,660,000 | 3.8 |
| **M+I Resources** | 4,840,000 | 4.1 |
| **Inferred Res.** | 24,230,000 | 3.7 |
| **2015 Production** | 1,985,000 | 3.57 |

Unit costs for H1 2016 were $US 42/tonne mined. Mill recoveries have averaged 90-93% zinc recently and concentrate grade is roughly 62% zinc. The economics therefore appear only marginally better than the Middle Tennessee Zinc Mines. As a standalone operation, +$1/lb. zinc is required. I suspect Nyrstar will retain these mines in order to reduce the vulnerability of the Clarksville smelter to obtain feed throughout the business cycle.

**Missouri Lead Belt**

Lead mining in Missouri commenced shortly after the crucifixion of Christ. Well not really, it just seems that way. 1720 actually. Currently room and pillar mining is used by Doe Run to mine ore from six underground mines in the Viburnum Trend. The zinc grade in this ore is roughly 1% so pales in comparison to the 4% lead grade. Minor copper is also present. Doe Run is a private company that plays their cards close to their chest perhaps because lead has had a bad rap for quite some time.

However, they state they produce annually approximately 225,000 tonnes of lead concentrate ( here ) 45,000 tonnes of zinc concentrate(here) grading 57% Zn (here) for roughly 25,000 tonnes of zinc in concentrate per year. However, when I used this figure in Table 1 I could not come up with the total annual USA output reported by the USGS. So I have assumed they produce roughly 45,000 tonnes of zinc IN concentrate annually instead. The same USGS shortfall occurred for lead which confirms to me Doe Run's use of bad language on their website (or the USGS is out to lunch I guess).

I have used this figure in Table 1 instead of trying to mine the depths of Missouri State statistics. Mining methods here are not much different from the Nyrstar mines discussed above.

It is probably safe to say that the price of zinc is not going to influence whether they mine lead or not so I have not dug too deeply into this one and assume there is plenty of ore to keep the show going.

**Balmat #4 Mine**

The Balmat mine in New York State commenced operations in 1930 and operated steadily until 2001. OntZinc, the predecessor to Hudbay Mining recommenced mining in 2006 but shut operations in August 2008 at the height of the financial crisis. The mine did not meet feasibility study expectations. Hudbay has recently sold the asset to an unknown entity called Star Mountain Resources who have recently filed an Industry Guide 7 Report (IG7R) with the SEC which is similar to an NI 43-101. This report, a previous OntZinc NI 43 101 report and 2007 operating results were reviewed.

Remaining zones at Balmat appear to be pretty complex from a mining perspective. In Table 9 are the Jan, 1, 2008 reserves as reported by Hudbay and the 2007 production results. It is pretty clear that the mining complexity resulted in fairly heavy waste dilution of the zinc mineralization.

**Table 9 Balmat Reserves as of January 1, 2008 and 2007 Production Results**

| | Tonnes | Zn% |
|---|---|---|
| **P+P Reserves** | 1,890,500 | 10.2 |
| **2007 Production** | 335,808 | 6.96 |

The mine and mill are reportedly in good condition. The mill can treat 3-4 times what the mine is capable of producing. A 1000 m deep shaft appears capable of skipping this quantity also. Remaining ore is essentially below 900 m depth. The area has good exploration potential, but like the Tennessee mines, exploration has never been a terribly high priority.

Hudbay was disappointed with 2007 production results. Site costs averaged $C74.34/tonne (roughly $US70/tonne) but a large portion of underground costs were capitalized so all in sustaining costs were much higher.

Hudbay took a $C15.1M impairment charge despite historically high zinc prices averaging $US1.47/lb. in 2007.

The mill recovered 95.4% of the zinc at a concentrate grade of 57.15% in 2007. When all these numbers are run through the simple model presented for the Middle Tennessee Zinc Mines above a healthy revenue per tonne ore milled of $US160 is generated (before numerous other charges).

Sustaining capital for the site however was roughly $US23M or $US68.50/t for 2007. So when zinc prices collapsed to $US0.50/lb. by December 2008 this mine was clearly doomed.

Casting forward to Star Mountain Resources today, this company is currently struggling to cover care and maintenance costs let alone finance a mine reopening. Star Mountain is hindered by the inability to use previous reserve calculations since much of the detail has gone missing and a documented QA/QC program seems to have not occurred. A 2.5 year mine plan only has been generated.

Underground mining engineers find mining near vertical or near flat orebodies to be the easiest. Ore dipping +20 to +65 degrees is the most difficult. The IG7 report illustrates that Balmat fits in this category as illustrated in the figures from the IG7 report below.

**Figure 15-2 Long Section View of the Lower Mud Pond Ore Body**

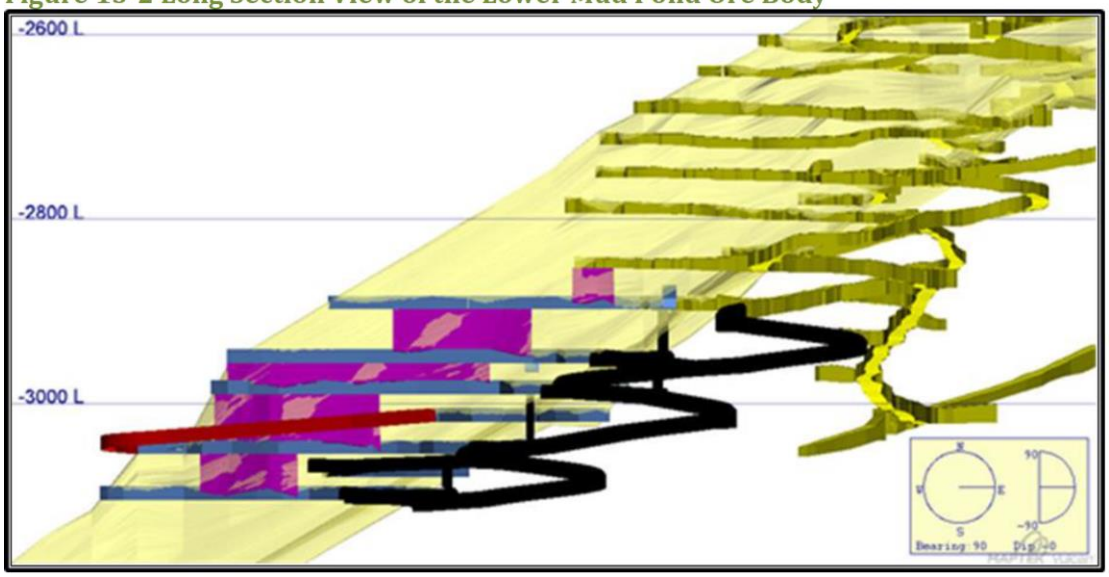



**Figure 15-3 Long Section View of the Mahler Ore Body**

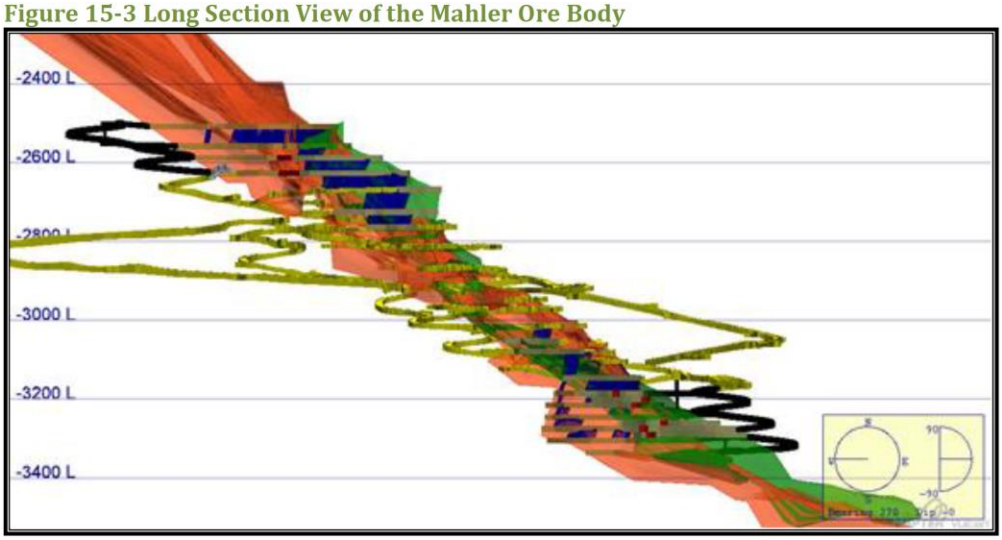



**Figure 15-7 Secion Through Cut and Fill Stope**

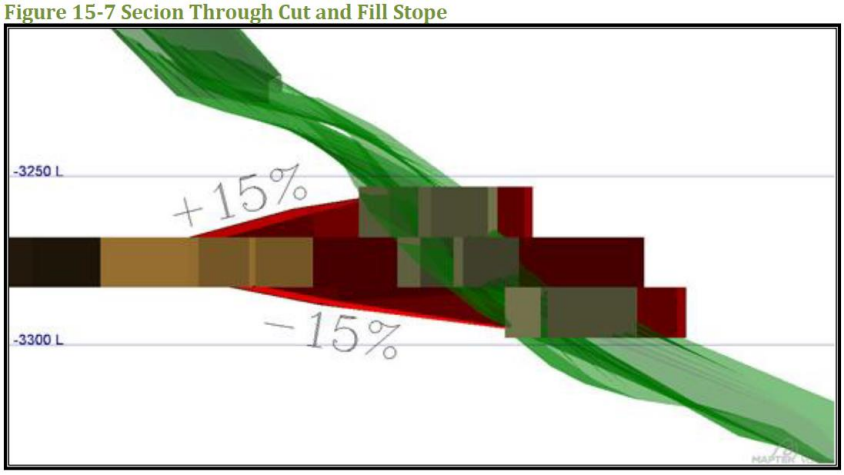
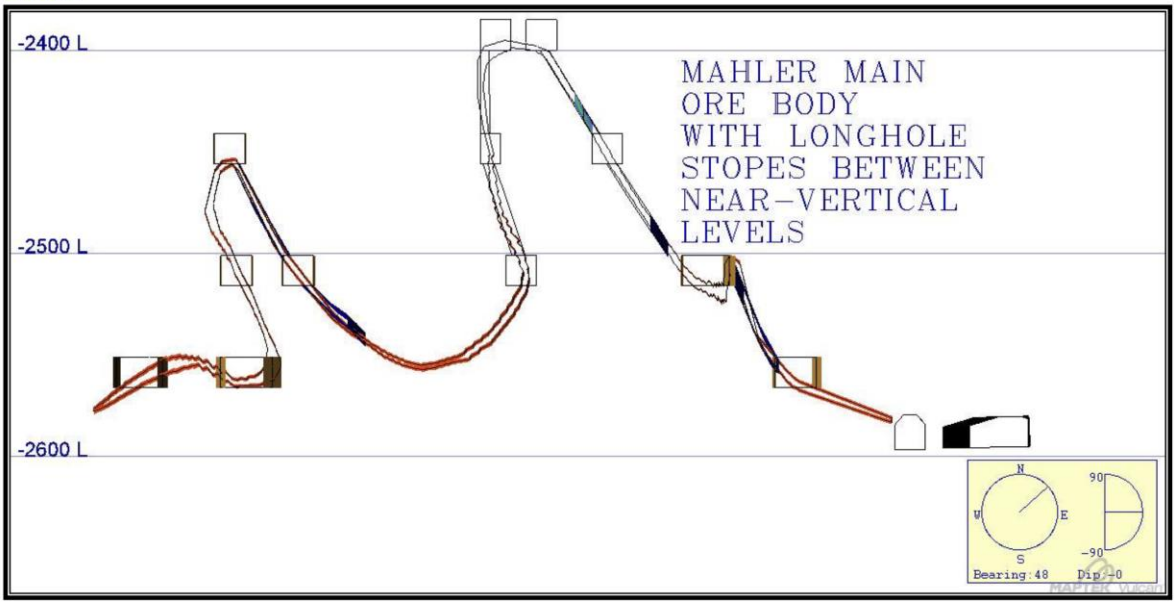


**Figure 15-6 Cross Section Through Maler Showing Long Hole Stope Development Drifts**




I don't want to belabour this one but the report does not provide any detail on how they will be better at grade control than Hudbay was. The figure above sends a shiver down my spine due to the complexity caused by folding. It only points to high operating costs and high levels of waste dilution. I get the real sense that the initial miners put much of this stuff in the "too hard basket" but it is all that is left to attempt to make a mine without the nuisance of conducting considerable exploration first. I can only conclude therefore that zinc prices probably greater than $1.50 /lb. will lead to a breakeven proposition here but prices in the $2.00/lb. range are likely necessary to create a sustainable mining situation.

References: Hudbay 2007 Annual Report. www.sedar.com

Star Mountain Resources Industry Guide 7 Report, Nov 2015 here

Resource and Reserve Audit, Balmat No.4 Mine, January 2003 Hudbay Mining (formerly OntZinc) www.sedar.com

**Undeveloped Deposits**

Only three deposits have hit my radar screen although I am sure there are many others out there including some smaller deposits in Wisconsin.

**Nevada Zinc**

Nevada Zinc is currently drilling a zinc deposit in Nevada that is largely a mineral called hemimorphite (zinc silicate). Although there has been zinc silicate mining in the past (ie. Beltana in South Australia, here), I am only aware of one current mine that mines this type of mineralization, Padaeng's Mae Sod mine in Thailand. A smelter was designed and built in Thailand specifically for this type of mineralization. This high grade zinc mine however closed last month after 32 years of operation due to ore exhaustion. Another one bites the dust. The Tak smelter will close by the end of 2017 due to the unavailability of low cost imported zinc concentrate.

Whenever it is necessary to utilize a novel treatment process to recover metal from an ore, I tend to shy away. These processes are outside of my area of expertise and details relating to them are often shrouded in secrecy (patent pending, yada, yada, yada). Timminco Ltd. producing high purity silica, Orebite producing aluminum from clay and Verde AgriTech producing potash from argillite are three well promoted but ultimately wallet lightening examples that come to mind. So although Nevada Zinc reports some impressive intersections of zinc it is often not the mining potential that dictates economics, it is the downstream exotic processing requirements for which I do not proclaim any expertise. I wish them all the best though.

**West Desert Project**

Zinc/copper/magnetite mineralization was first identified on this property in the late 1950's. This property has passed through many hands since then and is now owned by InZinc. I have reviewed the 2014 PEA and it is an interesting project. Funding for a PFS has not been obtained.

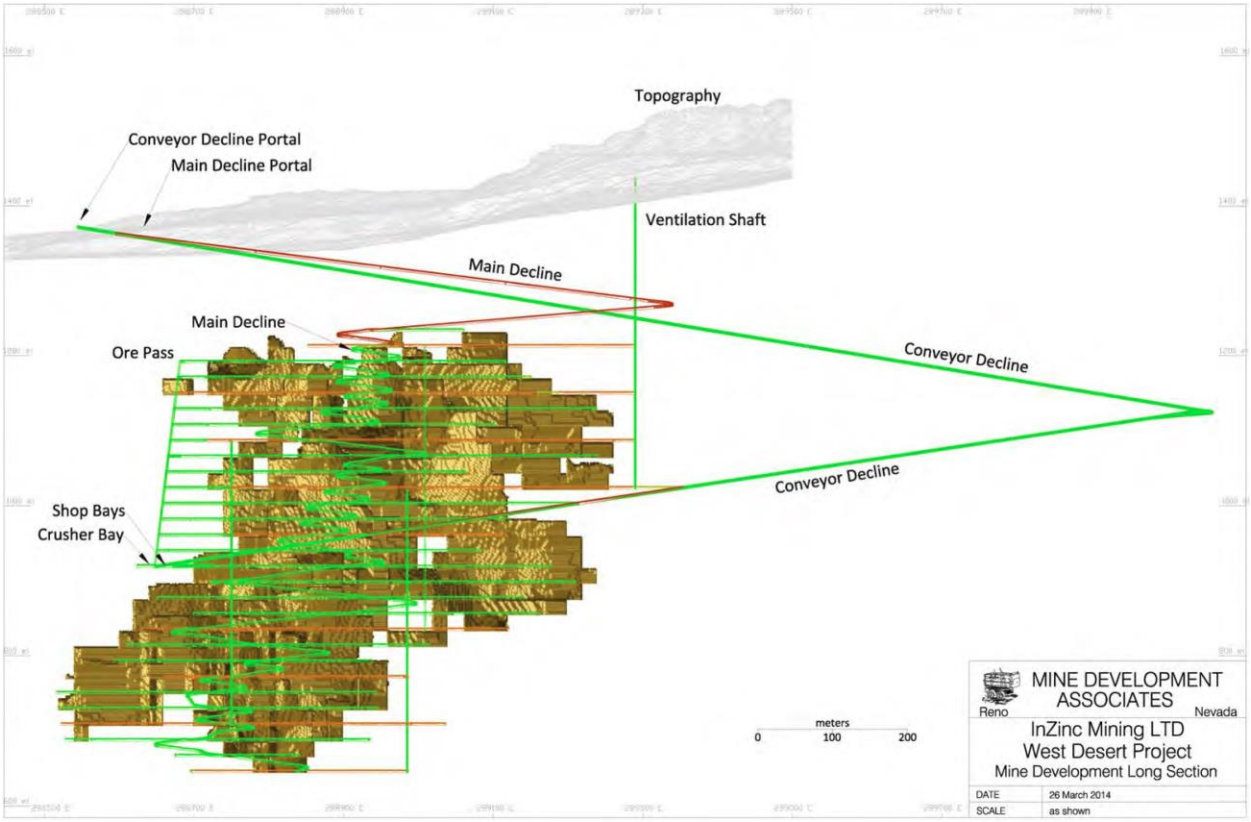
Resources from the PEA are listed below. The listed grades are low in comparison to other base metal deposits and InZinc is relying upon revenue from the magnetite and indium to help carry the economics. Unfortunately, the magnetite price used in studies is about twice current prices and the entire revenue stream at current prices may be consumed simply trying to get the magnetite to market (which they assume to be CFR Tianjin China). See here and here . In other words, it could be waste rock.

| | Tonnes | Zn% | Cu% | In (g/t) | Fe (mag)% |
|---|---|---|---|---|---|
| **Indicated Resources** | 13,022,000 | 2.16 | 0.23 | 33 | 28 |
| **Inferred Resources** | 45,986,000 | 1.76 | 0.21 | 324 | 28 |

Magnetically separating the magnetite upfront however does serve to greatly reduce the amount of ore requiring floatation while increasing the head grade. However it is uncertain whether indium will in fact attract substantial payment from smelters. Although a number of smelters recover indium, it is uncertain whether they actually pay the miners anything for it. InZinc acknowledges that this could be an issue.

Unfortunately, the PEA is very light on mining details apart from showing a few geological cross sections. However, one thing for the project to consider is to change the proposed blasthole stoping mining method to less expensive sublevel caving as practiced by Newcrest in New South Wales. Newcrest has made low grade Cu/Au ore profitable by doing so.

This project has good infrastructure so I think it should be advanced to the PFS stage . (I am not proclaiming it has the makings of a mine, far from it. But I think it warrants more work though.)




**Crandon**

The one that got away. The +50 MT relatively high grade volcanic massive sulphide deposit in Wisconsin would have been mined by blasthole stoping had Exxon managed to get the mine approved. After a roughly three decade on and off again battle with numerous parties opposed to this mine, the war ended with a local native tribe opposed to the mine now the owners of the land and deposit. Apparently casinos are more lucrative. Move along, nothing to see here.

**Summary**

Well, I see it took me 17 pages to describe this relatively easy issue here. Sorry about that once again. But in a nutshell, the US is no threat to the worlds zinc markets. There is some swing production potential but no reason to invest at current zinc prices to sustain or increase current production levels.

There are no producers evident that are going to cause a significant upward impact upon US zinc mine production levels. I suspect the Middle Tennessee Zinc Mines will reopen on a price spike to the $1.50/lb range.

I still have not found that sure fire zinc greenfield investment yet which either means I have not looked hard enough or zinc prices must rise dramatically to make the previously uneconomic, economic. I suspect it is the latter which is why I have been investing in current producers.

Next up in Module 4 will be India. I am looking forward to this since Vedanta has been spreading half truths about their potential there and I want to question this in detail. North American analysts also have issues finding India on the map let alone questioning their mining potential.

I have also been chipping away at a spreadsheet model since it is confusing to determine economics for multi metal situations. I should have this in a couple weeks.