Will Foran Mining Help To Solve The Looming Zinc Supply Problem?

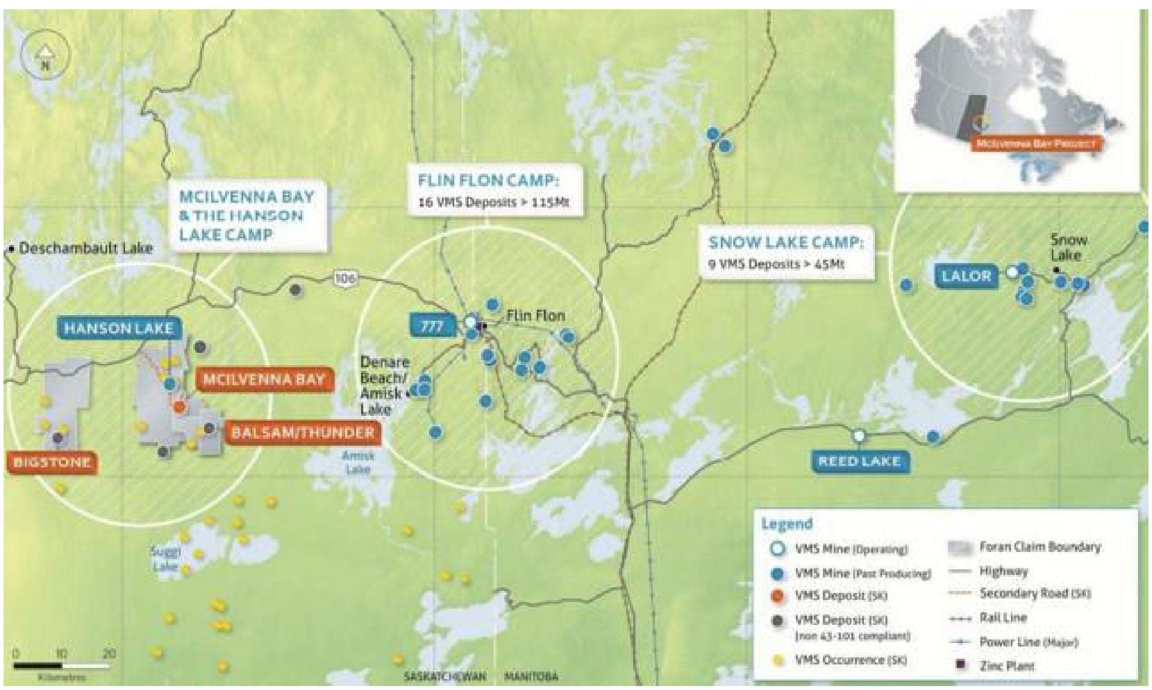
Mar. 1, 2015

Summary

- Foran Mining owns a very interesting copper-zinc project which could produce zinc at a very low all-in sustaining cost (as the pure cash cost is negative).
- The initial capex is scaring investors away, but I will explain why the diversity of produced metals will help the company to secure funding.
- The fair value of Foran Mining at its current stage of the development curve is approximately 50% higher than the most recent closing price.

Introduction

Whilst I was looking for potential zinc projects, I bumped into Foran Mining's (OTC:FMCXF) McIlvenna Bay project in Canada where a preliminary economic assessment was recently completed. As the numbers looked pretty good at first sight, I dove in the paperwork to see if Foran's project would meet my investment criteria as I want to get exposure to zinc projects which remain profitable even at the current zinc price. Foran's share price got smashed pretty hard in the past 3 years and is down approximately 75% for a current market cap of just $15M.



Foran's main listing is in Canada where the company is trading on the TSX Venture Exchange with FOM as its ticker symbol. There's always more liquidity on the primary listing exchange and I would strongly recommend you trade in Foran Mining through the facilities of the TSX-V and always work with limit orders.

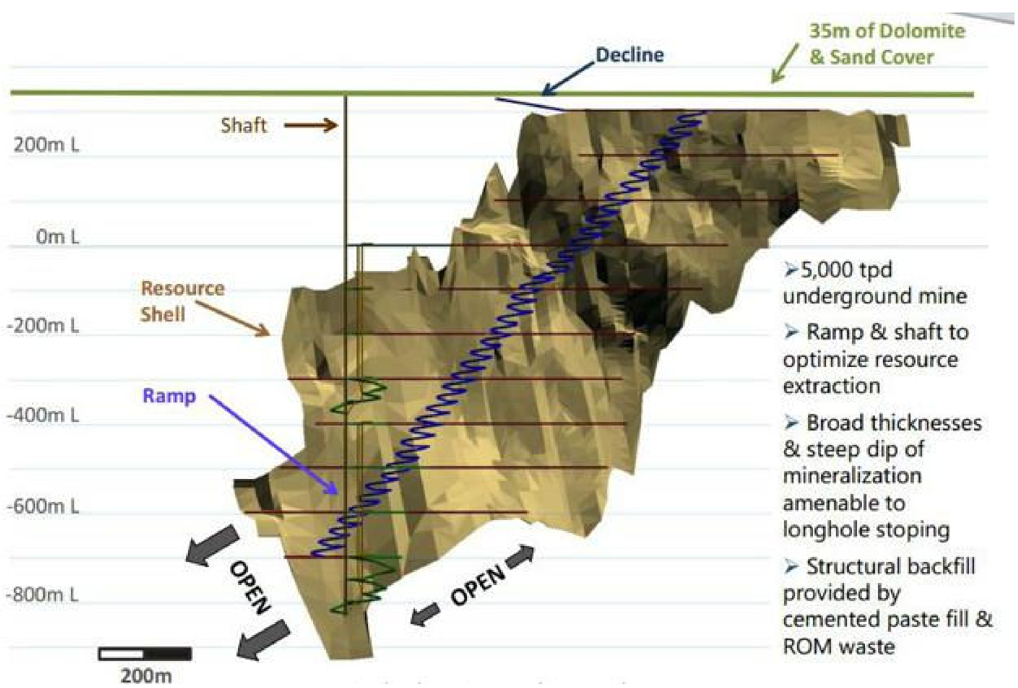
As always, the images in this article were taken from the company's website, corporate presentation and other public documents. The calculations are my own and should only considered to be back of the envelope calculations and just a starting point for your own due diligence.

The McIlvenna Bay Project

As said, Foran Mining owns 100% of the McIlvenna Bay Copper-Zinc project which has approximately 25 million tonnes of ore in both the indicated and inferred resource categories. As the average grade of the mineralization is pretty decent (1.96% copper-equivalent or 13.5% zinc-equivalent in the indicated category), this project has a very decent chance to be developed at a relatively low initial capital expenditure.

This resource estimate contains roughly 1.1 billion pounds of copper-equivalent or a stunning 7 billion pounds of zinc-equivalent mineralization. That's already very decent, but investors should keep in mind this resource estimate was based on 178 drill holes with a cutoff date of [December 31 2012] which means that all of the drill and exploration results since that date have NOT been incorporated in a resource estimate yet and were obviously not included in the mine plan for the PEA either. And that could be an important thing to remember as during the past two years, Foran has encountered some interesting and significant mineralization with astonishing grades of [up to 10% copper].

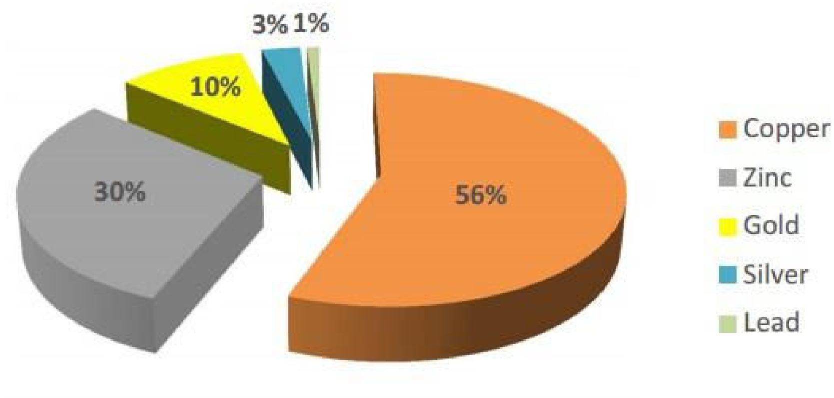
There's also a 1% NSR payable to BHP Billiton (NYSE:[BHP]) and Cameco (NYSE:[CCJ]) but Foran Mining has the right to repurchase this NSR for a cash payment of $1M. As this would make a lot of sense from Foran's perspective, I will assume the company will indeed re-purchase the Net Smelter Royalty when calculating the fair value.



The PEA

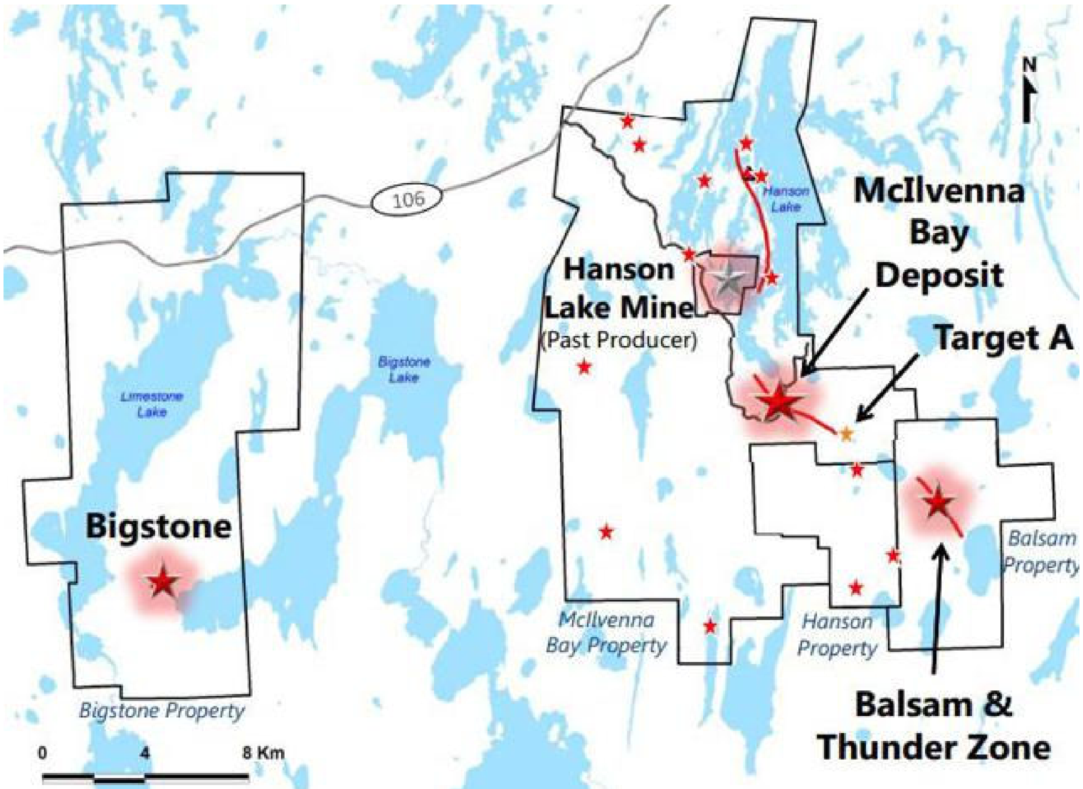
As said, Foran Mining has completed a Preliminary Economic Assessment on the McIlvenna property and the numbers looked really good at first sight. The mine plan calls for a 5,000 tonnes per day underground mining scenario using both a ramp and a shaft.

As it's a poly-metallic project, the product mix will be quite diverse. During the mine life of almost 14 years, Foran expects to produce just over 800 million pounds of zinc, 500 million pounds of copper and 15 million pounds of lead. There will also be a substantial precious metals kicker as the total life of mine production of gold and silver will respectively be 218,000 and 5.4 million ounces. The cash cost (using zinc as primary metal) will be a negative 37 cents per pound. This is caused by the substantial amount of by-product metals whose revenue cover more than the production and processing costs at the project.



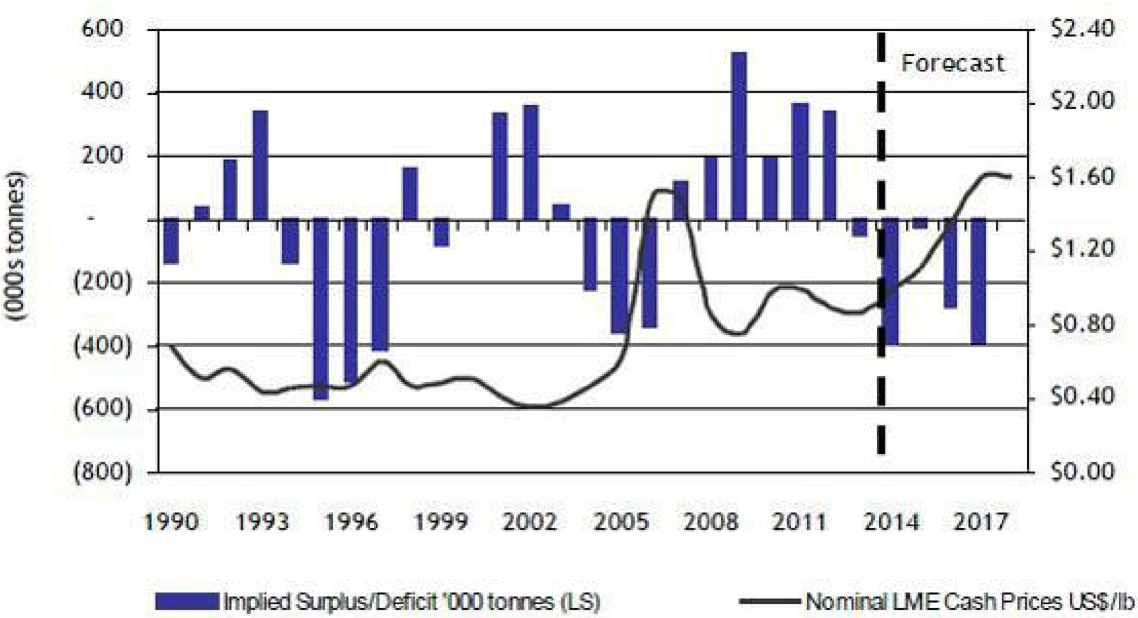
Keep in mind the PEA was based on an NI 43-101 compliant resource estimate which included drilling up to the end of 2012. So none of the additional mineralized intercepts which have been found since that date are included in the mine plan. These zones definitely have the potential to add several million tonnes of mineralized rock to the mine plan, thus increasing the NPV of the project.

One of the zones (Bigstone) has a historic resource estimate which contains an additional 3.7 million tonnes of mineralized rock with predominantly copper mineralization. As this is a historic resource (and thus non-NI 43-101 compliant), Foran was not allowed to include this zone in its plans as another round of drilling will first have to convert the resources into NI 43-101 compliant categories. A you can see on the next image, Bigstone is quite close to the McIlvenna Bay main zone, so it would/should be easy to transport the ore from Bigstone to the planned processing facility.



Why I like Zinc

Analysts usually don't agree on anything, but they almost unanimously agree we might see some supply problems in the zinc market. The Royal Bank of Canada has some excellent research on the zinc market and the next chart shows the expectations for both the near and longer term future.



As you can see the demand for zinc is still going up whilst there's a supply crunch expected. This is due to the fact several large zinc mines are almost depleted whilst not a lot of new production will be coming on line. This was caused by the global financial crisis in 2008 where the zinc price dropped to an uneconomical level. Subsequently, a lot of zinc projects were shelved and the new mine which were needed to mitigate the supply risk never came online either due to financial problems, cost escalation or permitting problems. Only Trevali Mining was able to get some projects going but that definitely won't be enough to solve the issue.

Long story short, there's a zinc supply crisis looming around the corner and that's one of the main reasons why I was trying to find companies which could offer me some decent exposure to the zinc market. I don't necessarily believe in the $1.5/lbs price projections for 2018 and I want to have some sort of margin of safety so I tried to find companies with projects which would still be viable at today's spot price.

Recalculating the McIlvenna numbers

Keeping that in mind, I had a very close look to the financial estimates of the McIlvenna project to see if the company has been too optimistic in its assumptions. As you might know, I'm usually very conservative because I want to find and buy companies whose fundamentals look good as I don't want to surf just the zinc-wave.

The anticipated capex is C$249M, but I will recalculate this into USD using an USD/CAD exchange ratio of 1/1.20 which results in a capex of $200M. The cash cost per pound of zinc will have to be updated as well, as the base case copper price is higher than the current spot price (which means the effective by-product revenue will be lower than originally anticipated). I expect the current copper price to reduce the annual revenue by $18M which would have an impact of $0.30 per produced pound of zinc and increase the production cost. However, the currency effect is also working in Foran's advantage on the operating level, and I estimate the company could shave off $5 per processed tonne of ore, resulting in an additional cash saving of $9M per year. On top of that, Foran will have to spend approximately $12M per year in sustaining capex. This results in a 'corrected' AISC per pound of zinc of -$0.02/lbs, which I will round up to zero for simplicity's sake.

I will use a discount rate of 6% (as the production cost is close to zero, and the project is located in a very safe region). This discount rate also is a mark-up of approximately 4% to the 10 year T-Note, which I consider to be the risk-free interest rate. I will use an average tax rate of 26.5% (consisting of federal tax (15%) and Saskatchewan provincial tax (11.5%)), for the first ten years. From year 11 on, the Saskatchewan Mineral tax comes into play and the tax pressure increases to 36.5%.

The zinc price in the base case scenario will be $0.90/lbs.

Using these assumptions, the fair value of the project would be $226M. But let's now assume the mine life could be extended by two years (and I think it will be more than two years) and the zinc price increases to $1.05/lbs from year 5 on. Again, this is very conservative as most analysts are aiming for a zinc price of in excess of $1.25/lbs from 2018 on.

Suddenly the fair value increases to close to $300M. The weighted average using a 60/40 ratio favoring the base case calculation, the fair value of the project right now is $255M.

What will be the next few steps to advance the project?

Foran Mining will obviously have to spend more money on exploration and should keep two things in mind. First of all, it will need to convert a large part of the inferred resources into the measured and indicated category in order to be allowed to include those tonnes in the mine plan for the pre-feasibility study. Secondly, the mineralization at the McIlvenna Bay project remains open at depth and I wouldn't be surprised to see the company drill a few deep holes to test the additional potential at depth.

Approximately 4,000 meters will be drilled during the drill campaign planned for this winter and as Foran has recenty raised in excess of $1M in flow-through financing (at an issue price 39% higher than the current share price), the company has sufficient cash on hand to fund this program. 2,500 meters of drilling will be focused on the Bigstone zone with the aim to indeed convert historic resources into NI 43-101 compliant resources.

How will Foran Mining finance the capital expenditures?

Looking further to the future, the big question mark will obviously be whether or not Foran Mining will be able to advance the project without getting a partner involved. An initial capital expenditure of C$250M indeed sounds like a tough nut to crack for a company with a market capitalization of just $14M, but there are several mitigating factors.

First of all, the recent weakness of the Canadian Dollar actually reduces the initial capex to less than US$200M. This is still quite high, but it will be much easier to finance, also because the operating costs per tonne could easily drop by another 5-10% due to the weaker Canadian Dollar.

A mining project usually gets financed by using 1/3rd equity and 2/3rds in debt. I will be a bit more conservative and assume a 45% equity/ 55% debt ratio to get McIlvenna going. This would mean Foran will have to find $90M in equity to fund its share of the development expenses. Does this mean Foran will have to increase its share count by 500%? Not at all.

As I explained, McIlvenna should be seen as a copper-zinc project, and fortunately enough there will be an additional production of 15 million pounds of lead, 218,000 ounces of gold and just over 5.4 million ounces of silver being produced, which are 'just' by-product credits. As there's no way Foran will be able to raise $90M in the current investment climate solely through issuing new shares, the McIlvenna project is in a perfect position to sell a gold and/or silver stream to raise the necessary cash. In several other updates (for instance this one on Sandstorm Gold), I explained it started to look like the streaming companies were unable to find any attractive deals anymore, so all streamers would very likely be extremely interested in a gold streaming deal should it be on the table.

So how much money could a gold streaming deal generate? And would it be worthwile?

Just to give you an idea why I'm positive a gold streaming deal will be a win-win situation, I will calculate the return of a streaming deal from the view point of a streaming company. In my back of the envelope calculation I will assume a paid price per ounce of $400 over the life of mine and a 50% gold streaming deal resulting in 8,000 ounces per year being delivered to the gold streamer. The corporate tax rate is zero (as most, if not all) streaming companies use nice sunny tax havens for their deals). A discount rate of 6% will be applied here as well and the used gold price will be $1200/oz.

As you can see, streaming just HALF of the gold production would have an NPV6% of $61.5M. If a streaming company would pay 0.9X NPV (which would be the case with advanced stage promising projects), Foran could bag $55M. And if the offered price/NPV ratio would be lower, it could just increase the production rate which will be streamed.

So selling just half of the gold stream would cover 60% of Foran's equity requirement. If the entire gold production would be sold forward, Foran could avoid any share dilution. Of course this will have an impact on the production cost as I expect the production cost for the zinc to increase by $0.18-0.20/lbs as the by-product revenue would be lower. But in this case I would prefer to sell the gold forward, take the higher zinc production cost and avoid a certain triple digit dilution.

Investment thesis

I usually don't care about companies facing capital requirements that are a multiple of the market capitalizations. However, I am attracted to the McIlvenna Bay project for several reasons. First of all, it has an excellent production mix of not less than 5 metals (3 base metals and 2 precious metals) in an extremely safe region. Secondly, the cheap Canadian Dollar is definitely working in its advantage. Furthermore the probability Foran Mining will add more tonnes to its resource estimate is very close to 100% and by just selling 75% of the expected gold production it could cover the entire equity portion of the initial capex without jeopardizing the profitability of the project.

That's amazing and even if I would double the share count to 200M shares, the NPV/share after taking the gold stream into account would still be close to $1/share, or a 500% share price increase. Does this mean Foran's fair value is currently six times the share price it's trading at? Of course not. For a company in the PEA/PFS stage, I think a price/NPV ratio of 0.25 is sufficient and that would mean there's near-term potential for the share price to gain approximately 50%, with further increases as the project gets de-risked.

I don't have a position in Foran Mining yet, but will very likely initiate one within the next few days. The diversity of the metals which will be produced indicate the company could be very creative in securing financing to get this project going, and I honestly think that despite the company's current market capitalization, it has what it takes to move the McIlvenna Bay project forward.

Editor's Note: This article covers one or more stocks trading at less than $1 per share and/or with less than a $100 million market cap. Please be aware of the risks associated with these stocks.