Tuesday, April 6, 2021

HALLGARTEN & COMPANY

Coverage Update

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Alphamin Resources

(TSX: AFM, OTC:AFMJF, JSE:APH)

Strategy: LONG

Price (CAD)	$0.60
12-Month Target Price (CAD)	$0.80
Upside to Target	33%
High-low (12 mth)	$0.12 - $0.66
Market Cap (CAD mn)	708.0
Shares O/S (millions)	**1,180.0**
Fully Diluted (millions)	**1,260.0**

	FY20	**FY21e**	**FY22e**	**FY23e**
Consensus EPS		n/a	n/a	n/a
Hallgarten EPS (CAD)		$0.062	$0.068	$0.063
Actual EPS (CAD)	-0.01			
P/E	n/a	9.7	8.8	9.6

Alphamin Resources

Riding the Wave of Resurgent Tin

+ The Tin price has stormed higher in the first quarter of 2021, managing to hit double its 2020 lows
+ Severe shortages of deliverable metals combined with recognition of the metal as potentially key in reducing thermal runaway in Lithium-Ion batteries has ignited buyers
+ Alphamin now has a full year behind it as the newest producer of size to be added to the Tin-mining scene
+ Bisie in the DRC is one of the highest grade tin mines in operation
+ Despite the normalization of production that occurred in 2Q20 (after the bridge collapse in late 2019) the year cannot be seen as “normal” due to wild Tin price oscillations
+ The company’s “good problem to have” was a hefty charge for accounting for warrants outstanding due to the doubling of the stock price in late 2020
+ Tin was classified by the US as a strategic metal, in 2018, but the US has no reserves, either in or out of the ground
+ Provided the Tin price stays above $23,000 per tonne, $2,000 below where it currently trades, money floods to the company’s bottom line creating a virtuous circle of cash generation
- ✘ The Virus Crisis has confused the demand picture while causing shutdowns on the supply side
- ✘ Logistically the location in central Africa means long supply lines to the ports that have become subject to the vagaries of the extreme weather in the area
- ✘ The DRC is still perceived in some circles as being politically difficult and unstable

Uniqueness Comes into Focus

The Bisie mine moving into production in 2019 was a key new addition to the world Tin feedstocks market, adding a potential capacity of producing 12-13,000 tpa of contained Tin to a market that has seen erosion of traditional mines and sources over the last decade.

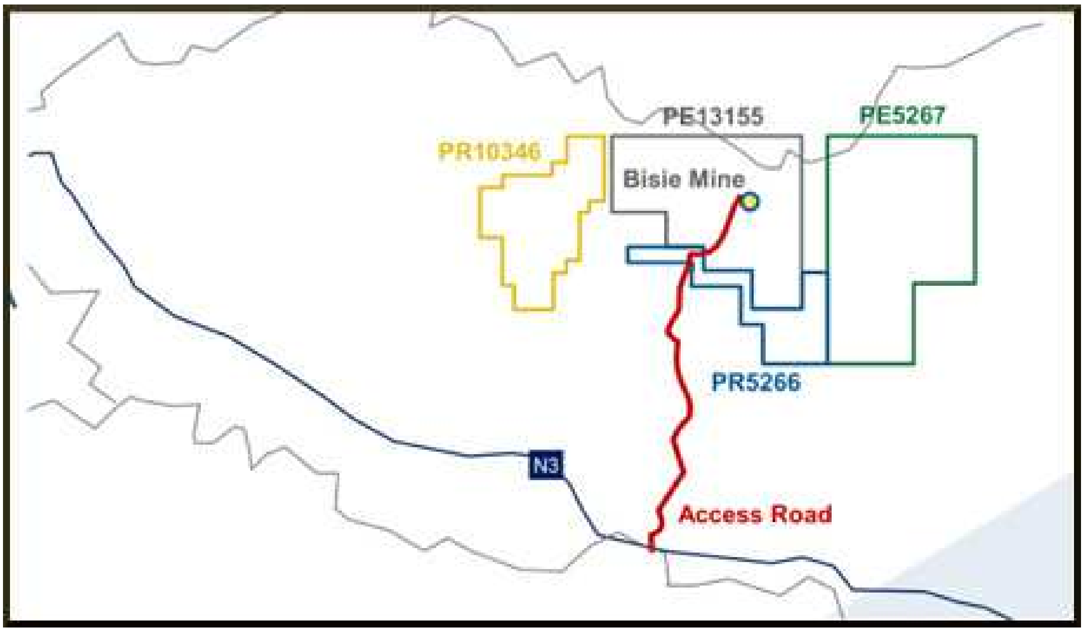
Aphamin’s mine in the DRC has been long in the development process and not without travails in getting to production, including the project being in a warzone earlier in the decade. But with the stabilization of the political situation, the project managed to move forward and reach commercial production in September 2019. Much credit has to go to its backers Tremont Master Holdings which maintained (and upped) its support during the long period where equity markets did not care for tin projects.

However, after a dive during the worst of the Virus's effects on markets, the Tin price stampeded higher on severe warehouse shortages that prompted panic buying by users caught short of supplies. As recently as last year, Roskill was expecting a tight outlook for tin feedstocks over the coming decade, although they thought the market would be sufficiently supplied if key projects ramped-up as forecast. However many of these were dependent upon a tin price north of US$20,000 per tonne. As this didn't transpire until recently the pipeline of projects is exceedingly dry with a paucity of producing assets in public markets.

In this note, with a full fiscal year of production under its belt we look at the progress so far, the details of the earnings and the outlook going forward in what is the most propitious tin market in decades.

The Bisie Mine

The company's main asset is the Bisie Tin mine in the DRC. It is located roughly 180 km west-northwest of the regional centre of Goma and about 210km due West from the Ugandan border. There is novel mineralisation at Bisie, which includes high-grade Tin, Copper, Zinc, Lead and Rare Earths.



Bisie consists of the Mpama North (currently being mined) and the highly prospective Mpama South (Mpama South is located 750 m south of the operating mine). Both are located in the Walikale district, 180km west-north-west of the regional centre of Goma. The company's 84.14% subsidiary, Alphamin Bisie Mining SA holds 100% ownership over three exploration permits which cover 1,470 km^2 of prospective ground in the North Kivu Province.

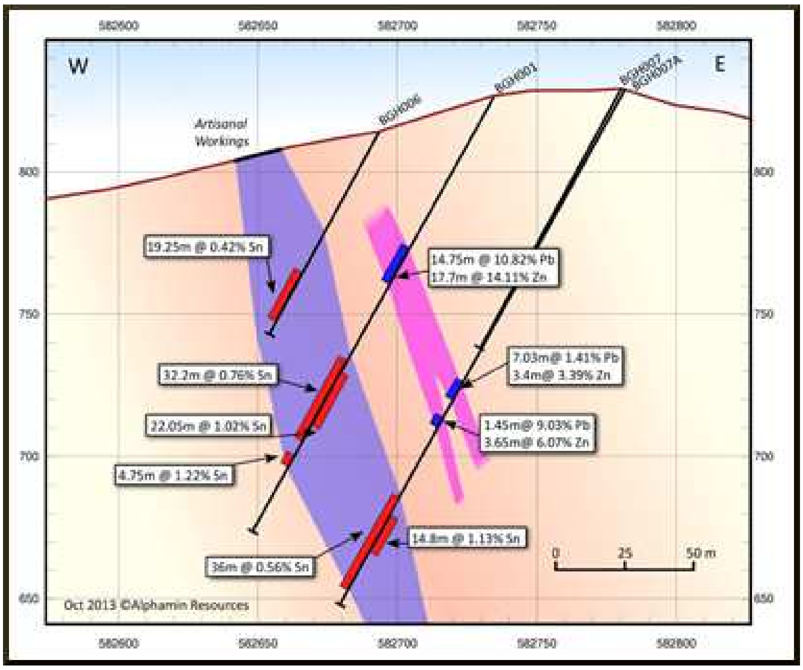
Tin was first discovered at Bisie in 2004 and was mined by artisanal miners (down to 80 metres) from two main target areas, Mpama North and Mpama South Both targets are located along 1.5 km of a ridge that extends over more than 9 kms. Artisanal mining from Bisie in the past has dominated the DRC's production by supplying up to 70% of the cassiterite exported from the country.

Mpama North was a large centre of artisanal mining in the past, with extensive surface and rudimentary artisanal shafts located on the prospect, much like Mpama South originally.

Exploration

Alphamin appointed a drilling contractor, to undertake an initial 6,000-metre diamond core drilling program at its Mpama South prospect, commencing in December 2020. Mpama South is located approximately 750 metres south of the main processing plant at Bisie and the drilling program is one of three phases designed to delineate a maiden Mineral Resource at Mpama South, by end 2021. Thereafter, Alphamin will do step-out and infill drilling to prove the extent of the deposit.

Between 2012 and 2013, Alphamin drilled 19 drill holes for 3,364 metres to determine the extent and nature of the mineralization at Mpama South. Three of these are shown in the cross-section at the right. Two distinct mineralized zones were intercepted, an upper zone showing well-developed lead, zinc and silver mineralization, and a lower zone rich in tin and copper.



The team has already identified several areas along the Bisie Ridge showing soil geochemistry anomalies similar to those found at Mpama North. Management expects to generate a further 3-5 drill targets from these anomalies over the next 18 months.

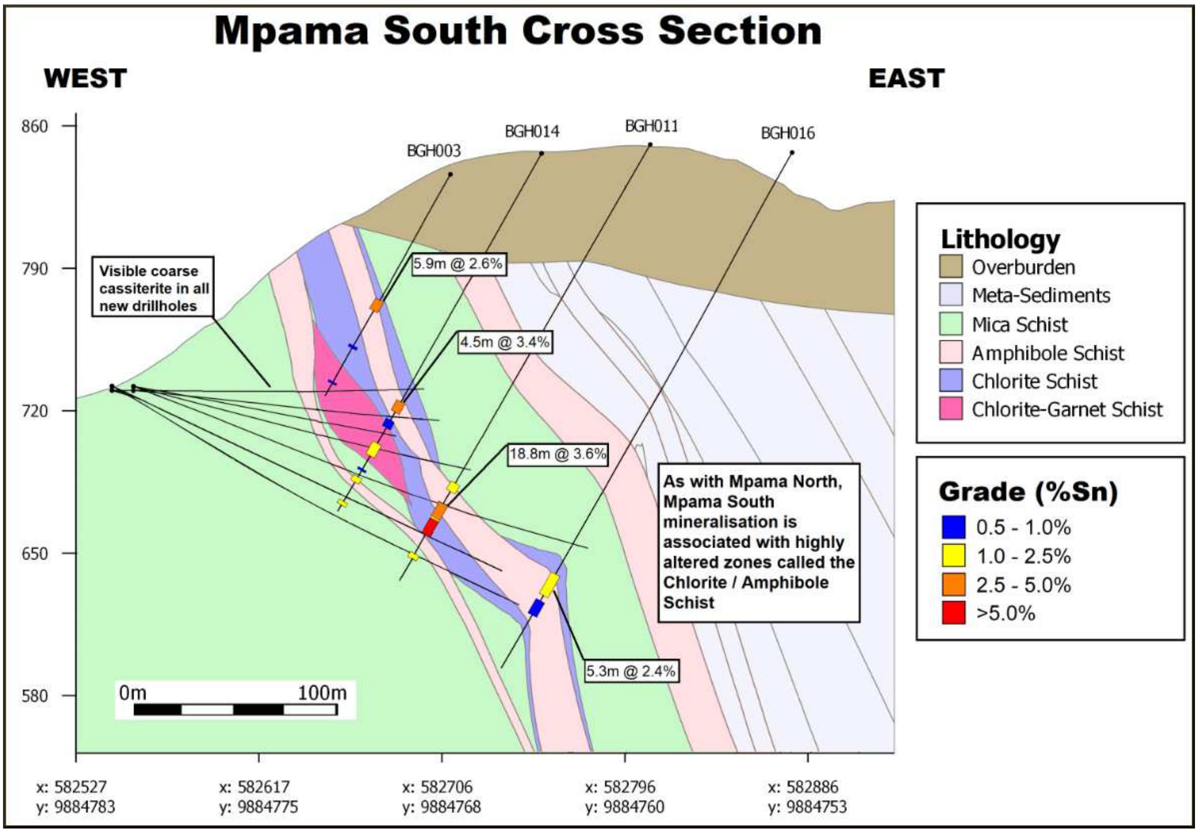
Work at Mpama South

In mid-March 2021 the company reported progress on the Mpama South drilling program, the results of which will be combined with past drilling to enable a maiden resource estimate to be published on this deposit. The main results were that the Main zone mineralization intercepted at Mpama South, based on a visual inspection and interpretation, is regarded by the technical team as comparable with the mineralization being mined at the Mpama North mine. A new parallel mineralization zone was discovered in the footwall of the Main zone at Mpama South.

A drilling program completed in 2016 recorded notable cassiterite intercepts in similar alteration styles and of similar high grades to Mpama North, including apparent widths of:

- BGH011: 32.8 m at 2.46% Sn (including 18.75 m at 3.91% Sn)
- BGH003: 2.5 m at 5.76% Sn

The company commenced its most recent drilling at Mpama South with a 5,800m (25 drill holes) in December 2020. To date, 5,056 m and 23 holes have been completed. The company announced in mid-March that all holes completed have shown visual mineralization, suggesting continuity of the Main zone system, while several "exceptional" intercepts were deemed visually comparable with the thick veins and brecciated zones of cassiterite existing at Mpama North. In addition, a new zone of mineralization was discovered in the footwall, which appears continuous and highly mineralized.

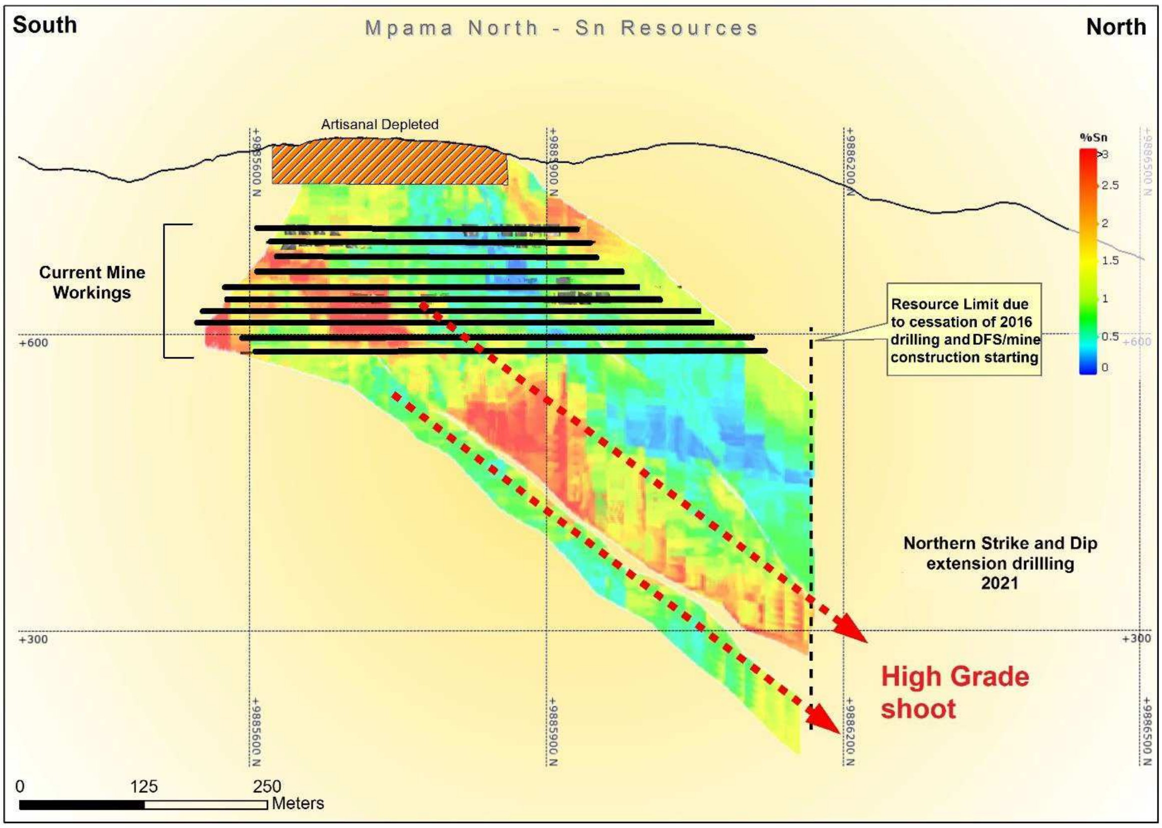


The first seven drill holes from the current drilling campaign were sampled and assayed by the company's on-site laboratory. Results confirmed the visual interpretation of high-grade tin intercepts over wide zones. The on-site laboratory has insufficient capacity to cope with the quantity of samples being generated by the drilling whilst also having to ensure full quality assurance/quality control success. Consequently, a decision has been made that all Mpama South samples will be analyzed by an accredited third party off-site laboratory before results would be released to the market. As a result there will be a delay in the reporting of the official tin assays at Mpama South while the export process is carried out. The first batch of export samples is in the export pipeline. This work was undertaken with two rigs.

The company has recently undertaken geochemistry works with 9,750 soil samples on 130 lines. Some 40 line-kms were sampled with ~1,300 samples dispatched in 1Q21 with two teams at work. The company has recently added an extra team.

Exploration in the rest of 2021

At Mpama North, an initial 7,500m drilling campaign is planned to test the strike and dip extension of the current producing orebody, below 400 m in depth from the mine portal; drilling should commence in August, 2021, on the establishment of an underground drill drive on level 6. Targets below the existing workings are shown in the cross-section below:

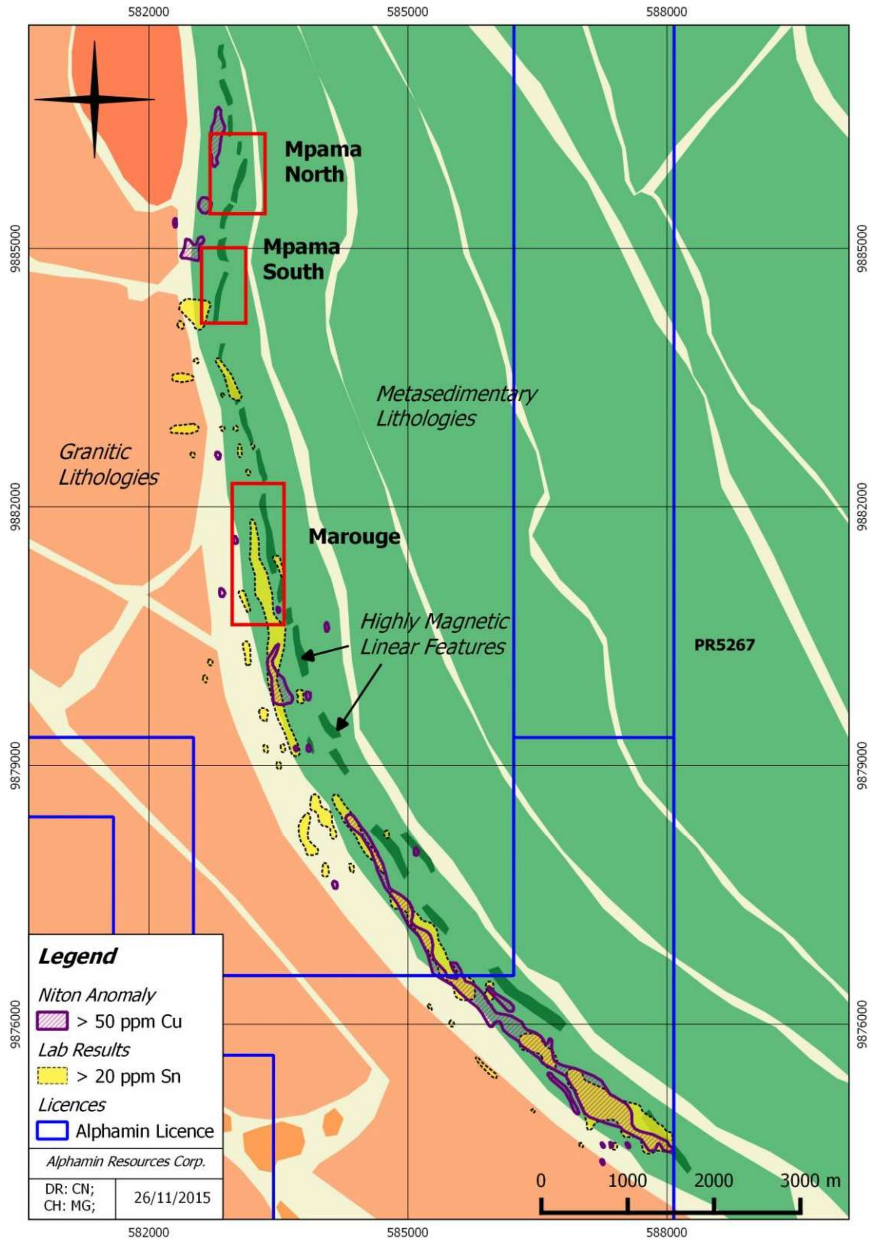


Additional drilling metres are planned at Mpama South to increase the size of the Main zone and incorporate the Footwall zone. At Mpama South, between 8,000 and 14,000m of drilling is envisaged with the intention of integrating all results in the maiden mineral resource estimate toward the end of

2021. This is expected to be followed by a conceptual mining study, infill drilling and further step-out drilling to determine the extent of mineralization.

A further four rigs will arrive on site between May and August of 2021.

Further geochemistry should produce high-precision targeting data and is expected in 3Q21.



Alphamin's exploration initiative also aims to discover at least one additional orebody on the highly prospective Bisie Ridge (13-kilometre strike length). Two drill targets six km to eight km south of Mpama North have been identified along this Bisie Ridge. A high-density geochemical soil sampling program is under way and more accurate drilling targets will be identified by the outcomes of this program in 3Q21.

Resource

In late November 2013 the company announced a maiden Inferred Mineral Resource at the Mpama North target. The Inferred Resource was defined over 400m strike to a depth of 220m and is open at depth

The Mpama North Target Inferred Mineral Resource currently comprises four million tonnes @ 3.5% Sn for 141,200 tonnes of contained tin (at 0.25% Sn cut-off). Drilling was conducted on a grid of approximately 50m x 50m down to depths of 220m. The best results were reported from the four deepest holes drilled to date.

A new resource prepared by Sound Mining is dated 31st of December 2019. This resource estimate was focused on Mpama North.

Mpama North Resource

Category	Ore mn tonnes	Sn %	Contained Tin	Cu %	Zn %	Pb (ppm)	Ag g/t
Measured	0.33	4.75	15,600	0.22	0.12	0.006	1.4
Indicated	3.99	4.59	183,400	0.32	0.16	0.01	2.8
Measured & Indicated	4.32	4.61	199,000	0.31	0.15	0.01	2.7
Inferred	0.48	4.57	21,800	0.16	0.09	0.013	1.4

It should be noted that the December monthly YTD forecast reports that 172,000 tonnes of ore have already been processed at a grade of 5.3% Sn.

The Mineral Reserve for Mpama North was also updated in 2019 to account for these depletions together with the outcome of a new mining method, and to cater for a lowering of the depth from where it was believed the artisanal miners had impacted the Mineral Resource. These adjustments reduced the Mineral Reserves as stated in the March 2017 Technical Report by approximately 34,000 tonnes Sn.

Mpama North Reserve

Classification	Ore mn tonnes		Sn Grade %		Contained Tin (tonnes)	
	2019	2017	2019	2017	2019	2017
Proven	0.05	0.38	3.77	4.17	1,890	15,900
Probable	3.28	4.29	4.01	3.53	131,490	151,400
Total Reserves	3.33	4.67	4.01	3.58	133,380	167,300

The maiden resource for Mpama South should be out at the end of 2021.

Evolution of the Mine

The development of the Bisie mine has been planned to be staged, with the starter mine (based on the initial reserve at Mpama North) being complete. As resources expand, based upon drilling, the optionality of increasing the mine and processing capacity is enhanced.

The process plant was designed to treat up to 420,000 tpa of ore (at 4% Sn) to produce ~20,000 tpa of 62% tin concentrate with 72% recoveries, or 12-13,000 tonnes of contained Tin per annum.

Crushed ore stockpile above jigs, gravity building to the upper left

Employment numbers are around 800 employees.

The company has implemented a mining method that uses open stope drilling and blasting methods to excavate the ore before backfilling the open stopes with waste rock. The latest mining plan is to use waste rock as the fill rather than cemented hydraulic or paste fill.

The underground development consists of the decline ramp located in the footwall which will advance to the central position on each level where the footwall drives are started. The connection from the decline ramp to the footwall drives extends to the orebody from where the ore drives are developed parallel to the footwall drives. Footwall drives intersecting the main decline are shown below.

The ore drives are located along the footwall contact of the orebody. These footwall and ore drives extend to the limits of the orebody. Connections between the footwall and ore drives are developed as and when required.

Further stages will include additional drilling at Mpama North, as mentioned earlier, below the extent of the current drilling to extend the life of mine of Mpama North. Additional circuits in the processing plant should increase recoveries, with drilling and development of Mpama South adding capacity and life of mine. These moves will be followed by further regional exploration of already identified targets and other prospective areas

The Fine Tin Recovery Project

The next priority, now that production is nearing nameplate capacity, is the installation of a Fine Tin Recovery component. Alphamin has appointed Obsideo (Pty) Ltd as its engineering, procurement and construction management (EPCM) contractor for the execution of its Fine Tin Project (FTP). The FTP is focused on treating the tailings stream from its gravity concentration plant at Bisie to recover the fine to ultra-fine tin particles.

Management believes that it can increase plant throughput by another 10% through minor plant de-bottlenecking activities – this could increase annual tin production to ~12,000 tonnes.

Additionally, in its efforts to maximise metallurgical recoveries, the team has identified process flow streams that contain fine, recoverable tin, and they have selected a proven metallurgical technology to recover the fine tin from these streams, which should increase tin output further at very low incremental operating costs.

The FTP will utilise Multi Gravity Separators (MGS), which have a proven track record in the tin industry to recover particles down to 10um in size, low energy requirements and make high upgrade ratios achievable. The MGS will be set-up in rougher-cleaner configuration, to treat a 20 ton per hour process flow stream from the current plant's tailings running at a grade of 0.8-1.8% Tin.

The FTP is estimated to produce a concentrate containing 45-55% Tin which will be blended with the concentrates from the main gravity concentration plant to produce a final concentrate, estimated to contain 60% tin.

The FTP has the potential to increase production of payable Tin at Bisie by 5-10% per annum. With higher production at a low incremental cost, the FTP is expected to further decrease all-in sustaining costs.

The total project expenditure was estimated to be US$4.6mn. The company reported in mid-January that the Fine Tin recovery plant construction was 70% complete. It should be operational mid-year 2021.

Recent Earnings

The table on the following page shows the recent earnings of Alphamin. After the bridge crisis of late 2019, and its lingering effects into early 2020, 2Q20 was the first "normal" quarter for Alphamin. It was afflicted though by the brutal collapse of the Tin price in March and April due to the first wave of the pandemic.

The rally started almost immediately from the metal hitting its nadir but the progress higher was in fits and starts. The Tin price achieved for sales was US$17,436 in 3Q20, a full $2000 per tonne higher than in the previous two quarters.

In 4Q20, the most recently announced quarter, Bisie's production increased 13% to a quarterly record OF 2,898 tons of Tin and was higher than management's previous market guidance of 2,600 to 2,800 tons. This outperformance was due to better than expected Tin feed grades and plant recoveries. The processing plant performed at an average recovery of 74% for the quarter, including a record recovery of 77% achieved in December 2020.

Once again infrastructure issues impacted with quarterly sales decreasing by 14% QoQ, due to extreme seasonal rains impacting export road conditions. Weather stations across the export route reported rainfall above 159% of the long-term mean. The short dry-season (January-March) allows road maintenance to be done and already road conditions are improving and management said that it expected to place the majority of the quarter's sales shortfall (around 500 tonnes) during Q1 2021. Of course this inventory is being sold into a much higher price scenario due to this fortuitous delay.

The LME tin price increased to approximately US$18,500/t during 4Q20.

The bottom line in 4Q20 ended up in the red to the tune of $4.43mn after minorities are taken into consideration. The main drivers of this were:

- Sales of around 500 tonnes of the quarter's production being thwarted due to rains (so thus will be in 1Q21)
- Interest expense was up at $4.43mn for the quarter
- The item classified as a forex gain (of $2.07mn) actually relates to the revaluation of a VAT refund owing to the company from the DRC government
- Revaluation of the warrants represented the biggest hit (though non-cash) with a negative impact of $7.7mn. This is due to the rising stock price.
- The tax bill was $3.36mn showing that in reality the company's pre-tax earnings in the quarter were somewhere north of $10mn

Earnings Outlook

As things stand the company is running very near to its current installed capacity throughput and targeted plant recoveries. The next step-up in production comes from the FTP in mid-2021. The company has said that it expects to increase annualised contained tin production from the current level of 11,000t to 13,000t. This increase is expected from July 2021 following the commissioning of the Fine Tin recovery plant and a planned increase of 5%-10% in processed ore volumes.

On this basis, management has guided contained tin production of 5,500t in 1H21, increasing to 6,500t in 2H21, thereby achieving the forecast annualised goal of 13,000t. Then the aforementioned unsold excess from 4Q20 needs to be factored into sales in 1Q21 also.

Our estimate for average prices in FY21 (i.e. US$23,000 per tonne) is $2,000 under where the metal has been for the last six weeks, so we may actually end up undershooting on our metal estimate and thus our top-line revenues and everything that flows from that.

Even with this conservative projection for the tin price in the full fiscal year, the company sales soar from a total of $187mn in FY20 to slightly over $300mn in FY21.

Even suppressing the price projections, the company is projected to produce a positive bottom line from here on out. The details of our economic model are shown on the following page.

Factoring in the Fine Tin project gives an extra volume kicker in the latter half of FY21 and all of FY22.

The volume of sales by the currently ebullient Tin price would produce sales of approximately $22mn higher than the $303mn we are positing. A change in the way payments are received from the company's trading offtaker will result in payments being received a month later so we have discounted sales accordingly by one-twelfth.

Costs of revenue would be slightly higher. It is important to note that the company's off mine costs increase substantially as the Tin price increases – royalties, export % of revenue costs, marketing fee ratchets and smelter deductor become more in nominal terms (% of contained Tin times the Tin price). As a guide this could be around $1000/t more at Tin prices of US$24,000 per tonne vs US$18,000 per tonne.

Depreciation is essentially unchanged and there is no reason for GS&A to be much higher.

We factor in the hit from warrants revaluation at $11mn based on an 80 cent stock price (our new twelve-month target). This then disappears from 2Q22.

Interest expenses are reduced in the first instance by the debt restructuring reducing debt in absolute amount but in the second instance by the lower interest rates and lower quarterly requirements. The cash sweep from the free cash flow is heightened though. If anything, this will accelerate debt reduction further and we are factoring in the termination of the cash sweep by the end of FY21.

Alphamin

FY ended December

USD mns	FY23e	FY22e	FY21e	FY20	4Q20	3Q20	2Q20	1Q20	FY19
Revenue	291.38	298.45	303.53	187.45	42.66	44.62	40.14	60.03	27.22
Cost of Revenue, Total	135.00	131.00	135.00	114.53	20.49	25.55	23.67	44.83	15.66
Gross Profit	156.38	167.45	168.53	72.92	22.17	19.07	16.47	15.20	11.56
Selling/General/Admin. Expenses	16.20	15.50	15.80	17.68	3.27	4.69	5.13	4.59	15.59
Depreciation/Amortisation	25.00	25.00	25.00	30.05	6.25	6.25	6.25	11.30	
Interest Expense (Income)	1.00	3.20	7.80	15.62	4.46	2.62	3.31	5.23	5.46
Forex loss (Gain)	1.20	1.30	1.40	1.52	2.07	(0.08)	(0.18)	(0.29)	0.00
Warrants	-	-	11.00	8.78	7.73	2.61	(0.02)	(1.55)	(6.85)
Total Operating Expense	178.40	176.00	196.00	188.17	44.27	41.64	38.16	64.11	29.85
Operating Income	112.98	122.45	107.53	(0.72)	(1.61)	2.98	1.98	(4.08)	(2.63)
Income Before Tax	112.98	122.45	107.53	(0.72)	(1.61)	2.98	1.98	(4.08)	(2.63)
Income Tax	33.89	36.74	35.56	7.14	3.66	2.91	0.72	(0.15)	(7.76)
Income After Tax	79.08	85.72	71.97	(7.86)	(5.27)	0.07	1.26	(3.93)	5.13
Minorities	12.65	13.71	13.28	0.97	(0.84)	0.01	0.45	(0.75)	0.15
Income pertaining to Shareholders	66.43	72.00	58.70	(8.83)	(4.43)	0.06	0.80	(3.18)	4.98
Weighted Average Shares	1272	1265	1185	1065	1180	1180	1180	866	866
EPS (USD)	0.052	0.057	0.050	-0.008	-0.004	0.000	0.001	-0.004	0.006
EPS (CAD)	0.063	0.068	0.062	-0.011					0.008
Tin production - tonnes	13,100	12,800	12,250	10,319	2,898	2,563	2,739	2,119	5,216
Tin sales - tonnes	12,950	12,700	12,700	10,900	2,306	2,695	2,613	3,286	1,109
Tin Price (Hallgarten estimate)	$22,500	$23,500	$23,900	$16,648	$18,497	$17,436	$15,359	$15,300	
EBITDA (US$)	140.18	151.95	152.73	55.23	18.90	11.85	12.90	12.45	
Free Cashflow (US$)	91.58	100.52	75.07	5.09					
Sweep of Excess Cashflow	-	-	37.54	-					
USD/CAD rate:	1.20	1.20	1.25	1.34					

The massive surge in the value of sales sends money streaming to the bottom and a massive turnaround in results. It is in 2021 that Alphamin really hits its stride as a money-making machine. This is on only modest increases in volumes (the FTP and the carryover of sales from 4Q20). The margins veritably bulge wider and debt is driven down (and accordingly interest payments) creating a virtuous circle.

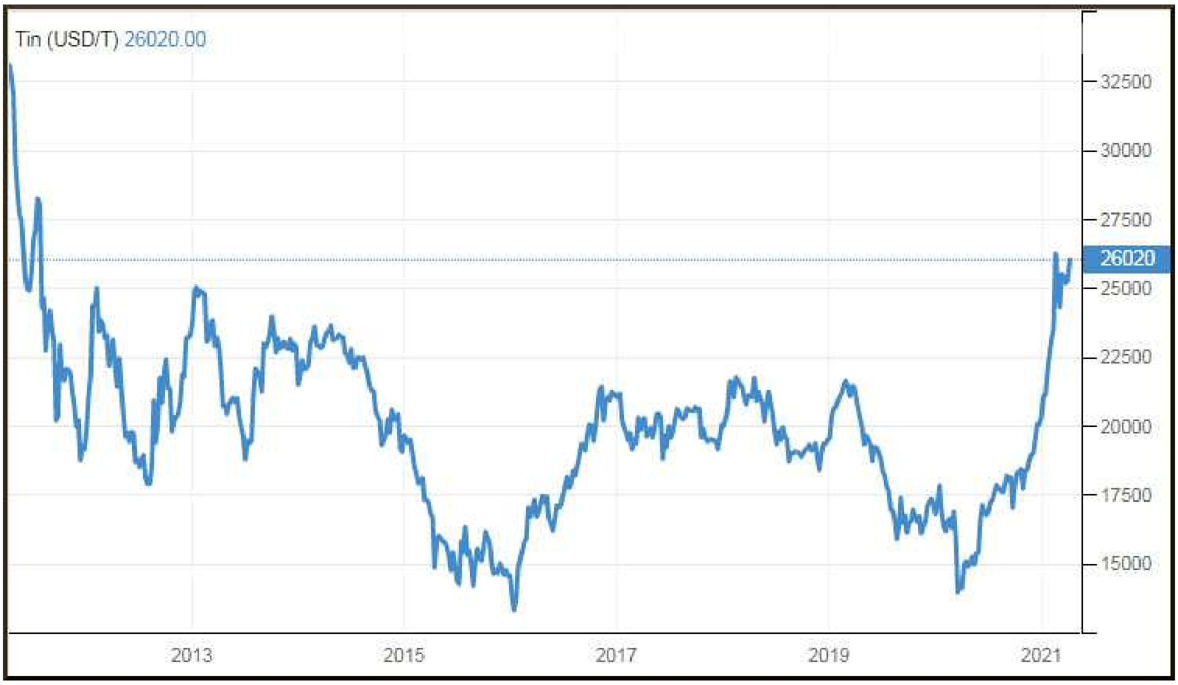
This produces results for Alphamin shareholders (after minorities) of US$58.7mn in FY21 and around $72mn in FY22. The company's cash generation ability is enhanced by a low sustaining capex of US$4mn per year vs US$25mn per year depreciation, and a tax shield until development costs have been recouped. Conversely exploration should be higher going forward and might be as much as $10mn per annum.

Tin – Regaining its Dynamism

Tin has not exactly been sexy since the go-go days before the collapse of the Tin cartel. However not being a "promotable" metal for such a long time means that Tin consumers have rested upon their laurels and imagined that providence would provide them with on-going supplies at attractive prices for their margin expectations. As long as low-cost, low tech alluvial production out of Malaysia and Indonesia could act as a price suppressant the end-users were happy and moreover unconcerned. However, such a scenario meant that there was minimal investment in new production and the pool of wannabes became very shallow indeed. The flush of developers early last decade when prices held firm between $19-22,000 per tonne for several years has been reversed with most drifting away into other activities or meeting their demise (e.g. Kasbah). The developments would have been way more likely to have moved forward if prices had averaged around the current levels of the tin price.

The supply dynamic is the prime motor of the space. Future demand was incorrectly estimated by parties such as the Tin Association and the USGS at the beginning of the decade. Their premise was that a massive shift to Tin solders would fuel a shortage. This created false expectations. The decline in traditional sources and their non-replacement is tangible though. Now is a good time to be bringing on new projects.

Despite the last decade showing a potential emerging supply crisis for tin, the price largely went sideways, or down. The chart below shows the last ten years and it looks anything but a smooth ride.



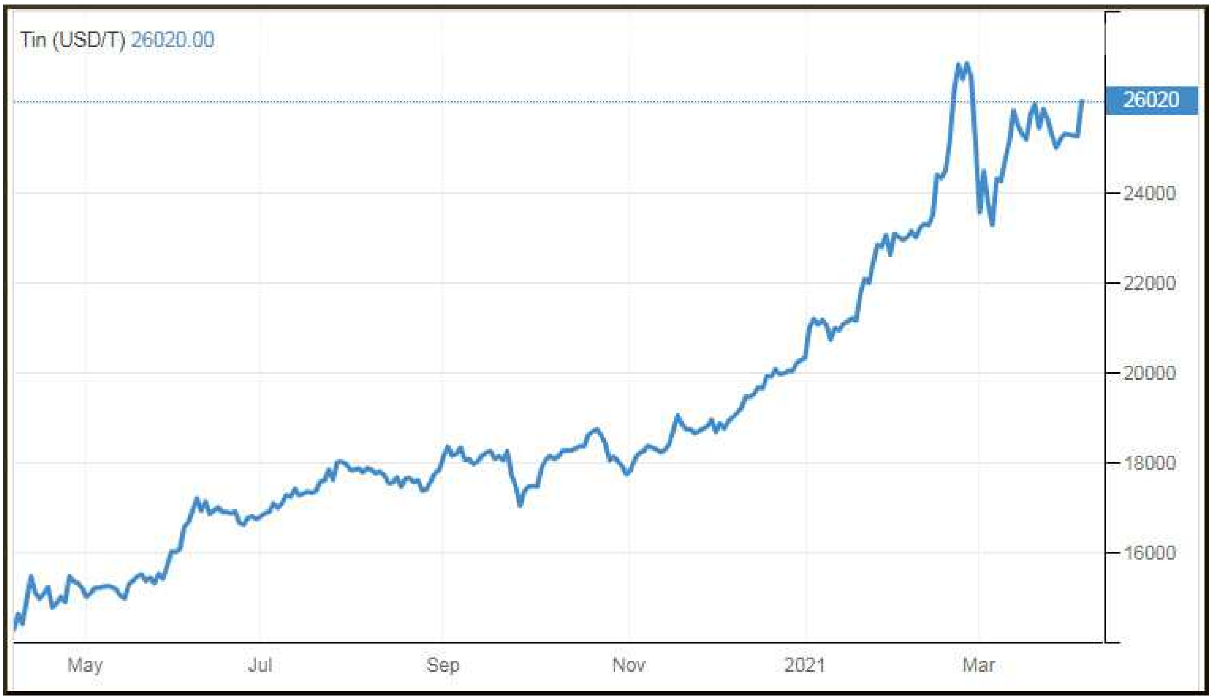
Source:Trading Economics

After peaking at $32,500 per tonne in 2011, the price sagged again but then spent the period between 2016 and 2019 locked in a range between US$21,000 & US$23,000. While investors love upward movement most tin users and miners would prefer the type of range-bound movement seen in the mid-decade than *boom & bust* scenarios.

However as one of the smallest of all metal markets on the LME, one might speculate that traders have found an attractive niche to trade within in a market they can move on very little volumes.

It is the fate of strategists to have to make calls on metal prices that almost inevitably are proven wrong over the medium term. The chances of being wrong are narrowed over the short term when momentum is going one's way and improved further when dynamics of supply (rather than demand) are fairly clear cut.

The table below shows the metal swiftly recouped the worst of the Virus Crisis slump effect. It then began a seemingly unstoppable rise until, in late February 2021, it finally ran into resistance and pulled back several thousand dollars before consolidating above $25,000 per tonne.



Source: Trading Economics

We are using $23,900 for our Tin price calculations for 2021, even though they currently stand at over $25,000. We are positing a slight easing in price over the following two years but this is just us being cautious. The pipeline of new projects is almost non-existent so prices could end up staying about $25,000 per tonne, with spectacular effect on Alphamin's bottom-line.

The issue is whether supply is the prime driver, or is it demand, going forward? Much depends on the way the fallout from the Virus Crisis plays outs and is handled.

Financing

Tremont now owns 672,667,224 common shares, representing approximately 58% of the number of the outstanding common shares. They also hold warrants to acquire up to a further 40 common shares of Alphamin at 30 cents per share. Assuming the exercise of all warrants by Tremont only and no other exercises, Tremont would own up to approximately 57.5% of the number of common shares of the company on a partially diluted basis.

Warrants

On April 8, 2019 the company issued 79,800,000 warrants in the private placement.

The warrants are valued using the Black-Scholes pricing model with the assumptions below:

As at December 31, 2020	April 8, 2019	January 22, 2018
Strike price	CAD$0.30	CAD$0.40
Risk free interest rate	1.593%	1.24%
Expected life of options in years	3.00	3.00
Annualised volatility	75%	75%
Dividend rate	0.00%	0.00%

All warrants in issue are revalued on a quarterly basis using the same valuation methodology as described above. The fair value of the warrants in issue at December 31, 2020 was calculated at $11,934,734 (December 31, 2019: $3,159,082). The movement in the warrant liability of $8,775,652 for the year was taken to the statement of Profit/Loss. The biggest hit was in Q4, a period in which the stock price nearly doubled from around 20 cents to around 40 cents.

A large number of the warrants on issue will be extinguished in 2020 without being exercised. This left, at year end 2020, only the January 2018 and April 2019 series of three-year warrants in contention.

Now only the 30 cents warrants remain relevant. These are mainly held by current shareholders so we suspect that they will wait until just before the expiry date unless they are offloading their current holdings. The company has indicated it is not getting much in the way of exercises at the current moment, despite the warrants being well in the money.

In the December results the company noted that a 5% increase in the volatility rate applied would increase the warrant liability by approximately US$535,000. Therefore the income statement charge will surge on the surge in price. On the positive side these warrants only run till early next year.

The stock price is up already around 66% from the end of the December quarter. If the stock was to reach our target price of 80 cents during FY21, then the gain would be 100% from the end of the previous fiscal year, implying a warrants charge of around US$11mn.

Their exercise should bring in around CAD$24mn in cash to be applied to further debt reduction.

The Debt Profile

The debt restructuring in May 2020 produced a quantum reduction in the company's debt. The amendments were designed to reduce debt service costs, reduce mandatory debt repayments and provide more favourable financial covenants. The financing resulted in the prepayment of US$31.2mn in principal under the Credit Facility, with US$19mn settled under the shares for debt transaction with Tremont and a further US$12.2mn prepaid from the net proceeds of the private placement and existing cash resources.

DEBT EVOLUTION

	Related Party US$	Non-Related Party US$	Total US$
Balance (31 Dec 2019)	29,636,371	64,932,161	94,568,532
Capital Repayment (in shares)	(19,000,000)		(19,000,000)
Capital Repayment (in cash)	(270,755)	(18,464,539)	(18,735,294)
Interest accrued	2,417,215	8,022,692	10,439,907
Interest repaid	(1,608,833)	(6,065,615)	(7,674,448)
Amortisation of capitalised fees	322,728	710,004	1,032,732
Balance (31 Dec 2020)	11,496,726	49,134,703	60,631,429
Due within one year	5,011,310	20,799,179	25,810,489
Due after one year	6,485,416	28,335,524	34,820,940
Initial principal	25,000,000	55,000,000	80,000,000
Interest outstanding	6,528,275	14,272,983	20,801,258
Capital repayments	(19,270,755)	(18,464,539)	(37,735,294)
Principal outstanding	12,257,520	50,808,444	63,065,964
Unamortised fees	(760,794)	(1,673,742)	(2,434,536)
New Total	11,496,726	49,134,702	60,631,428

Interest payments in the short term have been very much reduced. The full cost of interest will be accounted but the cash payments were reduced to a mere $300k per month.

The debt capital repayments were reduced also by 70%. These measures enhanced cashflow but we would note that the mandatory cash sweep of 50% of free cashflow also kicked in from 4Q20. The definition of “excess cashflow” is not given. As mentioned we are not factoring in the sweep still being extant after the end of the current fiscal year.

As can be seen in the table above, the company has engineered a reduction in its debt of around one third during 2020. The pace of the reduction should quicken in FY21 as the excess cashflow that is swept to debt reduction purposes increases on the back of stronger revenues and EBITDA. This should more than halve debt within the current fiscal year, leaving less than $30mn by year end.

The likely conversion of the remaining warrants should clear most of the remaining financial debt from 2Q22. This then liberates the free cashflow to be potentially applied to dividends.

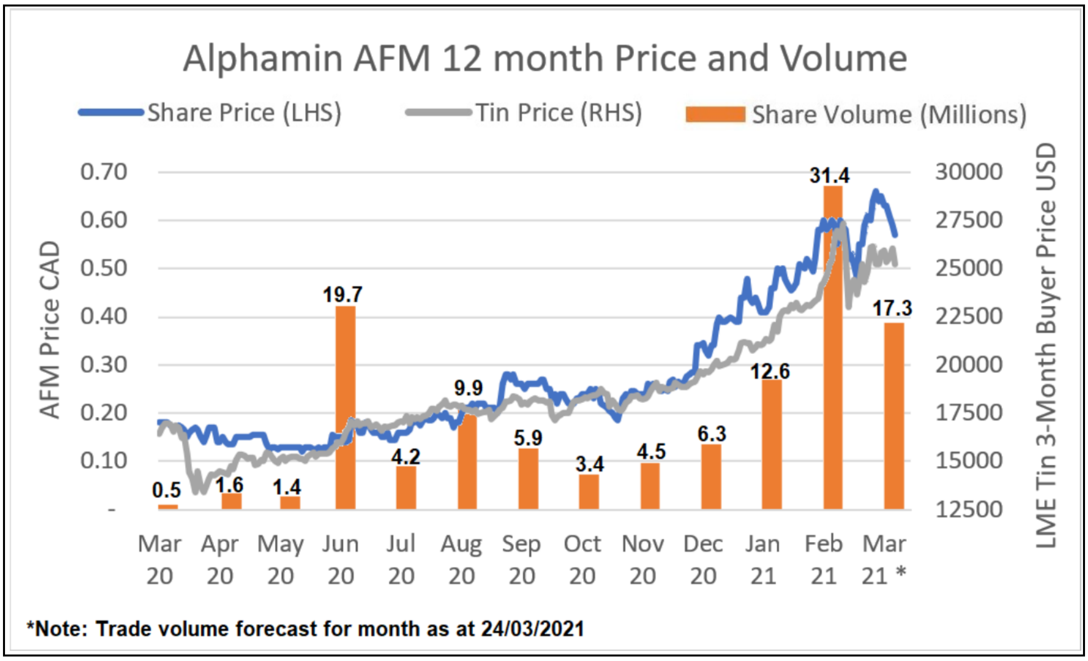
The interest costs are Libor +10.5% on US$62mn debt =US$ 7.1mn per annum plus US$1.5mn on concession interest and leases = ~US$8.6mn per year = US$2.15mn per quarter. This too will reduce as

Alphamin meets debt repayments, particularly via the free cash sweep.

The current debt levels amount to less than on quarter of expected gross revenues for FY21.

Trading

Despite the Canadian market's only tenuous encounters with Tin and its miners/developers the rising price of the metal has not only driven up Alphamin's price but created quite startling volumes as shown in the chart below.



How much of this trading volume is attributable to domestic Canadian investors and how much pertains to international investors (likely institutional) remains an unknown.

Risks

The prime risks we can envision at this stage are:

- ✘ Retracing in the Tin price
- ✘ Tricky logistic routes to markets
- ✘ Political unrest/guerilla activities in the region
- ✘ Fluctuating perceptions of Tin as a "conflict mineral"

Tin is subject to the forces of supply and demand as are most metals. The price rise has been whiplashed in the last year by the Virus Crisis on one side and long-term under-supply/under-investment on the other. New production is almost non-existent. However, Tin is inextricably linked with industrial activity and the West (at least) is in an economic swoon in the wake of the Virus Crisis. Most of the damage appears to have been to the service sector thus far. However it cannot be discounted that industrial demand might decline and eventually trim back some of the stunning gains of the last six months in the short (or even medium-term).

The bridge issue in late 2019 (the excessive rain in 4Q20) showed the vulnerability of Bisie to its limited options in accessing ports. This problem will only go away with the construction of better infrastructure in-country. The company would prefer not to take on such general benefit projects but, to guarantee future surety of egress and ingress, it will be helping maintain roads and bridges that it needs to traverse to markets.

The guerilla situation in the vicinity of the Bisie mine has declined sharply from the tumultuous days in the middle of the decade. This is not to say that it won't deteriorate again but as living standards are rising around the mine for its workers, their extended family and beneficiaries of the trickle-down effect the chances of locals being involved in attacks against the mine are lessened.

Bisie's past has been one of the reasons why tin was included in the Dodd-Frank legislation, which was introduced by the US to stop DRC warlords from using metals to finance their conflicts.

The legislation created a necessity for Alphamin to demonstrate to the likes of Apple, Microsoft and Samsung that its tin is 100% conflict-free. This the company has successfully done. Likewise, though it has propelled the artisanal miners to clean up their act (literally and metaphorically) to move their output into the daylight of "non-conflict material". Somewhat of a virtuous circle has been created that may eventually liberate mines in this part of the DC from the strictures. In many ways though the requirement to prove the provenance of metal from the DRC gives Alphamin an advantage because it is so easy to prove its product qualifies, with the opportunity to drive rogue players off the field.

Conclusion

For a few brief weeks in early 2020 the whole premise of Alphamin's move to production looked to be in danger. Tin had dived to $13,000 and viability seemed threatened despite the high Tin grade and low costs. The threat passed soon enough and the metal began to fly. Even when we began writing our initiation we never would have imagined seeing $26,000 per tonne within the space of 12 months. If only for reasons of economic uncertainty this seemed preposterous. However a confluence of mine shutdowns, low stockpiles, firm demand and the arrival of the long-awaited supply-demand crunch lit a fire under the price with, in 1Q21, some buyers being unable to source the metal for neither love nor money as warehouse stocks fell to the levels of less than a day's consumption.

In this buying frenzy Alphamin became the prime beneficiary as the public markets had been cleansed of tin-producing stories over the previous two decades. None of the wannabes were even vaguely near to production and the main competitors were one company going over only dumps and another with a half share of a storied mine, but with the Chinese gripping them in a panda-hug. Alphamin stood out head and shoulders and its stock soared.

Alphamin produces tin within the lower quarter of the global cost curve which makes it sustainable from that perspective. EBITDA margins are over 50% at current Tin prices (i.e. US$25k per tonne) and upticks in price have a snowball effect on earnings and thus the valuation afforded by the markets.

Alphamin is quite clearly a serious contender and the grades imply that it will be much more viable at lower prices (not that we foresee those) than almost all other projects.

From now on the perception of Alphamin will be coloured by the combo of the Tin price and the earnings performance. The FY gone was a strange one, now 2021 (hopefully) will be the "new normal". With EPS of over US 5cts per share forecast for FY21 and 5.7cts per share in FY22.

We reiterate our **LONG** rating on Alphamin and have upped our 12-month target price to CAD$0.80.

Important disclosures

I, Christopher Ecclestone, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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