

Lindian Resources - a new highest grade bauxite play

ASX listed bauxite stocks have been hard work

Bauxite is not a commodity that stock market investors naturally turn to owing to the opaqueness of the market and a dearth of juniors that have made money in the sector. Metro Mining is still struggling as a new producer (see comments below), Australian Bauxite (ABX) is focusing on value-added products and its projects don't seem to offer much in the way of economies of scale. It is still not breaking even.

Going to Africa where there is serious scale, Canyon Resources (CAY) hasn't been able to achieve much traction with its 892 Mt, 45.1% Al_2O_3 Total Resource in Cameroon even though it has been described as a global Tier 1 bauxite project. Its biggest challenge is probably the distance to port - approximately 800 km. Other, private ventures such as Alliance Mining Commodities (AMC) (owned by Taurus and RCF et al) in Guinea, have never gained much traction with its Koumbia project, being 2.1 billion tonnes resource at 43.5% Al_2O_3 . Its high grade component is 253 Mt at 48% Al_2O_3 . Both of these projects are lacking the magic ingredient.

Lindian Resources - the new high grade story

So, why am I taking up your time with a new story in the bauxite sector if it is so hard to make money in it? Well, first up, Lindian Resources (LIN) is a new story. It is a "fresh horse" in Guinea, one of the best places for world class bauxite projects. Admittedly, we haven't had much time to flush out all the negatives yet and there is a learning curve ahead of us, but its project has something exceptional about it; grade.

A bauxite project needs to tick three main boxes before it can be taken seriously as a real contender. The first is geopolitical suitability. In recent years Guinea has been behaving much better on this front with the development of 10-18 Mtpa projects. Next, it needs to be in the lowest cost quartile to have any chance of financing. It needs cash operating cost in the order of US\$25 pt f.o.b. Finally, and this affects costs, it needs to have strong grade. Gaoual is looking as if it may have the best grade possible.

Conglomerate-style is almost unique

There is no shortage of bauxite in the world. There are potentially many projected queued up for development that have grades of 45-48% Al_2O_3 , but completion is intense. In contrast, early sampling of Linden's Gaoual project has given grades of 55-60% over a 1.5 km strike length. That is a small sample size but the ore shows remarkable similarity to the famous Sangaredi conglomerate orebody which has previously been described as unique. The best (selective) assay at Bouba on the Gaoual licence was 73.99% Al_2O_3 with 1.88% SiO_2 using an XRF analyser, with a total

number of 21 samples averaging 56.6% Al_2O_3 with 2.25% SiO_2 .

The Sangaredi mine, opened in 1973, and produced at a rate of up to 14 Mtpa. It was owned 49% by the Guinea Government (CBG) and 51% by RIO and Alcan, and it was Guinea's most profitable bauxite mine.

Generally, bauxite deposits typically form in beds 8-15m thick on top of plateaus. However, the conglomerate style of bauxite can form in a river basin when the plateau-style bauxites erodes into it and undergoes a secondary enrichment process that also washes away some of the impurities.

Bauxite metallurgical characteristics can have a significant impact on saleability of product. Reactive silica is an important consideration. So too is boehmite, an aluminium oxide hydroxide mineral that is problematic and requires high temperature refining. The less you have the better as the 3-4% locked up in this minerals generally can't be recovered. An appealing characteristic at Gaoual is the 3-5% boehmite. This doesn't increase with the higher grade of Al_2O_3 , as one may have thought.

The impact of the favourable metallurgical characteristics and higher grade can mean an additional US\$20 pt in revenue - a 33% improvement when compared to average projects. It means a premium product.

Low cost entry price in the acquisition deal

Linden announced a deal in April 2019, whereby it can earn up to 75% of the Gaoual Bauxite Project. The first 51% stake requires the expenditure of US\$1m over two years and the payment of 17 million share. Another \$2m of expenditure and 17 million more shares will take it to 75%. The vendor retains 25%, but of if this proportion will come the government's equity entitlement.

Management experience in bauxite & Guinea

Lindian employed Shannon Green in July 2019, as a mining engineer with extensive experience initially with WMC in gold followed by a stint in the uranium sector. In the last eight years he has specialised in African bauxite with several companies and projects. Thus he has extensive relevant experience.

Corporate strategy is to monetise the asset

The last thing that a shareholders in a junior company wants to see is a capex budget of \$500—\$1,000m. We all know how dilutive this is and how long it takes to prove, fund and develop a mine. It can be a death by a thousand cuts. Once developed, there is no guarantee that it will be a profitable venture in any event. So, it is pleasing to learn that Lindian has no intentions of going down this path. The objective is to drill and prove how good an orebody it has, then look for a commercial exit strategy to reward shareholders; most sensible.

Immediate strategy is to start drilling

So far there has only been limited sampling and some inconclusive drilling by Canadians a number of years back. That has led to speculation that there might be 300 Mt if the deposit is 30m deep.

Once the general meeting of the company approves the deal in November, Lindian intends to commence a 34 hole auger drilling programme on 600m spacings. This low cost programme (US\$160,000) will give a good three dimensional view of the orebody and allow for a better informed resource estimate. Thus, there will be a short turnaround in finding out just how real this is.

Money is fairly tight at present but there is sufficient to conduct the forthcoming drilling. A small capital raising is always possible, but given the potential uplift in value that we may see, the Company would not be in a hurry to dilute shareholders unnecessarily.

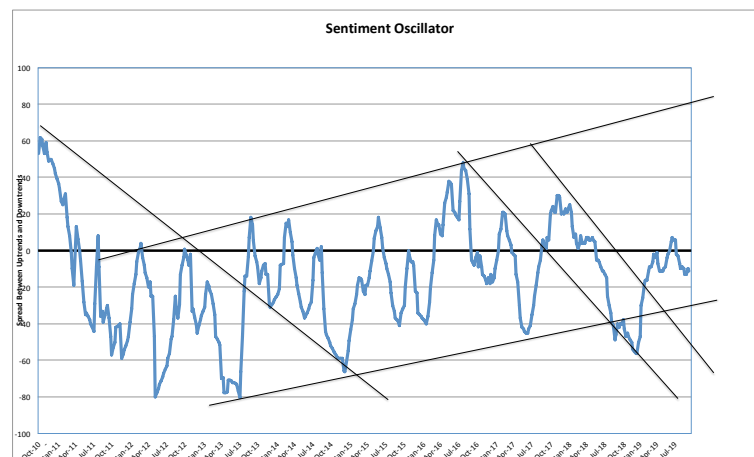
Other projects

Lindian has a number of bauxite projects in Tanzania, but these are of little significance compared to Gaoual. It is also trying to get hold of a large rare earths project in Malawi, but this is subject to a commercial dispute just now and this might take a year or two to resolve.

Metro Mining still struggling

The highest profile ASX-listed junior in this space is Metro Mining, having won an award for development of Stage 1 at its Weipa mining operation at Diggers & Dealers last year. However, shareholders haven't seen any joy yet, with the shares having fallen from 29.5¢ in February 2018, to hit 9.7¢ in June; recently trading at 12.5¢. Metro is currently in struggle street even though it recently reported an EBITDA margin of A\$15.77 pt in the September quarter on a shipment rate of 1.4 Mt, but this rate isn't representative of a full year due to the impact of the wet season. It really needs to invest another A\$51m in the Stage 2 floating Terminal to lift production to 6 Mtpa and bring unit costs down by an estimated 18%. Metro is another example of difficulties that can be faced when juniors develop mines. It is rarely easy.

Disclosure: No interest in the bauxite sector.



Sentiment Oscillator: Sentiment is still struggling. There were 31% (34%) of the charts in uptrend and 42% (44%) in downtrend on Friday's close.

Detailed Chart Comments

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