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Potash Ridge Blawn Mountain project

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Potash Ridge: Blawn Mountain project update

Fertilizer Focus speaks with Potash Ridge President, Guy Bentinck

Fertilizer Focus (FF): Could you give some background on the Blawn Mountain project from its inception to the progress to date?

Guy Bentinck (GB): Blawn Mountain has been considered as a potential project since the 1970s mainly by the alumina industry and a considerable amount of work was completed in terms of metallurgical test work, drilling, engineering and permitting. The economic stagnation during the 1980s meant that the project was abandoned due to a lack of funding. The US simply bought their alumina elsewhere.

Potash Ridge began to re-look at it as an SOP project in 2011.



Guy Bentinck, Potash Ridge President

“There is material in the ground, the mining and processing is straightforward”

We took control of the property and we began drilling as soon as once we received an exploration permit. We also obtained all of the historical drilling, test data and engineering work that was performed extensively on the property. Blawn Mountain is on state-owned land, and as such there were no objections once we had demonstrated the economic advantages of the operation to the State of Utah.

More recently in January of this year, we decided to move forward with a initial phase of the project one-third of the size of the original project in order to facilitate prompt funding. Blawn has the potential to be the lowest cost producer of soluble grade SOP in North America, at USD172/ton based on our January prefeasibility study.

We have begun discussions on the financing side and are looking at innovative financing structures that minimise dilution to existing shareholders.

The next stage is to complete detailed engineering before we put a shovel in the ground. We are looking to secure an Engineering Procurement and

Construction (EPC) contract for a fixed lump sum. We can then lock in this capital cost and engage engineering companies to carry out the work that is required. We can then begin construction later this year, with a two to three year execution phase.

FF: What, if any, have been the main obstacles you have faced so far? And how were these overcome?

GB: There have not been any obstacles of significance. The drilling and engineering work revealed everything we needed to know: There is material in the ground, the mining and processing is straightforward, the permitting is completed, the water rights are secured, and the market for the product is strong.

The state of the financial markets in 2013-2015 was the only road-bump we encountered. The market was effectively closed to resource projects of this magnitude during that time period.

FF: What were the results of your economic impact analysis?

GB: We engaged a third party to take a look at the impact on the local



Drilling Blawn Mountain

economy. The nearest town is Milford with 1 500 people. The first phase if the project will provide 240 direct jobs - so there is a huge job impact to this rural community, and potentially over 1 300 jobs in total in Utah. The project will also have secondary benefits in the region through through creation of supporting industry and infrastructure.

The owner of the land is the Utah School and Institutional Trust Lands Administration (SITLA) so royalties will be delivered directly into the education system. During the first phase we will contribute over USD12 million per year in royalties to SITLA, making us potentially their largest source.

FF: Which other organisations are involved in the project?

GB: Establishing key relationships with third parties has been paramount to the project. We have a buyer for the by-product sulphuric acid and we're already in discussions with the local electric utility and gas suppliers. We are also in the process of engaging companies interested in the offtake of SOP.

FF: What logistical/commercial arrangements need to be organised before mining begins?

GB: Most of that was taken care of well in advance, but as mentioned, we need to enter into supply agreements for electricity and gas and the SOP offtake, none of which we see as a difficult process.



Engineering procurement is key

FF: When do you expect to begin mining?

GB: Subject to financing we hope to begin construction on the site later this year. It will be a two-year build, so the pre-stripping should begin mid-2019 and mining would follow later that year.

FF: You have recently reduced the annual estimated output of SOP from the project - why was this?

GB: This is a reflection of market conditions. Perception of financing a billion-dollar project was too tough, so we scaled down. This was a good idea because the economics have not changed as a result of the decision. We were able to maintain an IRR in excess of 20pc, which is very robust for fertilizer processing facility in North America.

All of the SOP we will produce can easily be absorbed into the North American market, especially into California where demand for soluble SOP is increasing considerably. This doesn't mean we can't expand in the future though and will look to do so once phase 1 is ramped up.

FF: What are the current estimations on SOP production and which method will you use to produce it?

GB: We'll be producing 230,000 tonnes of SOP annually in the first phase. The production method is fairly straight forward – it's common technology: mine it, crush it, roast it, leach it and then crystallise it. This gives us a very clean SOP, either in soluble or granular form.

FF: How do you see demand for SOP evolving in the coming years?

GB: We spend a lot of time educating people about exactly this. You read reports that global production of SOP is around 7 to 8 million tonnes and that consumption is growing by 4-5pc per year. But what these reports don't address is that there is a huge deficit of SOP. Global demand is estimated to be around 10 million. Growers simply cannot get enough SOP. Consumption in the U.S. is pegged at 400 000 tonnes, but our studies show that US demand could be at as high as one million tonnes, were there enough SOP available. Plantations in California alone could easily use an additional 200 000 tonnes. Current production facilities in North America are not able to expand to meet this shortfall so we will hopefully fill that gap.

When you look at regions such as California – the arid conditions



The project will produce 230 000 tonnes of SOP annually



Blawn mountain mining zones

means growers are employing more underground irrigation systems through which they will run fertilizers with water. The best thing about our SOP is that it is water soluble, making it ideal for irrigation systems.

FF: What do you see as the drivers for increasing SOP demand?

GB: SOP works well on high value crops such as vegetables, fruits and nuts – so as populations become richer their diets migrate from staple crops such as grains and corn to these high value crops. Therefore, the growth profile of SOP could be higher than the accepted figure of 4pc that analysts forecast.

FF: Which destination markets are you targeting?

GB: In the first phase, western USA will absorb the majority of our production from Blawn Mountain. SOP is perfect for the almonds, grapes and other fruits and vegetables grown there. In the second phase we will probably take a look at Mexico and Brazil for the citrus and coffee crops there. The demand potential in Brazil could be 1.0-1.5 million tonnes. At present, Brazil uses just 40 000 tonnes. There is no domestic production in Brazil and they mainly import from Europe.

In China, all of the SOP is produced locally and demand is much higher than the local industry can supply.

FF: Potash Ridge proposes to extract alunite from the project. Could you outline the methods you expect to use?

GB: Mining is a simple truck and shovel operation. With the ore, we crush it, roast it, extract the SOP through a hot water leach process and then crystallize out the SOP. This is all commonly used technology. In our economics, the waste material, which is high in alumina goes to tailings. Given the high alumina content, however, this product has value and could be used either in the alumina industry or for the production of other products such as cement. We are in discussion right now with a number of potential buyers.

FF: What other projects, if any, is Potash Ridge looking at?

GB: We own another project in Quebec called Valleyfield. It will also produce SOP, around 40 000 tonnes per annum, but uses a widely-used conversion process. We can put a shovel in the ground in the first half of this year, after we raise the USD50 million construction capex, and begin production just 9-12 months after this.

So Valleyfield brings revenue in the short-term at a low capex, while Blawn Mountain brings scale at 230 000 tonnes per annum, and we expect it will be lowest cost producer in North America, if not the world. And both projects have room to expand. ■