Woodsmith Site Visit
Q&A transcript

Tuesday 3 October 2023

Woodsmith Project

Q&A

Jason Fairclough (Bank of America): Could you remind us, is this project Board approved? When do you intend to take a final investment decision?

Duncan Wanblad: No it is not board approved yet. As Tom said in his section of the presentation, until we get ourselves into a position where we are ready for full notice to proceed, we will approve it on an annual basis based on progress against milestones, etc. Our expectation based on what we understand of the project today, the study work and the status of that study work will help round this out to a level of certainty that we would be happy to take to the Board by the end of next year, which would mean board approval early the following year.

Jason Fairclough: So just to be clear, how much capital will you have sunk by the time you take it to the Board?

Duncan Wanblad: The way to think about that in the context of what we are trying to achieve here is probably not dissimilar to Quellaveco - as a percentage of total capital of the project. So, today what we're trying to do is ensure success of the project in the round for all the reasons that Tom described. That means somewhere between 25 to 30-odd percent of full capex by the time we get to full notice to proceed.

Jason Fairclough: And in that, are you including the acquisition cost and the write-downs you have taken already or is that on top?

Duncan Wanblad: Yes that's included.

Richard Hatch (Berenberg): A question on geotech. 1.6 kilometres down - what work have you done to make sure you are comfortable with the sort of geotechnical stability operating down there, room and pillar and such? Can you just talk a little bit about how comfortable you are that you are able to safely mine that?

Tom McCulley: It is competent rock down there on the polyhalite. We feel pretty comfortable with that. We have done enough work to feel like room and pillar is the right approach, and we do not see too much risk in that, from our standpoint. It is pretty typical for us and we feel comfortable with it.

Richard Hatch: You have talked a bit about how many people you have taken from Quellaveco because of the good work you have done there. Are you worried at all that Quellaveco starts to falter a bit because you have taken so many good people out?

Tom McCulley: No, because they are all project people. I brought over the project team and just one operations person.

Tyler Broder (RBC): I have a feeling we are about to hear from Alex on how the market will take 13 million tonnes of the product. But, as I understand it, the 5 million tonne case will go to the Board, so two questions. One, how much does the scale impact the economics? Do you think the economics will be there for a 5 million tonne case on its own, or how does the Board look at that within the context of the 13 million tonnes?

And then secondly, how long will it take to get to 13 million tonnes? When do you have to make the decision to start spending on that? Is that going to be dependent on the market development or, is it two years, three years? How long will it take to get that up and running?

Duncan Wanblad: As with all mining projects, scale tends to change the DCF analysis, relatively materially. But DCF isn't the only way that I think you need to look at projects like this. You have got to look at them in

the round. DCF is very important, but there are many other metrics from an investment perspective that make a big difference. And cash flow, in this particular instance, is one of them. Now what the Board will do when they look at it is they will approve the capital to get to the 5 million tonnes, but with that, they will have to approve the pathway to the full 13 million tonnes. And the level of the capital that is associated with that increment from 5 to 13 million tonnes will have a different level of confidence around it, therefore, a different level of contingency around it. The Board will have to apply their minds to that too, so that it is the project in the round that has to be approved.

From a timing perspective, this is market-led, and Alex will speak to you about that. Obviously from our perspective, the sooner the better. The mine will have the inherent capacity to be able to do it. And for us, by the time we get into this orebody, it is really a question of the number of mining units that you turn on at any point in time - and that is relatively low capital intensity in and of itself.

In terms of the timing of capital, it's not stay in business capital, but it has the same effect as a stay in business capital of a very big copper mine that's got a big tailings dam, for example, that you have to approve incrementally as the mine goes on. How and where you process the product, in what markets and the form in which you distribute the product can change over time. For example, Tom made the point that as we think about it today, we probably don't need, in the early years, to deploy the capital for a very large-scale processing unit. We can probably do that two or three years later or maybe do that in a different jurisdiction if that is how the market shaped itself up to be the most effective value in use contributor to the outcome.

So how long to 13mt? Between five and eight years is our expectation from the time that we start to the time that we get to full production.

Tom McCulley: The extra capital will take another three years. What we need to do from getting 5 to 13 is about a three-year capital time frame.

Angus Poland (AllianceBernstein): Realistically, what would have to go wrong for the Board not to approve the project?

Duncan Wanblad: A couple of things. Firstly, we are in full-scale trials now in certain farms. And there may be something in there that we don't know. We think it is very unlikely based on what Tom's seeing and what Alex is about to tell you. Secondly, if we realised with some certainty that the capex is significantly higher than our pre-feasibility study capex. Or, that there is something that we have not thought about that is a material obstruction to getting to full production at a point in time.

That's what the Board is alive to. That is what they came and had a look at last week at the site. That is what we are going to have to take it through. So, it is not a done deal until it goes through that approval cycle.

Alain Gabriel (Morgan Stanley): So the 5 million tonnes capacity project will exclude processing? How will that impact price realisations, and will the economics still be attractive on a standalone basis for the 5 million tonnes?

Duncan Wanblad: It doesn't exclude processing.

Alain Gabriel: Slide 24 is on the port. Can you repeat a little bit the ownership structure of the bulk terminal? So Redcar Bulk Terminal for 10 million tonnes is fully owned or is it on a lease basis?

Tom McCulley: Bran Sands is fully owned. Redcar is on a lease basis [Note: We have a Materials Handling Agreement for up to 10 million tonnes with Redcar Bulk Terminal].

Alain Gabriel: And Redcar is 10 million tonnes. How would you plan to get to 13? Would it be via upgrading the lease part?

Tom McCulley: We can either build Bran Sands then, or work out a negotiation with RBT.

Duncan Wanblad: It is a great set of options to have in terms of port here, Alain. We can build the whole port ourselves because we have access and ownership of that, or we can work with Redcar. And ideally that's the way in. That makes a lot of sense. We've got to start there. Maybe we don't ever have to build a port, but having the option to be able to do that is quite phenomenal for a bulk product.

Myles Allsop (UBS): Could you give us a breakdown of the $4.8 billion for the 5 million tonnes, in terms of what relates to the port, contingency, tunnels, shafts? Just so we can get a sense that if you don't do the port, what the potential saving could be; or if you have an overrun with the shafts, what the incremental cost could be.

Duncan Wanblad: We can give broad brush strokes, but a lot of that is a function of the study work that we are doing. Just a point to make first, in terms of how we have been thinking about this and how we are modelling it ourselves. Our case that we are looking at is at P50, so, we are neither overly pessimistic, but neither are we overly optimistic. The stuff that we don't know yet, at a level of detail that we would be happy to take for approval is the stuff that we're studying. That is the stuff that is ultimately deterministic of the timing of the spend of capital as opposed to definitively whether you're going to have to spend the capital or not and the size of that cheque that we would have to write.

Tom McCulley: So to answer your second question first, the port itself. If we built Bran Sands, it would be somewhere between $150-200 million, on its own. We would have to put some money into RBT though, so the saving would be somewhere in the $100-150 million range. Recognising that the final capital estimate and phasing remains subject to the ongoing studies - the rest of the project can be broken down at a high level as tunnel c.$1 billion; the shafts in the MTS area c.$1 billion for the excavation, then we need to do a fit out, which is c.$200 million. The plant itself is between c.$500-700 million to get to 13 million tonnes, or c.$500 million to get to five million tonnes. And then the miscellaneous infrastructure, engineering etc makes up the rest of it.

Myles Allsop: What's the contingency you built in? I remember with Quellaveco the reason you kind of managed Covid so well was partly because of the contingency you had.

Duncan Wanblad: Tom is a project expert here. You should really deep dive this thing, but the American Association of Cost Engineering Standards define the known/unknown within a level of engineering confidence for every part of the study. Normally, you end up with different parts of the projects at a different level of engineering confidence, and therefore you get a blended contingency at the end of the project. So what we are trying to do is define outer envelopes of the project, and that contingency changes as your engineering and your confidence in that work increases over time. That was exactly the point that I was trying to make, relative to Quellaveco.

Quellaveco wasn't an accident in that context, and it wasn't a case of "oh, well let's thumb suck a large number from a contingency point of view and add it in that way, we're going to be absolutely fine". At Quellaveco the risk was in the bulk earthworks so to make it work in a small engineering estimation error at one point in the project can translate into a big number at the end of the day. Knowing that that's a very high level of uncertainty, that's where you invest the time to engineer. The equivalent of that here is the sandstone, some of the processing technology and the processing flow sheet work that we are trying to

develop. And so therefore the contingency shrinks over time. It doesn't necessarily grow over time and it's not there to allow for things that you don't know. It's to manage the stuff that you do know, but don't have a level of detail on.

Tom McCulley: In round numbers, you can look at between 10% and 15% is where we are at for the contingency as we sit today. The issue for us is we did our estimate is based on 13Mtpa and we've got to bring it back down to 5Mtpa, so I can't give you an exact number. But Duncan's point on Quellaveco is right. On earthworks, I applied 30% contingency on the earthworks at Quellaveco because I knew if it messed up, it was going to be bad. So that's where a lot of the contingency was. The rest of it was actually pretty small because we had the engineering done and we felt confident in it. So as we get through the design, we will do the same thing here. We will evaluate where our risk is and apply contingency to that risk rather than a bulk number. But I would feel comfortable with 10%, maximum 15%.

Myles Allsop: Is around the time of Board approval when you will be in a position to try and bring in a partner and what do you want from a partner?

Duncan Wanblad: Great question, Myles, happy to unpack that. Syndication is a really important step and there are two very key determining factors to syndication of a project, as we did with Quellaveco. One is, be clear on what the risk is that you are syndicating, and two be very clear on the type of partner that brings the most to that risk that you are syndicating. Obviously there is a point at which you have an optimal valuation with which to syndicate. If we were to take the project to the market now, there are a lot more known unknowns, whereas if we've got closer to full notice to proceed, we would have a lot less of those sorts of things. That crystallises a lot of value. It's those sorts of things that we think about.

Type of partners is a function of the type of risk that you are looking at. So not necessarily the same as Quellaveco, but not necessarily excluding those sorts of partners. Here, maybe something more downstream, something more market-facing as opposed to upstream. These are things that are under consideration and in development as we progress over the next year or so.

Simon Kendall (M&G Investments): When you say it will be Q1 on the cost curve, what cost curve is it? I think it was on the polyhalite cost curve. So the 50% EBITDA margin, how does that fit into the context of the cost curve and also how does it fit into the context of the 5 million tonne option?

Duncan Wanblad: Fundamentally this goes to the application of the nutrients in the markets in which the nutrients perform against the cost of those nutrients relative to the blended cost of polyhalite as it comes through. There clearly isn't a polyhalite cost curve that exists today, but there are fertiliser nutrient cost curves that exist today and we can infer where polyhalite is at a production cost of circa $50/tonne against the cost of other fertilisers that do the same sort of thing.

Mike Garnett: I think you answered that perfectly. If you compare us to a SOP, we are right at the bottom of the cost curve. But if you take the approach that Duncan has put out where you compare the main comparable nutrient components of polyhalite then firmly in Q1.

Jason Fairclough (Bank of America): Is it just a margin curve?

Duncan Wanblad: That's what it ultimately ends up as, Jason. Yes.

Jason Fairclough: And then after the 5 million tonnes where would you get to in Q1 on this?

Mike Garnett: At 5Mtpa we are definitely in H1 of the cost curve, but we would need to do some work to confirm exact positions across the nutrient cost curves.

Sylvain Brunet (Exane BNP Paribas): Can you give us a sense of what sort of cost inflation you are experiencing in the project this year versus last? I don't know if you want to break down by any items, if you've got some to provide some colour? And my second question is on the book value. Is it fair to assume that we shouldn't expect any potential revaluation before 2027 when you have the first production?

Duncan Wanblad: So your second question, as it stands at this particular stage, I think it's fair to assume that.

Tom McCulley: On the inflation point. This is an interesting project for inflation, especially in the point we are at right now. It may change in the future. I think timing is everything. I think we actually may hit the timing just perfectly from when we are buying materials and equipment. From an inflation standpoint, all we really see is the labour inflation, which is about 7% or so over the last year. We own the equipment. We had bought a lot of the materials. We have bought a lot of the consumables already, so we haven't really seen that much inflation. We'll see a gradual trend next year. And then my expectation, timing is everything, I think the world is going to struggle over the next year or two and time frames and costs should come down and equalise. We haven't factored that into our numbers yet. We are just assuming a straight inflation rate of c.7-8%, but I do think we'll get the benefit of deflation at some point on this project. But we're at very little risk on the inflation over the next year or a year and a half.

Ian Rossouw (Barclays): On the cost inflation, is that $50/t a real number or do you think it'll be $50/t by 2027 when you start production? Sorry, was it 10 million tonnes at $50/t?

Duncan Wanblad: $50/t real.

Ian Rossouw: In our site induction, one of the videos talked about 20 million tonnes capacity. Can you talk about where the bottleneck in the process would be?

Tom McCulley: We're still doing some of the design, so there isn't technically a bottleneck. What we've assumed is the shafts can do the 13Mtpa with the ventilation. Beyond that, we would need an additional shaft over what we currently plan (which is the two deep shafts plus a third vent shaft), so we would need a fourth to get to 20Mtpa. The conveyor will do it. And the ports have the capacity, as we noted. I think it's a long-term play. If the market really turns for us or we look at this as a little bit different product in the future, 20Mtpa is a potential. That's my view.

Duncan Wanblad: 20Mtpa is a long way off, Ian. But the mining industry is relatively progressive in terms of getting more out of what it has currently got from an infrastructure point of view. It has been doing that for a century. Given the size and scale of this orebody, then I think you would expect the same. So the real bottleneck, as Tom said here is the shaft diameter, and the ventilation that we can pull through that, that's just physics. And so eventually, even if we were able to de-bottleneck conveyors and conveyancing up and down the shaft, we would still need to deal with the ventilation issues over time.

Ephrem Ravi (Citi): On the stratigraphy slide, you kind of brushed through the Boulby potash layer saying don't get tempted, but, just putting you back on the spot there, what is the constraint on doing both together? Is it capex, opex or complexity?

Tom McCulley: First, we don't have a permit for it. Second, I don't think it is high-quality. Alex can talk about it, but it is a potential future option to look at. Third, we don't want to use ventilation capacity that we have on the Boulby potash instead of polyhalite. It's a long-term future option that we can look at when we need it.

Ephrem Ravi: But you are building the tunnel now for 13 million tonnes of capacity, but you're short of ventilation for that?

Tom McCulley: No. The tunnel is separate from the ventilation. The ventilation is through the shafts and in the mine itself. The tunnel is basically 320 metres below ground. The shafts are down at 1,600 metres. It's easy to ventilate the tunnel if we need to do additional ventilation in the tunnel. The drill hole there takes about four or six weeks. It's almost nothing to do it if we got the ground, so that's not the challenge. The challenge is the deep shafts, how much ventilation we can get there. And again, Duncan said it's just the physics, it's the size of the shafts and how much ventilation we can push down and comes up. Our ability to add another shaft, basically relies on permitting going forward. So that would be the restriction.

Ephrem Ravi: And the last question on the Sherwood sandstone layer, I'm not a geotechnical engineer, so it sounded like there were serious risks of water ingress into the shafts?

Tom McCulley: We expect to hit water. Boulby hit water, so we are going to hit water. We will do the grouting, as I mentioned, and then what we have is a series of 'tubs', which are basically just steel, almost like the segments, and concrete that will line the shaft and protect it from getting water inside it in the future. What slows us down ultimately is the grouting and installing the tubs. We have a pumping system that will pump out the water. We feel we can manage the water. It is only one or two sections.

Ephrem Ravi: Just to be clear, you don't see that as a risk where the project could reach a go / no-go stage?

Tom McCulley: No. I think it is just how fast you can get through it and, like I said, we've basically cut our forecast progress rates in half. We also have looked at opportunities like putting on a third shift and other things that aren't in place yet, to try to mitigate some of that risk. So it is a timing issue. I think the risk is probably about six months on the schedule, and we think we can make up that six months if we got into a situation where we just need to add a third shift.

Duncan Wanblad: It does feel like this sandstone stratigraphy has just become like the big thing. But to be clear it really does represent the risk category of the known unknowns. We know that it's going to be hard. We know that because Boulby went through some very hard ground through that layer, and we know what it looks like from our geological boreholes. We also know that it carries water. On that basis, there's an engineering solution for that stratigraphy that looks different from the engineering solution for the other stratigraphies. This is the work that we are doing now, and that's really important to get right, as opposed to it's a complete go, no-go, kind of thing. We'll just see what happens when we get there.

Tal Lomnitzer (Janus Henderson): You talk about a one-to-one ore to product ratio, and then the mineral resource is at 84%, or 88% on the reserve. I'm just trying to understand what the other, say 16% on the mineral resource is, and whether that gets included in the product or where it gets stripped out, just how all that works.

Tom McCulley: Overall our number is about 90% including the micronutrients and everything else. The rest of that will still be in the product and it is basically hydrogen and oxygen that make up the material. And that's it.

Duncan Wanblad: In terms of the resource more generally. It's a room and pillar mining method. So basically what happens is when you're mining in the orebody, you're supporting it by leaving some ore behind. Therefore you don't get 100% extraction of that. The reserve is quite small relative to the resource at present. But there's loads more on land and then under the channel that we could still do. And by the way, Boulby mines under the channel. And then, like a hundred years from now, we can come back and extract some of

those pillars, if not all. So that's why there is the big delta between the resource & reserve statement. It's not that there's anything that comes out gets upgraded on surface and then goes to a waste dump.

Matt Greene (Goldman Sachs): Tom, you mentioned how thick the polyhalite seam is, but can you just discuss the grade variance both vertically and laterally as you get on the mine plan there? And, what are you going to have to do to maintain that product grade? Is much blending involved? And just given the depth, how confident are you in terms of mapping any sort of faults, intrusions, or do you have to get down there before you can start mapping that?

Tom McCulley: Within our 25 meter seam, it breaks up to about three seams that are about seven or eight metres in height and that's how we're going to mine it. It's a higher-grade, a high-grade and a medium-grade seam. We will mine the two high-grade seams first, which are about the 88-90% polyhalite, and the third one is around 85%. There's not much blending that goes on other than what happens at the underground mine and in the plant itself. We don't really need to blend anything. It's pretty consistent along the ore length. We don't see too many challenges with mining that.

Gareth Williams: What Tom said there is right, so in the 25 metres we just simply classified over three bandings. And from mapping through the geological holes where we go looking for K content, we know where a higher grade is and where our lower grade is. We also look at the distance between the holes and we do simple grade blocks as well. And as any mine, as soon as we get to the bottom, when we start doing in-seam drilling, that's where we're going to continue to gain additional confidence in that. But the major structures and faults we have already seen from surface, from geophysical mapping and from airborne mapping as well.

Alex Kozac (T. Rowe Price): What sort of volumes do you need to achieve to hit your target hurdle rates? Is it 13 million tonnes?

Duncan Wanblad: So it's closer to 13Mtpa than 5Mtpa to get the returns that we want but the hurdle is a lot lower than that.

Alex Kozac: What would the hurdle be?

Duncan Wanblad: Cost of capital - our expectation is higher than cost of capital. In the impairment model we used 9.7% and for every 1% that you come down from that, from a risk point of view is circa $1 billion of value.

POLY4 Market

Q&A

Tyler Broder (RBC): Some of the pushback I have got is that there is 60% potassium in MOP, whereas POLY4 has 14%. Now if I'm looking at slide 31 where you show the reduced amount of MOP, does the farmer not need all of that potassium?

Alex Schmitt: You supply the rest of the potassium through POLY4. The farmer's blend will exactly be the same: 15-15-15-6. He/she/they will get exactly the same nutrients because some of the MOP is taken out and replaced by the potassium from our product. That is the logic of a blend substitution – there is POLY4 included and less MOP, less ammonium sulphate and more urea balances it. It is the same composition of nutrients that the farmer gets. As I said, often in Brazil or any bulk blend market the farmer will not even notice that it is different as they will buy the same bag of 15-15-15-6 and put it on the field.

Tyler Broder: On slide 31, I guess the question I have is the ratio between the amount of MOP – in the example, you only need 18% MOP with POLY4 in the blend, whereas the typical blend above has 25% MOP which is what you are reducing, is that the equivalent of what the POLY4 provides?

Alex Schmitt: Exactly. The amount of nutrients stays the same. They are just supplied by a different source - POLY4.

Ben Davis (Liberum): A lot of the marketing effort seems to be centred on the actual farmers rather than the blenders. Are the blenders totally agnostic to using POLY4? Can they capture more upside by using POLY4? How does that work? And when it comes to marketing fertilisers, are there just benchmark products of MOP, SOP, SOPM, or is it just drowning in everyone making claims about different yield strengths?

Alex Schmitt: We are focusing on the intermediaries – the blenders and retailers as well. What's in it for them? - various things. One of them is that if they market a bulk kind of commodity product, they get probably $10/tonne. If they market a speciality product (and that's their word) but at scale, they get c.$25/tonne. So, they have an interest economically at having a speciality product at scale- which POLY4 is , and there is a differentiation factor. They are approached by farmers: "Can you provide me with a more innovative solution?" "I've heard the blender, a couple of kilometres away has done it." They want to have an innovative portfolio, plus it makes economic sense for them as well.

Tim Clark (SBG): So further to that question, you are selling to the intermediary, the blender. Clearly, they are incentivised to pay you as little as possible, and not to do some kind of a value uplift scenario and then to try and realise that in the example you gave, the $10-25/tonne. Is there not a big risk here that, yes, there is going to be a lot of yield, but no, you are not going to be able to be the one that captures that uptick?

Alex Schmitt: There is competition between the blenders as well. So, it is not that you go to one and you can't create a competitive tension there as well. A big reason why we are globally positioned is because these negotiations are easier to do when you have alternatives. That is what we try to create. But obviously, yes, in a negotiation with a blender, there is this tension that they don't want to pay you the full value. That is why we say we only claim c.33% of the uplift and c.20% stays with them and c.50% with a farmer.

Tim Clark: I suppose what I am trying to understand is that the contractual terms that you might have secured with these new contracts instead of the take-or-pay contracts that Sirius had. I am trying to assess how you are going to secure that and how you are going to lock that in.

Alex Schmitt: There are various incentive mechanisms. If we together with the partners achieve a higher price realisation ie. the contract term could get extended or you have an option whereby you get more volume. We thought about exactly this principal -agent challenge, and we believe that through certain incentive mechanisms, which we have and will put in – including volume and contract duration - and on some occasions, we have very prescriptively described which parts of the market they should develop and what are the KRAs against which we measure them. And then it is part of the negotiation to create the incentive to have a win-win situation within the partnership.

Richard Hatch (Berenberg): You've got your $170/tonne long-term price, and then the uplift to $190/tonne, but that is on your 13 million tonne case. So, what price do you start at?

Alex Schmitt: To begin with, we will target high-value markets. We might use some volume to activate the market, but we would go for market segments where customers are appreciating low-chloride content, the magnesium content, etc.

Richard Hatch: In terms of the scale of the various trials that you have put out and talked to across the world and such, how do they compare to other crop trials?

Alex Schmitt: As I said, it is not just the pure number, it is the detail. It is the number of universities we have worked with together globally. I feel very, very comfortable. We have people from other companies like Mosaic who have launched MicroEssentials, which is a product that was launched only in America, and they are all saying that the way we have done it is the most sophisticated, the most professional way that they have seen. And that is how I would judge it as well. It is scientifically grounded in the way it needs to be.

Liam Fitzpatrick (Deutsche Bank): How are your competitors reacting or countering your marketing campaign? Isn't there a lot of risk for your customers in establishing POLY4 as their kind of platform product given it is only going to be coming from one source, which is your mine?

Alex Schmitt: Let me start with the first one. How are they reacting? I think their reaction has changed. With the takeover of Sirius by Anglo American, we have provided clarity to the market that 2027 is when we will be there. We have heard competitors saying, we need to think about how we can work with you. So the reaction long-term is that we are operating in different markets on a global level. It is difficult for a competitor to attack as it is not just one product against another. We are providing a customer centric solution.

Secondly on the competitor reaction, the low-chloride and magnesium products especially that are supplied into the market space are super high on the cost curve. They are supplied from ageing mines - some are nearly 100 years old. These producers will have very little wiggle room to get into a price war.

Your second question, it is a good and the valid one. Don't forget if it is purely on a nutrient basis, the nutrients are used and people could get it through other products. Will it stop them in the long run from buying a superior solution? It is a value consideration. They get a solution, they put it into their programmes, they see the benefits, and if they believe that the price is too high, then yes, they can go for other nutrient solutions.

Ian Rossouw (Barclays): Could you give us the figures you have used for long-term prices for MOP, SOP, Kieserite etc etc in the calculation of the $170/tonne substitution price?

Alex Schmitt: We have used analyst consensus prices at the time.

Ian Rossouw: Obviously, there is already a market for this product. How has that product been accepted by farmers? How has that market grown? Has that achieved a premium versus other nutrients? How has that changed over time? Obviously, it's not a brand new product, so I'm just interested to see how that market has developed.

Alex Schmitt: I think the fact that there is another product in the market at the moment is a gift from heaven. Somebody does market development and we will come with a bigger solution at scale. One thing you need to keep in mind, is that the product development is successful – the product has been ramped it up from 200,000 tonnes to 1 million tonnes in a relative short period of time - but there are supply constraints to keep in mind. Farmers like their product - they like its multi-nutrient and organic nature. There is a slight difference between their product and ours, which you will see tomorrow when you speak to Ruan. This difference is the form factor of their product which is a crushed small rock that is then difficult to spread; and has a different nutrient release profile whereas our product will be a granule. And you have heard me saying that granule products are between $40-60/tonne premium in the market.

In terms of farmer adaptation, what we hear in the market is that they like the product, but do not like the form factor. That is why they cannot wait for our product to come to come on-stream. Granulated form factor is by far the most widely used nutrient delivery across the globe.

Tom McCulley: They do market it differently as well - their focus is on some of their products that they already have and trying to improve those, rather than scale-up as a separate product.

Jason Fairclough (Bank of America): First, can you confirm that the crop trials are being done with ICL's product? Is that what you're using?

Alex Schmitt: We buy it in the marketplace and then we granulate it. It comes from the same seam as we will be mining. But don't forget, there is this technology, so we don't sell or use the product on a like-for-like basis. There is this intermediate step in between which is granulation.

Jason Fairclough: Could you talk a little bit about freight? This is a bulk commodity. Obviously, you have great logistics, but at the end of the day, value per tonne is not that high. I mean, this is not a tonne of copper concentrate. So how does freight figure into your decisions about who your best customers are?

Alex Schmitt: There are customer segments, ie in Inner-Mongolia or a central Chinese region, that are difficult to reach because the whole freight cost up the chain will be $200/tonne - so they are segments which we will not chose to access. But in general, when we net it back, we use long-term average logistics rates to get it to the customer. And it depends on, for example, we have a great port that theoretically could take Cape-size vessels, while into Europe, we would have to use Coasters to get it to the main discharge ports, and then truck it or rail it to the consumer. We would, if it goes to the US or to Brazil, most likely use Handymax or Panamax. But we always consider the logistics costs to the farmgate.

Jason Fairclough: For those of us who are used to coal and iron ore - are there any funnies here when it comes to freight for fertiliser that we should think about? You can put coal and iron ore in a Capesize. Could you really have a Capesize of POLY4 driving around?

Alex Schmitt: No, no. We wouldn't do it for the simple reason that the discharge port wouldn't be able to unload it. Fertiliser ports are normally not the big iron ore or coal ports, they are smaller. So, we wouldn't ship in a Capesize vessel. There are restrictions mainly driven by the receiving-end of the unloading facility, and that is why we need to use Coasters (6,000 tonne vessels) to ship into our European market.

Jason Fairclough: So everything else being equal, the unit freight costs should be higher?

Alex Schmitt: Yes, compared to iron ore, absolutely. The freight cost difference applies to the fertiliser industry generally, not POLY4 specifically.

Ephrem Ravi (Citi): Firstly, on the frequency of use of POLY4. For potash, you can do it once, then you can skip one year and then go into the next. So, is POLY4 something that you have to use every year or is it something where you can skip one or two years and then come back in the third year? You mentioned the concept of a fertiliser holiday, which works for potassium.

Alex Schmitt: You are absolutely right - at the end it is the decision of the farmer, and the nutrient needs that the farmer has. Could the farmer skip POLY4 application for a year? Perhaps, and then they would see an impact on their yield and the not getting the other benefits I spoke about, and that is the trade-off the farmer will determine. Don't forget, this is a concept that applies particularly to potassium. We are a multi-nutrient solution for sulphur, for example

Ephrem Ravi: So potassium is the only nutrient where you have a holiday?

Alex Schmitt: There are countries in the world where people don't apply fertiliser, like in Africa - so it is a decision of the farmer. But the concept of a fertiliser holiday is primarily potassium type of logic. But for example, sulphur will be similar to nitrogen, you will need it relatively regularly.

Ephrem Ravi: And secondly, your route-to-market, you said 50% of the world's farms are indirectly or directly controlled by the big consumer goods companies - is that in the western world?

Alex Schmitt: That's an average when considering the food that influenced by consumer goods companies. Of course, there are other uses for agricultural output like animal feed, fuel and fibre that are outside of consumer goods companies. If you think about the impact or the influence that an Olam, for example, or Ferrero has on cocoa farms in Ghana or in Ivory Coast, or the big tea producers in Ethiopia, it is a pretty global figure. Don't hold me to account to 1% or 2%, but it is massive the influence of the big consumer brand companies on farming land around the world.

Jason Fairclough (Bank of America): This looks like a business where most of the value will be captured by someone close to the farmer because they know what the specific soil conditions are, what the farmer's economics are etc. Would it be fair to say if you are selling through distributors in the long term, most of the value would be captured by the distributors of the POLY4 upside? The only way you can capture it is by effectively having a massive sales force going right to the farmer?

Alex Schmitt: Let us not forget, it is not a competitive-free area, there is competition. Different retailers approach different farmers, so they're competing for business. There are some online channels coming up too. We recently did a Dragon's Den concept where we engaged with industry experts. One strong voice or discussion was, what's the future of this retail channel versus online channel that is coming up. That is why they are so interested in innovative solutions. They are in a competitive environment themselves.

Tom McCulley: Perhaps you can explain the contract change from Sirius to ours as that might help people understand this a little better?

Alex Schmitt: There is an element, and it is under NDA, so I cannot give you specificity, but the logic is that we want to find a way to share the upside, which we create together. Very often, we go out and do the agronomy and the marketing, so we can define to an extent the recommended selling price. We have incentives in place for the partners depending on the price realisation, ie. it might determine the volume that we allocate to them – that is of big interest. Through the arrangements, we have created a good kind of tension for players to create upside and then let us take a fair share of that as well. Also, it is often a

percentage distribution margin option, for example - so they create the upside and then they get a higher proportion of it. So there are mechanisms in play that are aiming at your point of how can we together create the value and how then can we make sure that it does not stay just in one pocket but that we get it through these mechanisms fairly shared.

Lada Emelianova (Lazard Asset Management): Just following up on all of these questions on freight and how the prices are negotiated. It has been a while for me since I looked at fertiliser, but I do remember that a substantial part of the customer base is government regulated. So farmers get subsidies based on what government negotiate or associations negotiate. So, on slide 24 where you said, the industry is 180 million tonnes and POLY4 can capture a third of it - is this inclusive of all of this, like India for example? How can a farmer calculate the price if the subsidy is not known?

Alex Schmitt: What we said is 180 million nutrient tonnes today, and a third of that is a nutrient space where we could play with POLY4 directly. So, it's 60 million tonnes of nutrients that will grow. It doesn't mean that we need to capture a third. We need to get to a lower proportion, with the market for potassium and other POLY4 nutrients being amongst the fastest growing segments, and especially taking into account the future facing developments in the market and that the properties of POLY4 include benefits beyond the pure nutrient content. These properties mean it is a superior product to those currently on the market. By 2035, that market share should be around 10-15% driven by three key factors; firstly, the shift within the market to better solutions, ie unmet demand for low chloride solutions; secondly, growth beyond extrapolation, ie sulphur shortage in soils and through natural replenish cycles; and finally, our active product development work through inclusion of N and P into our polyhalite platform product.

I'm not saying primary and secondary markets, but Europe is a core market of us – it is our home market. The US is also a core market and so is Brazil. There are no government restrictions. The restrictions come into play if we enter certain countries in Africa, and obviously it is in play in India – which is a different space where you have subsidies mainly for N and P products. We do not fall under the subsidy scheme in India, and we have a very strong distribution partner there for POLY4. And so the role of the government in India is actually quite small in the way we want to approach the market.

Lada Emelianova: But just to follow up. Brazil, for example, is in the process of bringing 6 million tonnes of potash online in the next 5-7 years. We have been waiting for this for a very long time but that is your core market. Where I'm coming from with all of these questions is - if I were to stress your price, which you have given, what is the most conservative you see that you could get on your given volumes just from Europe and US if you exclude Brazil?

Alex Schmitt: I would assume that in the long-term MOP forecast that CRU and Argus are calculating that they are aware of this change in supply so it is already considered in there. So as such, it is in our pricing model as we base our $170/tonne on the long-term MOP price consensus for the potassium component. If it comes to where do you expect higher prices - clearly in Europe, I expect higher prices and that is what we see from our neighbours as well. And in the US there are certain markets which are very, very attractive. There are other high-value markets where we expect higher prices as well. So, the price mix depends on obviously in which region we supply.

Myles Allsop: Going back to Tyler's first question. To get a 15-15-15-6 similar mix, is the bag with POLY4 in the blend twice the size?

Alex Schmitt: Simple answer. No, it is the similar size of bag. It has the same nutrient content, 15-15-15-6, which matters. That is the copper equivalent logic in the commodity industry that matters to the farmer.

That is the same size, just POLY4 in instead of ammonium sulphate, 18% instead of 25% MOP and a bit more urea. No different size, cost neutral and as I said, some of the farmers in Brazil where the blenders will do the work, the farmer wouldn't even notice the change except, all of a sudden, the farmer gets a couple of bushels of soybeans more out of the ground.

Myles Allsop: What actual contractual offtake commitments do you have? How much can you actually sell or is it all theoretical?

Alex Schmitt: I need to keep in mind the NDAs we have so I can't provide individual offtake agreement volumes. At respective peak volumes, there is a ramp-up. At the moment, we have between 8-9 million tonnes contracted for with our existing partners.

Myles Allsop: Where is that contracted from? In line with a ramp-up to get to 5mtpa by 2030 for example?

Alex Schmitt: There is obviously some optionality depending on how fast we ramp up. As I said, we will work with our existing partners and develop new ones through market development agreements with those to better understand their capabilities. And then if they do a good job in the next three years, they might get an exclusive distribution agreement. So we are obviously in the market to increase the number over time and to get the quality of this revenue as high as possible.

Myles Allsop: Is the 3-5% yield improvement unique to potatoes? If we look across all crops, is that consistent or is this your best-in-class?

Alex Schmitt: No. That is the average across all crop types and we have taken outliers out. For example, we have had trials in Africa, such as in Nigeria or in the Ivory Coast, where we are talking about 300% yield improvements but this is comparing to the standard fertiliser practice today which is zero or a little bit of manure. So the farmer puts on POLY4 gets magic. Not surprisingly, these trial results are taken out. We take out these outliers to the upside. The 3-5% is an average across all the crops. For broad acre crops, it is more like 2-5%. For high-value crops, it is more in the direction of 6-8% or 5-10%. So there is a distribution between the crops and depending on the soil.

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