

# **BHP**

## **Potash outlook briefing**

### **Transcript: Session 1**

**17 June 2021**

**Paul Young (Goldman Sachs, Analyst):**

Thank you. Good morning Huw and team. Thanks for the very detailed update on the market. A question on your demand forecasts and actually maybe stepping back to looking at your historical demand forecasts. So you've been analysing this market for 15 years, I'm curious, have you gone back and looked at what your 10 year demand forecast was back in 2010 when you actually bid for PotashCorp and if so, how does that demand compare to the 70 million tonne market today and why was it different? I'm just trying to understand the variances in demand that you described.

**Huw McKay:**

Okay thank you Paul. So we do study our historical forecasting performance in a very detailed way. We check it for recency bias and many other forms of bias and conduct a process of continuous improvement and potash has been no different. What we found is that the paradox that we talked about with respect to year-to-year variations in potash demand being - the variability is probably more than industrial metals, but once you smooth out time periods and you start dealing with half decades and decades, those historical relationships really do hold together well.

Then you have to consider the supply side and what that is doing to your price forecast and I think it's fair to say that over the last five years, the supply side of the industry has probably undershot expectations that the industry itself had back in 2015 and that's one of the reasons why the very favourable farm economics we're seeing today are manifesting in higher prices.

**James Redfern (Bank of America, Analyst):**

Good morning everybody. Yes just one question on your thoughts around the latent capacity, spare capacity within the potash industry. I mean the demand outlook is attractive as you point out and you've got a slide there on projects that are currently under way to bring new supply on. We're just wondering how you're thinking about latent capacity that's not yet approved. For example, I understand that Nutrien has about five million tonnes of spare capacity that could come on quite quickly at low cost. Just wondering if you could talk to that, plus the other producers as well, in say Russia and Belarus as well that you're aware of with spare capacity that could come onto the market? Thanks Huw, thanks.

**Huw McKay:**

Paul, why don't you take that one?

**Paul Burnside:**

Yes sure. I'd maybe make a distinction between spare capacity and capacity that requires investment, even if it's not the same scale of investment that a greenfield project would. So in terms of existent capacity and how much that can produce, we actually look at asset by asset back over the last 20 years and tried to identify where the limitations are, and from that we can estimate how much a site is able to produce. Then when you have years like 2020, when active sites were pretty much running flat out, it gives you a good empirical justification of whether you got your assumptions right. That worked out very well in 2020 with how much different sites produced.

In terms of what could be built by expansion, yes as we said, I think a lot of the easy stuff has been done because if it was easy, people did it in 2009, 2010, around then. Not to say there isn't any possible brownfield expansion still to come. I know Nutrien's talked about having some options there but they haven't gone into the details on how that would be achieved yet but in our long run view on supply, we do have brownfield expansions. Even if they're not committed yet, we do factor those into our thinking.

**Rag Udd:**

Listen I might just jump in a little bit there as well, if that's all right. It's Rag here. I think it's a great question in terms of latent capacity sitting out on the market. What I do want to underscore though is what we're talking about when Jansen comes up towards the end of the 2020s - sorry, late 2020s. So if you take a look at the demand growth that we've talked about over this presentation and even take a look at some of the input provided by competitors that are talking about the range of 14 to 20 M<sup>t</sup> of additional demand coming on and then consider that what we're talking about with Jansen is about a four million tonne project, would advocate that there's room in the market for additional capacity coming in from greenfield options as well.

**Kaan Peker (RBC Capital Markets, Analyst):**

Good morning Huw and team. Thanks for taking my question. Just wanted to see how you're thinking about Canpotex and price formation currently and how you expect this to change in the future, particularly given solution mining in Canada? Thanks.

**Huw McKay:**

Maybe Paul. You want to talk about that one?

**Paul Burnside:**

Yes, I mean our outlook on price is kind of built up from costs, how our potential competitors might behave is not really a consideration for us. So we look at a market where we look at the supply/demand balance and we think that prices will, over the long term, as we've said, support investment in the incremental supply that's required to come into market.

**Rag Udd:**

I think it would be fair to - maybe just to build on that little bit as well, I think it would be fair to say that we actually respect Canpotex and the model that's deployed in that area. It would be fair to say there's a whole bunch of ways to actually sell potash as well and the vast majority of people actually do sell it directly and that's a model that we have a great deal of experience in ourselves and actually feel quite comfortable with.

**Bob Brackett (Bernstein Research, Analyst):**

Thank you. I was noticing that port and rail are some of the key requirements that are currently in progress ahead of FID. Can you talk to that a little bit and talk to your desire to go it alone versus a potential partnership?

**Rag Udd:**

Let me jump in on that one, Bob. I suppose a couple of things, one, we've always said that we are opening to partnering, but this project doesn't need a partner and if you take a look at and point back to modus operandi of BHP, vast majority of our assets actually do have some sort of partner, whether that's in petroleum, met coal or iron ore. Now in terms of at the moment, where we sit with Jansen is we're looking to take Jansen to the Board and before we do that though, we do have to lock in a port solution.

So in terms of the rail solution, we're actually quite advanced in terms of the designs, in terms of actually reaching Vancouver basically with both our ore cars and the infrastructure necessary to put that in place. We are still considering two options in terms of the port. One is a commercial option in the Port of Vancouver, the other is a greenfield at the Port of Vancouver. I won't go into any more detail on it but suffice to say that we would like to have those locked in before we take that forward for approval. Operator: Our next question comes from Robert Stein at CLSA. Please go ahead.

**Robert Stein (CLSA, Analyst):**

Hi, Huw and Paul. Just a quick question on I guess the supply side of this. So I think, as earlier highlighted, the demand profile is relatively predictable through time, albeit with some variances. Given this has traditionally been a supply-managed industry, I mean what scenarios do you run around the game theory implications of the incumbents essentially taking what would, on face value, look to be un-rational decisions to flood the market with supply to penalise new entrants to keep the status quo?

**Huw McKay:**

Okay. So I think the way that we approach range forecasting holds us in good stead in any industry, regardless of how the norms have evolved. So the way we think about putting together low cases, which I think is probably the heart of your question, when we put together a low case for a commodity, we try to build in assumptions which are the most inconvenient for ourselves.

But we're not also trying to come up with a minimum case. We're trying to balance those assumptions. They clearly have a skew of risk back towards the range or back towards our mid case, but they still really challenge you and they're still really inconvenient.

That gives you a really good basis for taking that case and assessing the resilience of anything you may wish to do in its presence and that is exactly the process that we consider in potash and of course the behaviour incumbents in terms of how they think about releasing latent capacity feeds into that.

So we have a really good sense of what that looks like and the resilience of a prospective potash business under those circumstances.

**Lyndon Fagan (J.P. Morgan, Analyst):**

Thanks very much. So my question relates to Jansen's impact on the market. So I guess it will be about 5% or 6% of global supply. Just wondering how you think about what sort of pricing impact is bringing on Jansen will have?

And just an extension to that question, with your long-range outlook, what opportunity is there for further expansion of Jansen, given that really the returns to Jansen relate more to subsequent expansions, rather than the Phase 1 project itself? At what point do you see further opportunities, given that you've mentioned there'll always be a high-cost segment of the market sitting there?

Then the second question is can you talk around the carbon intensity of potash supply, how many tonnes of CO2 per tonne of production? Thanks.

**Huw McKay:**

Well Paul, why don't you handle the second part of that question and then Rag, if you come in and talk about the optionality embedded in Jansen, following on from that. So Paul, could you start with the carbon please?

**Paul Burnside:**

Yes, just generally in terms of scope one and two emissions, for solution mining you're looking at several hundred kilos CO2 equivalent per tonne of MOP. For floatation-based operations, you're looking at substantially less than that, typically in the region of 50 to 100 kilos per tonne.

**Rag Udd:**

Thanks for that. Look, coming back to the first question in terms of how do we expect the impact on the market. I think it's worthwhile just to scale it a little bit in terms of when this project is coming on. So as an example, obviously if we were to drop four million tonnes into the market at the moment right now, that would actually have a, I would suggest, an impact and a pronounced impact into the market as it stands. What we're talking about though, in terms of Jansen, is a project that's coming on towards the end of the 2020s that actually is in a market that's got demand growth of somewhere between 1% and 3% a year, that's well flagged and well signalled in terms of what sits out there.

Now in terms of how others respond to that in terms of potential competitors, I suppose that each their own decision. What I would flag though is just that Jansen's operating costs will be more than competitive than most mines are producing due to the fact that it will be brand new with the latest technologies and productivity-induced equipment as well that I think will make it exceptionally competitive to others out there.

In terms of latter stages of Jansen, I do want to flag that there's no set date on that. So each stage of the project will need to wash its face at that time and we'll make an assessment based on the supply/demand fundamentals for stages two, three and four in the future, if and when the market's ready for it.

**Paul Young (Goldman Sachs, Analyst):**

Thanks again. Maybe a question for Rag on the capital estimate of Jansen. Rag, the range of \$5.3 billion to \$5.7 billion, that range has been around for a few years now, I think two to three years. If I just look at the current environment, price of steel was double, labour costs are rising, so I'm wondering, I know you test this, but how does the CapEx range hold up in the current environment of increasing capital cost inflation?

**Rag Udd:**

Great question, Paul and look, it's actually held up fairly well. So one of the things that Mike flagged when he came in as the CEO was that he really wanted to make sure that there was a critical assessment done on this project and that we really had turned over every opportunity that actually sits in the project. So you're right, there absolutely have been some headwinds in terms of that we've encountered with the project. There's also been some tailwinds in terms of how this project team has worked and the efficiencies that they've actually drawn out and delivered, whether that's the equipment that we're using or the way that we're actually thinking about mining the deposit.

Giles, I might hand to you just to provide – I know you've got one or two examples that would be really useful to provide a bit of colour to this example.

**Giles Hellyer:**

So thanks Rag, Giles here from Canada speaking. The other factor into that question is thinking about it from the point we have done a massive amount of engineering work; we're sitting at around about 50% engineered, for example, at the moment, so that is a very key indicator for delivering projects in a timely and cost-effective manner. And I think it's also worth considering that that level of engineering is similar to recent large projects that we've delivered successfully in the Company in the last short while with South Flank in Western Australia and also the new copper concentrator, SGO in Chile. So that's a very good indicator, I think.

But basically the project uses very well-established ways of looking at how we factor in inflationary factors to major capital projects which have been very successful and this project has a commensurate level of escalation built in as well. So yes, as Rag said, some headwinds, but there is a major amount of work done to fully understand how to build this project in a way that's going to be, if approved by the Board of course, in a very successful way. So lots of modularisation being used, that's just one clear example as well that differentiates from other projects.

**Rag Udd:**

Thanks Giles. So look I mean maybe to bring that together, Paul, yes you're right, a lot of headwinds playing out there, but we've had a great team working on this for a number of years that continue to find new efficiencies. And let's not forget that this project has been in study for quite a while which has enabled us to chase a whole host of value improvement activities that will differentiate us from our peers.

**Peter O'Connor (Shaw and Partners, Analyst):**

Thanks Paul, thanks Huw, excellent presentation. My question is on the product market pricing you talked about, Huw, and the potential evolution of this market to a terminal market. How could that and when could that happen? I'm thinking the iron ore template from the late 2010. You'll still playing in a large market, is there steps or a pathway to a terminal market pricing to make this more transparent?

**Huw McKay:**

It's a very interesting question, Peter and market evolution is something that we do study very actively and of course the Company, as you say, has a very strong and historical track record in driving evolution and not accepting it passively. The iron ore analogy is similar in terms of the way that the major basins set up and the role that they have in the proportion of seaborne supply. But the demand conditions are actually very, very different here. In iron ore, of course, China is first and daylight is second.

Here we have a hugely differentiated and well-spread customer base to consider. Paul's already mentioned that Brazil is the major market. Asian customers, China and India, absolutely prefer annual contracting and we have the Americas which absolutely prefer prompt or spot pricing. Then you also have Southeast Asia, which is material in its own right, who actually has a hybrid system and a nine-month contracting system. So, it's very, very heterogeneous at the moment, and probably not right for that kind of market evolution in the short run, but you would never say never.

**Robert Stone (CLSA, Analyst):**

Thanks a lot for the opportunity to ask a second question. Just looking at the identifying available capacity slides, there's a few negative bars on inaccessible capacity and allowance for unplanned downtime. Specifically, the unplanned downtime, is that just your typical availability, utilisation, and rate type of assumption you have on what potentially a plant has peaked at or is that more permanent capacity disruption in relation to things like water ingress into mines and the like. Because if it is the latter, how should we think about that risk for Jansen given that potentially it's factored into the price but not necessarily factored into the risk to the valuation of the underlying asset?

**Huw McKay:**

Okay. Paul, why don't you take the definitional element and then the asset team can come in on the back if there's anything further to say.

**Paul Burnside:**

Yes. In terms of the way we've tried to split it up is anything that is permanent or at least requires significant investment to rectify goes into inaccessible capacity. For instance, the Uralkali operation that's currently flooded is inaccessible, as well, as I mentioned earlier, the kind of sprint capacities that Canpotex members report.

In the unplanned downtime, that's more of an empirical estimate of disruption rates by looking historically once we've got these fixed constraints. We have reported capacities, we know there's some fixed constraints on there, and then how does that compare to how much they actually deem to be able to produce in years where we think they're trying to run close to flat out. So, it's an empirical-based estimate of a disruption rate if you like.

**Rahul Anand (Morgan Stanley, Analyst):**

Hi, Huw, Paul, and Tristan. Thanks for taking my questions. Look, two from me. First one was around lithium in Argentina and Chile. You talk about how brine can also be a source of potash. Have you done any work around what type of a price incentivises some of the latent capacity there to come back on? I know a lot of lithium projects were set up initially as potash and lithium projects but then produce the potash mainly because of pricing.

Then second is just around the timing. I note that the construction time now sits at five to six years versus five years previously. If you could talk around that perhaps a bit? Is that determined by that port solution you talked about or is there something else that we should be thinking about? Thanks.

**Huw McKay:**

Okay, so another double-headed question. Paul, South American brines, and then we'll go back.

**Paul Burnside:**

Yes. That's something that ebbed and flowed, hasn't it? There was a time when everyone was looking to hand MOP recovery to lithium projects, and it's very much shifted the other way now. You've also got even SQM, which is quite a major producer of potash tilting much more towards the lithium production. I think you're right, yes, there is a biting point if prices change, but that probably suggests we're already in quite a high-price world for potash if we start to see that happen.

The other thing, I think even in aggregate the actual volumes that we might see out of some of these salars in terms of MOP production is quite small so I don't think it's going to be a major impact. I think there's bigger capacity uncertainties elsewhere that we'd be concerned about.

**Giles Hellyer:**

Maybe if I just talk to the scheduling question there around the last six years. I think we haven't seen a major departure in our schedule since we talked to those recent CapEx numbers, but I think what we have been is rather conservative about our approach to building out through what can be rather cold Canadian winters, but it's a very realistic schedule and built off obviously the first pieces around the underground and doing the development work in getting that done, and then going into surface facilities in years 3 to 5. In response to the question, no significant change.

Can I just come back to a previous question we didn't quite answer around inflow potential with Jansen which fortunately by its location does not have the ore body. It's situated where there's quite a lower risk of inflow due to the positioning of the ore body relative to anything above any potential inflow capability, and we have extensive three-dimensional seismic work done to clarify where those inflow potentials would be, and we can avoid it through a very development mine plan which is very much avoiding all of those potential areas. So, very low risk of the ore body and secondly, very good insight to where potential might be for inflow it's a very low risk.

**Paul Young: (Goldman Sachs, Analyst)**

Hi again. Final question from me around the marketing and distribution strategy. What's your thinking around this and how that will differ from peers, and will you sell 100% at index or spot? Because that was I guess the strategy 10 years ago. Just a rule of thumb for us, can you maybe share what you think the marketing distribution costs will be in dollars per tonne for Jansen? Thanks.

**Huw McKay:**

Rag, do you want to come in on that one?

**Rag Udd:**

Sorry. Apologies, folks. It was bound to happen once in the call, wasn't it? Look, in terms of the model, it would be fair to say, as mentioned earlier, Paul, that all sorts of folks sell potash in different ways. We respect that Canpotex is one way of actually selling potash.



That said, that's actually not a model that we probably will pursue at this point in terms of moving forward. We see a lot of other individuals actually sell potash directly, or through different marketing arrangements to thousands and hundreds of thousands of customers downstream. We think based on our experience in bulks that we actually have those capabilities to do it ourselves.

In terms of the unit costs in terms of marketing and distribution, I won't put those numbers forward at this point, but let's take that offline.

**Paul Burnside:**

Just to add in terms of how we might go about pricing, I think I'll just refer back to Huw's answer earlier, that particularly initially I don't think we would be off the scale to look to try and change how the potash industry operates. So, in terms of pricing and the regional marketing norms that are in place with a fairly small-scale operation coming in, we're likely to be largely following those norms.

**Tristan Lovegrove:**

Thanks, Paul. Look, with that I'm happy to say that that's the end of the Q&A session, but before we finish I'm going to hand over the Rag to make some closing remarks on Jansen. Over to you, Rag.

**Rag Udd:**

Thanks, Tristan, and listen, thanks to everybody for joining us today, and for your questions. As Tristan said earlier, we've got a really big decision ahead of us in terms of Jansen. We've also had a number of investors over the last six months to a year ask us for a bit more of a deep dive into our views on potash ahead of any decision, and hence we hope today's briefing has actually been really useful for yourselves.

One thing I do want to underscore though is that our decision on Jansen depends on more than just the fundamentals of potash. We are still working through some of the final steps to get to a decision. As I said earlier in the Q&A, we are still finalising a port and that remains one of the key steps for us to work for.

Now, before we close, I would like to give you a few of my personal reflections on the project. As you would expect, the starting point for any portfolio decision, does it sit within our strategy to create long-term value and returns, which from my perspective is built on three aspects. First up is growing our exposure to highly attractive commodities with world-class assets and via operating excellence.

Now, if I touch briefly on each of these three. First on the commodity. I hope it's evident based on the conversation with Huw and Paul and our depth of our understanding of the potash market that we believe that potash has some attractive fundamentals. In terms of the second point around world-class assets, we see Jansen as large, long-life, upstream, high-margin, and expandable, and we see this has the potential to be a really great resource. In terms of BHP portfolio, we see it providing attractive diversification by product, by customer, and by operational location.

Finally, in terms of operating excellence, I do believe that we have the capabilities to operate and expand Jansen in a way that would confer a number of significant competitive advantages. Now, we accept that potash mining is new to BHP. That said, we do have world-class capability in bulk mining and have a long history of marketing high-quality commodities in global markets.

With Jansen, you can expect that we would apply the latest technologies, be that 3D seismic, advanced materials handling capability, or automation. We would also bring basically the BHP culture of safety, simplicity, and operational excellence. That includes our approach to cultural heritage, water stewardship, and emissions.

Now, openly I've said a few times to individuals that we're not happy with the amount of capital we've already sunk and if we were to do our time again we would have gone about doing things quite differently. But we are where we are, and our decision needs to be about how best to apply the next shareholder dollar. All investments need to compete for capital against the other options in our portfolio and against cash returns to shareholders.



Now, making our assessment we always take into account a number of metrics, in addition to IRR. We also consider NPV, payback, margin, and various risk metrics. As you'll also be familiar, we assess many of the metrics and ranges rather than a single point of outcome. We are finalising that assessment concurrently with working on our port option and will then sit with our Board to determine whether to now pull the trigger on the first phase of Jansen. We continue to expect that this will occur in the next coming few months.

Thanks again, and that represents the end of our briefing.

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<sup>i</sup> This was said as 14-20 per cent during the Q&A session, but should have been 14-20 Mt.