Jansen briefing
Speech

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Rag Udd

Thanks Tristan, hello everyone, and thank you for joining us today. We’re excited to have the opportunity to take you through a deep dive into the recently approved Jansen Stage 1 project.
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At BHP, we’re focused on making sure we have a portfolio that is future fit and positioned to generate value and returns for decades to come.

There’s growing recognition of the critical role future-facing commodities play in the energy transition and in ensuring a sustainable world for future generations.

We’re convinced that the mega-trends of decarbonisation, population growth and higher living standards will drive strong demand for many of the commodities we produce. And there will be an increasing call for these commodities to be supplied by companies with a track record of sustainable operations and strong social value creation. BHP is one of those companies.

BHP’s approval of Jansen Stage 1 marks BHP’s entry into the world’s best potash basin and opens up a new future growth front for the Company with significant expansion potential which is expected to support up to a century of production.

Jansen Stage 1 will be the most advanced potash mine ever built. The very latest technology and sustainability practices are built into its designs. It will be very difficult – if not impossible, for existing potash miners to retrofit and recreate the operational advantages we will capture.

Potash is an essential input in supporting the agricultural production required to feed a growing population and in improving farming practices. It facilitates a better, more diversified diet and reduces the environmental impact of agricultural production.
One of the big questions we asked ourselves in approving Jansen Stage 1 was, does it fit with our strategy?

A strategy to own a portfolio of world-class assets, exposed to highly attractive commodities, and to operate them exceptionally well.

This is designed to deliver exceptional value and returns through the cycle.

- The first thing we assess is the attractiveness of a given commodity.
  - Determined by: the size of the market; its demand drivers; and the supply landscape – including the steepness of the cost curve...all of which play into our ability to capture meaningful, and growing, rent.

- We then look for assets that are large, long-life, high margin and expandable.
  - This helps us realise economies of scale and produce strong cash flows through the cycle.
  - And allows us to apply different technologies over time, and of course, provides high-return growth optionality.

- Finally, any option must align with our capabilities, in order to unlock full potential.
  - For BHP, this means mining, processing and bulk logistics.
  - As well as the creation of shared value for both our stakeholders and the environment in which we operate.

We are deliberate with this criteria.

And while the framework sounds simple, it is proven to have generated strong value and returns for our shareholders. You can see examples of it throughout our history.

As you’ll hear from us today: potash is a commodity we like; Jansen is an attractive asset; and the capabilities of our teams will extract the most value from it.
The addition of potash and Jansen to our portfolio also provides diversification benefits.

The demand drivers for potash differ from other commodities in our portfolio.

- As I touched on earlier, Potash is leveraged to global mega trends – including population growth and rising living standards.

- And it also further benefits from more rapid decarbonisation.

The customer base is more globally diverse than BHP’s existing portfolio...which is skewed toward Asia.

It also diversifies our operating footprint into Canada... a highly attractive, and stable mining jurisdiction.
But of course, every project must stack up against the other attractive development options in our diversified portfolio... and returns to shareholders.

We do this through our Capital Allocation Framework.

Jansen Stage 1 has an attractive risk-return profile.

Our knowledge of the orebody, combined with application of the latest technology and processes, will result in low, 1st quartile operating costs, and support 70 per cent EBITDA margins on consensus prices.

At consensus prices, Jansen has a 7-year payback from first production, and generates a healthy IRR of 12 to 14 per cent.

We are confident Jansen will generate strong cash flows and returns for decades.
We have also designed Jansen Stage 1 to have competitive advantages from the outset.

This began with our appraisal of the orebody. We’ve employed modern 3D seismic technology to gain a detailed understanding of the total resource.

This has allowed for full life-of-mine planning – unlike some other operators in the basin.

Jansen is designed to require 60 per cent less equipment, which reduces operating costs by about 10 per cent.

We have also designed Jansen to be as sustainable as possible and are already working on how to make it even greener.

While Jansen will be our first potash mine, we bring a wealth of experience and world class capability in bulk mining. And we have a long history of marketing high-quality commodities in global markets, which has helped us to put in place MoU’s for up to 100 per cent of production from Stage 1.
While compelling in its own right, Jansen Stage 1 also unlocks up to a century of production and growth potential. Jansen’s longevity is common to the assets and investments that have enabled BHP to create strong value and returns for our shareholders over many years, including both our Western Australia Iron Ore assets and our Escondida copper mine.

As we’ve demonstrated time and again, good resources get better over time. Large assets with expansion potential, provide inherent capital efficient, high-return expansion options...for when the time is right.

While each subsequent Stage beyond Stage 1 will be subject to disciplined application of our Capital Allocation Framework, we have a path to 16-17Mtpa of production at Jansen.

What’s more, each of these Stages comes at a lower capital intensity, faster pay-back and with higher returns.

So, we have taken the time to study Jansen and establish the optimal path forward, and we look forward to sharing more about this exciting project with you today.

Shortly, you will hear about the appealing market fundamentals that will be aided by some of the megatrends we are seeing play out around the world and our approach to marketing Jansen’s product.

Then our team from Canada will provide a detailed overview of our development plans that will leverage our proven capability. I will now hand over to Huw, our Chief Economist, to provide you with a reminder of our market outlook for potash.
Potash is a future facing commodity that is positively leveraged to global mega-trends, including decarbonisation.

Base demand is underpinned by very reliable drivers, with attractive, plausible upside readily identifiable.

While the industry is currently subject to excess capacity, the demand trajectory is expected to absorb this overhang over the course of this decade.

When that process has played out, with the market very likely to continue expanding in the following decades, a durable inducement pricing regime centred on solution mining in the Canadian basin is the most likely operating environment for the industry in the 2030s and beyond.

The fact that higher quality conventional development opportunities globally are mostly already executed, underscores this view.

Jansen S1 and our overall resource holding in the basin are the exception to the rule.
The BHP portfolio has traditionally been comprised of energy and metals. The drivers of these commodities are well known to an audience like this one.

Potash on the other hand sits within a value chain where the fundamental drivers are more basic, slower moving and boringly consistent across decadal time spans:

- The number of mouths to feed,
- The scale & scope of diets,
- And long run trends in soil fertility and the associated interplay with fertiliser application rates.

Given the relative simplicity of these basic drivers, it should come as no surprise that the historical record of population growth, crop production and potash demand provides a very reliable basis for projecting future fertiliser needs.

All in all, population is up roughly 2.5 fold since 1960, crops are up 3.5 fold and potash demand is up 4.5 fold. These relationships are as “law like” as it gets in the commodity domain.
Under our 1.5 degree scenario, potash stands to be a winner with increased biofuel production and intensified competition for land due to afforestation.

However, the impact of deep decarbonisation on potash demand is best characterised as attractive upside on top of an already compelling demand case.

That can be easily seen from the robust demand emanating from the other scenarios depicted on the chart.

Further, potash does not generate some of the negative environmental impacts of the other 2 major chemical fertiliser nutrients.

It is truly future facing.
Turning now to the market, the most important questions to consider are these:

When will excess capacity be absorbed?

What might be expected in terms of inducement pricing when new supply is required to balance the market?

What sort of supply response is most likely under inducement pricing?

Will a new “supply-led” wave emerge, driving pricing back down towards SRMC for an extended period?

Or a durable, disciplined inducement environment, with the possible additional benefit of occasional fly-up pricing?

Let me address each of these in turn.

This chart provides an indicative range of demand outcomes by way of round figure CAGRs,

- an extension of the 10 year linear trend, the average forecast of specialist consultants and
- the midpoint of incumbent producer Nutrien’s publicly stated range of 2.0% to 2.5% for the 2020s.

We have superimposed our estimate of achievable production across the demand range.

I will define and quantify what we mean by achievable production shortly.

Our central view is that demand will have “caught-up” by the late 2020s or early 2030s.

The chart illustrates clearly that this timing is not controversial.

Now I’d like to clarify some of the terminology around capacity, which can sometimes be a source of confusion.
Unfortunately, there is no clear, single definition by which different producers report their capacity, if they report it at all. “Nameplate capacity”, which is often cited, is sometimes based on annualising a ‘sprint’ capacity, which is not replicable day in day out.

Or it can fail to reflect limitations that have appeared over time as an asset has aged: and in potash, the major basins are very mature.

Accounting for these realities, as well as for unplanned downtime – which we gauge empirically based on actual performance – we estimate that the Achievable Production of the industry is about 76Mtpa.

Then we have some capacity that is under voluntary curtailment, most of which is in Canada, and a little that is currently uneconomic.

That takes us to Expected Production, of only 71Mt last year. Actual production in calendar 2020 was nearly 70Mt.

That shows just how hard available capacity is presently being run to meet the big jump in demand that we have observed.

Paradoxically, the potash market is both supply constrained and “suffering” from excess capacity in this mini-cycle.

So, looking forward, we assume that capacity that can be reutilised is brought back ahead of market balance.

Plus there is new capacity either under construction or already in ramp-up, such as the Petrikov project in Belarus which reportedly commissioned this quarter.

Working on the assumption that all this becomes available, we think that future achievable production could be up to 86Mtpa, without Jansen S1 or currently uncommitted investments by other players. That’s without factoring in depletion in the 2030s and beyond.

At linear trend growth, that 86Mtpa of supply will be absorbed by the late 2020s.

If the pace of demand we’ve seen over the last 18 months keeps up, it will be much sooner than that.

Or taking the average forecast of three specialist analysts, it happens in the early 2030s.

Somewhere in that window, we have firm conviction that additional capacity is going to be needed.
Prior to this structural balance point being reached, we expect prices to cycle at or slightly above forward-looking estimates of SRMC, which are similar to the average prices seen since 2014.

This does not preclude the possibility of price upswings – we are in the midst of one right now after all. It just implies that while excess capacity is present, prices are unlikely to sustain at or above inducement levels.

Once structural balance is achieved though, with demand continuing to move upward, new supply will obviously be required.

At mid case macro assumptions, our estimate of the inducement price for the most likely consistent source of greenfield supply (which we have identified as a large bench of Canadian resource suitable for solution mining) turns out to be similar to the average price realised over the last dozen years, which is in the mid $300s.

Our view is that average prices for the period 2008 to 2013 are a reasonable proxy for what could emerge under future episodes of fly-up pricing in this industry.

Recent experience has pushed realised pricing into precisely this zone.

Why then might prices fly-up in future?

The first reason is that by the time the industry reaches the balance point we discuss above, there will be few high quality conventional development opportunities available should demand then surprise to the upside.

Why then might demand surprise to the upside in a sustained way? The future yield impacts of soil depletion: that’s why.

We know natural soil fertility has declined.

What we do not know is when this fact will begin to influence farm behaviour, and how smooth or abrupt the change might be.

If farm behaviour were forced to change “overnight” due to a disruptive event like a multi-region crop failure. That in turn could lead to a step wise increase in potash demand. That would take producers a considerable time to catch-up to given the maturity of these large but “venerable” basins, where the vast majority of the available brownfield and lower cost greenfield opportunities were executed in response to the last price upswing.
What can be expected under inducement & fly-up pricing? (continued)

To be clear, we are not planning for precisely the above scenario to occur, or bold enough to time it, but we are certainly cognizant of the possibility of fly-up pricing being a recurrent feature of this market as the decades unfold.

To us, when seeking to identity the skew of risk around the central case, the upside case seems like a far more reasonable hypothetical than the one where a new supply led wave emerges.

The geological and agronomic cases for this “back to the future” vision of potash, which we do encounter from time to time, those cases are weak.

We hope that these remarks have provided you with some useful insights in advance of the project deep dive and our marketing strategy.

To recap very quickly:

- Potash is a future facing commodity,
- Base demand is reliable, with attractive, plausible upside
- Excess capacity is expected to be absorbed over the course of this decade.
- Beyond the 2020s, we expect the LRMC of the Canadian resource suitable for solution mining will set long-run prices.
- The alternative book end – trading at SRMC more often than not due to a perpetual supply overhang – is far less plausible given the narrow range of high quality conventional development options the industry has available to it.
- Neither the geological nor the agronomic case for this view stack up on a probabilistic basis.

With that I will hand over to Mark Swan, our Head of Sales and Marketing for Potash.
Thanks Huw. With respect to potash marketing, I would like to talk about four key topics:

- First, to provide an overview on fertilizer products and how the potash market works
- Second, to explain how Jansen’s competitive advantages have helped shape our marketing approach
- Third, to share where we intend to sell our products
- And finally, how improving market conditions and our diligent preparation will underpin our successful entry.
So first let's start with looking at fertilizers, potash, and MOP, quickly recapping on some of what we covered in the June Potash briefing.

Crops need three essential primary nutrients to grow – Nitrogen, Phosphates, and Potassium. These all perform different functions to support a plant's development and are not interchangeable.

Soils naturally contain varying amounts of nutrients, but to achieve higher yields modern agriculture relies heavily on nutrient rich “mineral” or “chemical” fertilisers.

The term ‘potash’ refers to any fertiliser containing potassium, but it's also sometimes used to refer to potassium chloride, or ‘muriate of potash’, which we’ll refer to as MOP.

Besides MOP, other forms of potash include potassium sulphate (SOP) and various potassium-magnesium fertilisers including Polyhalite.

These products are niche and typically only applied when a farmer is looking for low-chloride product and/or secondary nutrients like magnesium.

Farmers are usually just looking for an economic source of potassium, and when this is the case, they are very likely going to end up buying MOP.

Most MOP demand is for agricultural standard/fine or granular product.

Standard or fine MOP is preferred across much of China, S.E. Asia, and India, and used for direct application by hand or machine, or as a feedstock for making other potash fertilizers.

Granular MOP is preferred across much of the Americas, including Brazil and the US, and is used directly in bulk blends in large-scale mechanized farming.

Agricultural MOP is usually red, but may also be white. This is governed more by production methods than by demand, although there some exceptions, notably in certain parts of China. Some producers have numerous niche MOP products in their portfolio to suit all needs, while others sell only a few grades.

Jansen will sell agricultural grade red granular and standard MOP, giving BHP access to the majority of the agricultural market. I also want to remind you that MOP has a smaller environmental footprint than other primary fertilizers for both production, and consumption.
The potash market is projected to be around 70Mt in 2021 representing over US$20 billion in value.

The MOP market is different to other commodities we operate in, and there are many customs and practices that are important to understand.

Because of this BHP established a dedicated potash marketing team back in 2016 to build a practical understanding of how the potash market works. This team has recruited and consulted with many industry experts who collectively have well over 100 years of first-hand experience marketing and distributing potash.

If we start by looking at the beginning of the value chain on the left of the slide, around 65% of supply is represented by 4 producers. A little less than 20% is sold via Canpotex, a joint venture between Nutrien and Mosaic, that handles their sales outside North America.

Some larger producers flex utilisation rates at different mines depending on the market; a practice that seems entrenched at least for now.

Moving down the value chain to the middle of the slide, producers collectively sell the vast majority of their MOP on a CFR basis, typically as standalone product, directly to independent bulk buyers, utilizing regional offices, and sometimes agents. Producers typically sell to well over a hundred buyers that collectively form a diverse and competitive demand pool.

MOP producers’ geo diverse sales help to balance regional offtake variation that occurs due to local weather conditions, seasons, and crop economics.

Commercial CFR contracts have many terms that are commonly used across commodities (like shipping terms) but there some terms that are peculiar to MOP. While these are all important to buyers and sellers, most are not material to investors, so we won’t go into them now.

However, we should expand a little on how MOP pricing works given published FOB prices are estimated from CFR prices, and are not representative of achievable producer netbacks.

CFR prices vary by product and region and are agreed bilaterally, and reported prices are published in ranges, and include freight and are gross of customary discounts/rebates. To calculate an achievable average netback FOB price, you need to adjust for the factors I just mentioned. We provide a little more detail on this in the Appendix of today’s slides.
MOP market value chain overview (continued)

Also worthy of note is the duration of fixed price terms. These tend to vary by region, ranging from as short as cargo by cargo in some regions, to as long as 12 months, in say India or China.

On the right-hand side of the slide, we look at the final part of the value chain. Post CFR logistics span from discharge port to 100s of millions of farms around the world.

In-market supply chains can be complex, but vertical integration is not a prerequisite for selling bulk potash. For the most part, in-market distribution is disaggregated and managed by many independent downstream entities. Barriers to entry are often low and margins smaller than those captured further upstream.

Where producers choose to sell a portion of their production via their own distribution, manufacturing or retail assets, it is usually done when they want to capture downstream synergy from selling other fertilizers, agricultural products, and/or services. Even in regions where potash producers are particularly active downstream, such as the US and Brazil, the majority of the in-market supply chain remains independently owned.
Our marketing approach has been designed to ensure competitive access and sustainable sales, while playing to Jansen’s strengths.

BHP is new to potash, but we will become in time one (of only a few) established sellers.

Buyers we have spoken to welcome a new independent entrant that can help them diversify supply and support their growth.

Jansen will provide customers with up to 100 years of low-cost MOP that will be competitive through the cycle.

If we look at logistics, like other established sellers, we will focus on upstream CFR sales. We will also benefit from being able to direct-rail to North American customers.

Jansen has logistics optionality and flexible granular processing capacity that means we will be able to shift sales between export regions and North America, depending on the market.

By staying upstream, we can focus on the highest margin part of the value chain and play to the strengths we already have in export bulk marketing and sea-freight.

During Stage 1 we will benefit from only needing to produce, handle, and sell 2 products.

Our location, and environmental and social value leadership, are proving attractive to buyers’ emerging needs. In particular, with geopolitical risks rising, buyers are increasingly valuing the long-term stability that supply from Canada offers.

Our contracting approach will be competitive, and the vast majority of sales are likely to be made against framework agreements, with prices fixed in line with regional prevailing custom and practice.

Finally, once established, our marketing team will be positioned to capture incremental demand growth to support any future potential expansions as and when required.
Once Jansen Stage 1 is fully ramped up to 4.35Mtpa we forecast our market share will peak at ~5%.

We will target dozens of large buyers across growth regions in the Americas, Asia, and the rest of the world, by example Africa, noting we will be under-weight in China given our exclusive red product offering in Stage 1. We will also sell some volumes into the US and other smaller established regions.

For illustration we show what Jansen’s potential regional share of imports may look like. Actual sales splits will depend upon various factors (including regional netback prices, logistics costs, reliability, and location diversity) and will vary over time. The key point here is that we will always want to retain geographic and customer diversity to ensure competitive global access, and average out regional demand variation and price netbacks.

As Rag touched on earlier, Jansen stage 1 will bring some diversity to BHP’s business. By example, China accounts for more than 70% of global iron ore imports but only around 15% of potash imports, and there is zero overlap with our existing customer base in other commodities.
Entry risk is only present for a relatively short period of time at the beginning of Jansen Stage 1, but it is still something we are planning for.

Over the past 5 years, as well as building an experienced team, we have spoken with 100s of customers and developed working relationships with most major potash buyers. Many of these buyers have voiced strong support for the project.

We have subsequently agreed non-binding MOUs with key strategic buyers that collectively provide for up to 100% of BHPs planned output in stage 1. Interest levels have actually exceeded our stage 1 capacity. In some cases we have captured some of this upside in mutual options that we will explore further in execution.

We will replicate the tried and tested model of marketing directly to major customers via a network of regional offices, leveraging BHP’s existing footprint and capabilities.

The marketing team will be expanded to bring in more specific regional sales experience. So while BHP will be new to potash, the marketing team will not be.

We expect Jansen will be structurally needed to balance the market. In ramp up we will target multiple customers in each region satisfying new demand wherever possible, to support a smooth market entry and ensure the most competitive access and terms. Many buyers tell us they are keen to diversify their existing supply and buy from us, and we are encouraged by this.

The marketing team will have 6 years prior to entry, and 2 years in ramp up, to prepare, monitor developments, secure sales, and ease ourselves into the market. Overall, we should be well positioned to place all our product at competitive prices and sell through the cycle profitably, under any market conditions.

So, stepping back to reflect on the key points:

- BHP has developed a strong, practical understanding of the market to support the sanction of Jansen Stage 1.
- We have developed a sustainable marketing approach that will optimise our strengths.
- We have built an experienced team and developed relationships with many key customers in the potash market, who have demonstrated strong support, and have indicated strong future demand, for Jansen’s product.
- And finally, diverse sales in an improving market, underpinned by diligent preparation, will help ensure a successful entry.

So, thanks to everyone for your time, I will now hand over to Giles Hellyer, our Vice President of Potash Operations, who will give you an overview of the Jansen project.
Thanks Mark and hi everyone.
I’ve been responsible for guiding the project through to approval and am now looking forward to bringing Jansen, the world’s most advanced potash mine, to life.
At our potash outlook briefing in June, we noted that Canada – primarily Saskatchewan – is home to more than one third of the global potash reserves.

The region has been a key producer since the 1960s. And today, produces around one third of the world’s potash.

Since 2008, BHP has accumulated the largest landholding in this region ~9000 square kilometres, or representing ~37 per cent of this tenure in the basin.

Jansen represents the best of this footprint, in the world’s best potash basin.
The US$5.7 billion, or C$7.5 billion, go-forward investment will have around 35 per cent going towards the mine; 45 per cent to processing; and 20 per cent to logistics including the Westshore port. Around 85 per cent of spend is in Canadian dollars.

We are confident in these estimates. We’ve been working in Canada and the region for the past 15 years, and engineering design is over 50 per cent complete. For comparison, the engineering for the Spence Growth Option and South Flank was at about the same level of completion at sanction as Jansen at the same point in time.

Construction will take six years – with peak spend in FY25 and FY26.

And first ore is targeted in 2027 – with a two year ramp up to full production.

Jansen will enter the market towards the bottom end of the global cost curve, with operating costs of around ~US$100 per tonne on an FOB basis.

And it will support up to a century of future production and growth, with future expansions significantly de-risked by existing shaft capacity.
It is important to also realise that Jansen has been designed with sustainability in mind.

Stage 1 will have approximately 50% less carbon emissions per tonne than the average in basin and approximately 60% less fresh water consumed on the same basis. We have proactively taken steps to lower emissions and water usage at start up, with more planned as we ramp-up.

Firstly, looking to emissions, we expect more than 80% of the underground fleet’s energy will be supplied from battery or electric as Stage 1 comes online with the plan to be fully electrified by 2031.

We won’t stop there though.

The Potash Path to Net Zero plan we’ve designed for Jansen focuses on eliminating power generation emissions at the source and mitigating the impact of natural gas consumption in the process area. Together these sources make up over 80% of Jansen’s forecast emissions for Stage 1.

The local Saskatchewan government electricity utility shares similar goals as BHP for reducing emissions.

Therefore, our strategy for mitigating emissions from electricity is to work with the local utility provider on a purchase agreement to secure power from low-emissions sources only - thereby incentivising investment in further green power in province.

Turning now to water, Jansen’s lower water usage is mainly driven by design optimization in the process plant. That is because processing and infrastructure technologies have been a key focus area for the design of Jansen Stage 1 to ensure a sustainable approach to local water supply.
So where does this leave us in relation to our peers?

Well, as the first conventional mine built in 50 years, Jansen will be larger and simpler... with one location, one production shaft and one service shaft.

At 4.35 million tonnes per annum, it will be one of the largest producers from a single mine; without considering future potential expansions.

This, of course, creates economies of scale.

It will incorporate the latest equipment and technology.

Mining equipment has been matched to the orebody. This includes 60 per cent less fleet... resulting in fewer machines to maintain. Integrated support systems will be put in place for the highest level of productivity.

Automation has been integrated in the design from the start – not as an add-on – and extends to the rail loading and unloading systems, which will be best in class.

Jansen will require fewer people to operate equipment, making it the most productive in the industry on a tonne per person basis.

Our modern plant design will set industry benchmarks – higher recoveries from a unique flowsheet; designed with reliability in mind – delivering higher run time and increased productivity. The flow sheet incorporates the best innovations already employed by the mature global potash industry.

These built-in systems and equipment advancements provide efficiencies and value that cannot be replicated by retrofitting an existing mine.

We have also assembled, what we believe, is a leading potash mining team.

We have spent the past decade bringing talented people to this project. People that know the industry, the region and the markets.

The mine is in the world’s best basin, it will feature best in class design and equipment and our team will get the most from the resource by operating it exceptionally well.
Over the past 10 years, we have secured all major permits possible prior to sanction. This includes approval of our Environmental Impact Study, and conceptual closure plans.

You will have heard last month that we have struck an agreement Westshore Terminal as a port to export Jansen’s product from.

Port fees are fixed for the long term. Export and domestic rail service and other logistics costs will be subject to shorter term contracts with service providers.

Finally, it is also worth noting that shaft progress is now 93 per cent complete and on track for completion by the end of CY22.
As Rag touched on, Jansen’s competitive advantage is largely embedded in its optimised design, and so, at the intended nameplate capacity of 4.35 Mtpa, Jansen is expected to be the lowest cost producer in Canada.

Future stages of Jansen will strengthen the Stage 1 opex advantage through further economies of scale. Even if competitors improve continuously, we expect Jansen’s advantages to remain for many years to come.

Our estimate of approximately US$100/t operating cost in 2030 includes both contingency and escalation allowances. Sustaining capital is expected to average of US$15/t, and the Canadian currency exposure is expected to be an average ~85% over the life of mine.

We are confident in these estimates. Their development has been reviewed by industry experts, they’ve been subject to extensive benchmarking and they include potential inflationary pressures.

So in conclusion I want to reiterate that Jansen represents the best of our substantial holding in the basin and that Stage 1 is a modern, high margin, long life and expandable asset that is positioned to outperform peers.

We are well advanced on permitting and ready to unlock significant value as we move towards production.

We will now take a break of 10 minutes before I come back to introduce you to the key members of the Jansen team to take you through a Stage 1 engineering deep dive.

During the break we would encourage you to watch our site visit video if you have not done so already.

Thanks again and we will return in 10 minutes to continue the briefing.
Thanks operator, and welcome back.

I’ll now introduce you to some of our experts that you will hear from in this session.

- Cheryll Godwin-Abel who will present on the mining system;
- Mike Elliott who will speak on the shafts, process plant and outbound logistics;
- Simon Thomas on project management;
- And on Social Value we will hear from Lindsay Brumwell.
But before I get to them I’d like to kick off by talking to you about our approach to the site’s geology.

BHP is in the enviable position of developing a world class resource with the benefit of modern technology and decades of local Potash mining experience.

From a resource perspective, two key advantages arise from this position.

Firstly, we have been able to optimize value for the project over the entire life of mine, and

Secondly, we are better able to avoid hazards – including those that result in unplanned water inflows.

Since the potash industry started using 3D seismic in the 1980s, no mine-threatening inflow has occurred in the Saskatchewan potash industry.

Nevertheless, unplanned inflows still happen and they can become a persistent threat, requiring a lifelong commitment to manage and mitigate the risk.

A key advantage we have is that we surveyed almost the entire property before mining, allowing us to plan for and avoid hazards that could lead to inflows. No other Potash miner has developed such a complete, integrated view of their property ahead of first production.

Our detailed understanding has allowed us to plan the mine’s layout to minimise infrastructure, optimize the mining sequence, and pave the way for a reliable supply of ore.

By comparison, operators that started mining decades ago relied on 2D seismic technology, which didn’t provide the same resolution of data or understanding of collapse structures and other geological features that we have been able to access – decades later.

So, we have combined the decade’s long body of knowledge from the Saskatchewan potash industry with leading 3D seismic techniques to generate the safest and most productive life of mine design for Jansen.

The extensive landholding and characteristics of the orebody supports a large resource base for Jansen with mineral resources totalling 6.5Bt at 25.6% K₂O.

So in summary, the extensive and early coverage from the latest 3D seismic information creates a key competitive advantage for Jansen and sets the foundation to build additional value, which I will pass to Cheryll to talk to you about from a mining perspective.
Thanks Giles. Our underground production mining system for Jansen is designed specifically for our potash ore seam. If you pair that with our detailed understanding of the total resource that Giles just spoke about, we are positioned to extract maximum value out of the Jansen resource.

The mining system is comprised of the Sandvik MF460 full face borer miner and PO140 Extendable Belt System. The system has been developed from existing technology and adapted and scaled up into a unique integrated mining system.

It has higher capacity than typical potash borer machines, and feeds onto our underground conveyance network which we have designed to handle this higher capacity.

The borers themselves are sized to extract the highest grade of the Jansen potash seam in a single cut, versus a less productive two cut benching method we would have to use if Jansen had typical lower profile borers.

The cutting height can also be adjusted above the high-grade potash zone, for managing ground conditions such as clay seams in the mined roof that need to be cut out for stability, while also minimising ore dilution.

In the picture you can see the borer in its lowest height configuration. It will cut up to almost a meter higher than what is shown here. The dotted white outline shows the relative size of a typical low profile borer with fixed cutting height, for comparison.

Jansen will have just 4 mining systems... capable of producing the equivalent of 10 to 14 typical systems. This is a sustainable advantage, with fewer active mining faces for lower operating costs.

As was noted earlier, this ~60% less fleet creates a ~10% operating cost saving

We have been engaged with Sandvik for the past ten years in developing this technology, in part to help de-risk this new approach – of using a higher capacity system.

Over the past few years, we have been conducting a full-scale, underground trial of the system in a salt mine in Germany. This is a mine with similar mining method and ore properties to Jansen.

We have seen and understand how the system operates, and are confident in the technology.
Advanced mining technology to be utilised (continued)

The underground trial has helped us resolve equipment issues typically experienced in early operation.

We have improved system performance, and will continue to complete enhancements prior to the final design of the Jansen fleet.

And as noted previously…. We will be using an underground mobile equipment fleet of mostly battery powered electric vehicles.

We plan for more than 80% of the energy used to power the mobile fleet to be from battery or electric. If you include the mining system electric load, then it is close to 95%.

Beyond this, we are aspiring to eliminate diesel exhaust exposure from the underground.

Thank you, I will now hand over to Mike Elliot, Jansen’s project director.
Mike Elliott

The Jansen team can certainly tell you that shaft sinking is the most challenging part of building a potash mine in Saskatchewan, because it involves excavation and lining through several water bearing formations.

We are pleased to say that we’re on track for the end of calendar year 2022, and completion of the shafts will remove our principal barrier to entry and significantly reduce overall development risk for the project.

Our shafts are constructed to be completely dry by using a composite hydrostatic liner from the surface to beneath the lowest water bearing formation.

Most other Saskatchewan mines have opted for less capital-intensive construction by only constructing hydrostatic liners through the major water bearing formations, and as a result they experience residual seepage.

This is an important differentiator because dry shafts last longer, are cheaper to maintain and deliver higher annual hoist run-times.

Jansen’s two shafts are also the largest in Saskatchewan with a diameter of 7.3 metres, which is significantly greater than the next largest shaft in the province at around 6 metres, and the average in the province of 5 metres.

Our investment in a larger diameter allows us to deliver stage 1 production through only a single service shaft, thereby reducing upfront capital.

And then for future stages, our larger diameter allows us to have four skips in our production shaft versus the typical two, and increased ventilation to support a larger mine footprint, thereby giving us the potential to achieve 16-17Mtpa of production from Jansen alone.

Our peers’ production is constrained at their mines due in part to smaller shaft diameters that limit both ventilation and hoisting capacity, and they will have to continue operating multiple mines to achieve the same output as Jansen.
Now turning to our process plant…

We have applied the latest equipment and digital technology to a proven potash flowsheet, and as a result Jansen will set a new benchmark for plant automation both within BHP and the Potash industry.

As shown on the bottom right of the slide, we are planning to achieve an industry-leading recovery rate of 92%, which is higher than current best performers at 89% and the Saskatchewan average which is in the mid-80s.

A higher recovery means we will extract more potash per tonne of raw ore resulting in less product going to tails, better energy and water efficiency, and a lower operating cost per tonne.

Jansen Stage 1 will be controlled by an Integrated Remote Operating Centre, or IROC, using technology that has been proven in our Iron Ore, Coal and Copper businesses. Based in Saskatoon, the IROC will integrate our mining, processing, rail, and port operations allowing us to continuously improve the supply chain and better serve our customers. The IROC is enabled by a single, advanced control system which will analyse data from more sensors than any other Potash mine. We will have 3 times the number of process sensors and 10 times the number of machine health monitoring sensors than the last process plants constructed in Saskatchewan.

Lastly, Jansen will keep the plant fed by an automated raw ore reclaim system that operates when the hoist cannot, and dual production lines that will run independent of each other.

All of these features that I’ve just mentioned contribute to a target plant uptime of more than 8,000 hours per annum compared to the 7 to 7,500 hours per annum achieved by others in the industry.

As Giles mentioned earlier, Jansen is expected to be one of the world’s most sustainable potash mines. This comes from having both a low carbon footprint and low water intensity.

Jansen will emit about half the average CO₂ per tonne of product than the average Saskatchewan potash mine thanks to technology that mitigates natural gas emission and our pursuit of electrification of mobile equipment.

Compared to other conventional potash mines in Saskatchewan, and something that I’m really proud about, is that Jansen’s water usage will be 60% less due to the use of dry dust control technology and automation that minimizes fresh-water usage.

For future stages, and as part of our ongoing drive for lower emissions, we will continue to research technologies as a partial substitute for conventional flotation and drying, thereby reducing both natural gas and water usage.
So let’s look at the next step in the supply chain and how we get product from the mine to our customers.

Looking firstly at the rail network….

Jansen Stage 1 includes the construction of railway spurs linking the mine to the two national carriers in Canada, Canadian National and Canadian Pacific.

We will use a dedicated fleet of 1,200 potash rail cars for stage 1, destined for Westshore’s terminal on the west coast or domestic distribution into the US.

How Jansen will load these railcars is really exciting. Jansen will have an automated and continuous loading facility that uses robotics to open and close the top hatches through which each rail car is filled with potash. We will load and return a train to the mainline in about half the time of current benchmarks, thereby avoiding the need to un-couple locomotives and more importantly, avoid the need to have our people work on top of rail cars. This is the sort of technology that we aspire to as it removes our people from potential harm whilst delivering an economic benefit.

And now turning to the port terminal….

BHP has entered into a long-term agreement with Westshore to construct and operate a dedicated Potash terminal.

We are proud to partner with Westshore, a long-established bulk commodity operator in a premier deep-water location. The terminal has best-in-class rail access which follows a route that avoids heavy rail congestion in the Vancouver region, which will deliver us more reliable cycle times than competitors who are tied to terminals in the more congested regions of the Port of Vancouver.

Westshore will construct the terminal under a Design-Build-Own-Operate agreement. It also captures exclusive expansion potential for stage 2 and possibly beyond.

So putting together all of what you have heard from Giles, Cheryll and me, Jansen’s competitive advantage is embedded in our resource knowledge, mining method, shaft design, and modern plant with integrated digital technology. On top of this, we will embed BHP’s approach to safety, operational excellence and continuous improvement that you would have seen elsewhere around the Group.

Future stages of Jansen, if approved, will strengthen this advantage through economies of scale.

So that is the stage one design deep dive, and I now have the pleasure of handing over to Simon Thomas, our Vice President for Projects, who has recently joined us from South Flank and will talk about the approach to executing stage 1.
Thank you Mike.

The team has given you a flavour for how the structural advantages are embedded in the Jansen design.

I now join you to talk about how we will successfully execute the project.
Firstly, let me step back. At BHP, we have recently completed 4 major projects worth ~US$7bn on time and on budget - across iron ore, copper and petroleum.

For each of these projects, which spanned sustaining and growth options, we had a strong regional team focus, with global support through the Project Centre of Excellence and Global Project Management Leadership Team.

This global support helps us maintain standards and, importantly, ensures lessons learnt are incorporated into future projects.

Lessons learnt typically centre on effective project delivery models, engineering performance, appropriate commercial practices, understanding the supply chain, active risk management and digital innovations.

As Mike said, I have joined Jansen from South Flank – the 80mtpa sustaining iron ore project that achieved first production on schedule and on budget a few months ago.

I headed up that project and one of the key lessons that stands out to me is that going into execution with a robust study, having the right delivery partner, advanced engineering progress, sound knowledge of your contractor capabilities, and a team that is well established and embedded is a strong indicator of success.

Here at Jansen, we have used the front end study phase to be more advanced across these key success factors than I have seen for other Major Projects I have been a part of.

Jansen has built a team that draws on the most experienced people we have in BHP in the capital delivery function and we have enhanced that team by securing local Potash experience that now makes up over 25% of our Saskatoon based workforce.

Importantly, our team includes a strong representation of people with Underground Potash experience and major resource processing construction & hard-rock mining experience.
I hold a high level of confidence in our schedule and capital cost ranges for Jansen Stage 1 – largely because of the extent of studies and reviews conducted internally by BHP and by high number of independent experts.

Our scope has remained stable over the past 4 years, and has been optimized.

Our engineering and procurement is advanced.

Engineering has progressed to over 50% complete. We have more than 45% of procurement orders awarded to the market, including long lead items like the mining system, processing equipment and electrical equipment.

This progress is in-line with other successful BHP major projects at the time of Sanction.

We’ve also drawn on knowledge of projects in the Saskatchewan Basin, Canada and Potash Industry. We now have a strong understanding of our construction risks, what could impact our critical path and what drives productivity - especially in underground construction.

Cost risk has been studied thoroughly with a focus on our exposure to those high risk elements of:

- Bulk Material quantities
- Labour productivity
- The Saskatchewan winter seasons
- Mining equipment ramp-up rates
- Contractor capability; and
- Inflationary pressure; or escalation

Finally, our ranging has determined a conservative cost contingency, modelled in detail and calculated at a level higher than some of our recent development projects.
Looking now to the Project Schedule - this is an integration of 5 critical work streams required to build a complete Potash Supply Chain from the deep Underground Mine to Port.

Jansen has two construction peaks – reflecting the Mine Development and Hoist Modification work through 2023 to 2024 and then - the Processing Facility Construction during 2025 and 2026.

The integrated schedule has been fully reviewed by a team of Subject Matter Experts both internal and external to BHP, drawing on experience across the Potash industry, global underground mining and large complex process facility construction. Our understanding of risk, our ranges and opportunities are all well informed.

Jansen enters execution at an ideal time with few competing major projects in the mining & minerals industry and a lull post the Canadian oil-sands boom. Given this we anticipate that labour availability and labour cost exposure will be within expected ranges.

So to briefly re-cap,

We have a strong track record in major project execution at BHP and we are confident in our capital budget and delivery schedule for Jansen.

With that I’ll hand over to Lindsay Brumwell, Manager of Corporate Affairs for Potash to take you through social value.
Lindsay Brumwell
Manager Corporate Affairs, Potash

Thank you, Simon.

The Jansen investment is the second largest foreign direct investment in Canada since 2015 and the largest in Saskatchewan in decades.

For some of the local communities and first nations near Jansen this is a once in a lifetime opportunity and economic growth experience.

The social value opportunities presented from this investment is what I’m pleased to speak to you about.
Over the past ten years, we have built roots and strong ties in Saskatchewan, which has been a positive aspect of our project journey for everyone in the BHP team.

We are excited to be able to continue to support the local, provincial, and Canadian economies while being a good corporate neighbour.

During this time, we worked with valued stakeholders and communities to learn more about their needs and find solutions to create mutual benefit.

This is why we have prioritized training, small business development, local hiring, and local procurement as core areas of our social value.

The next phase of the project opens opportunities for Indigenous and local businesses, both small and large. Approximately 85% of our total project spend is in Canadian dollars, which means there will be hundreds of millions of dollars’ worth of local procurement opportunities over the coming years.

We estimate this will contribute to direct and indirect economic spin off, of $1.8B GDP during construction. During this next phase of the project, construction is expected to take six years, followed by a ramp up period of two years. We expect to create as many as 3,500 jobs during peak construction and 600 mine operations jobs once in production.

Diversity and inclusion are central to building Jansen’s workforce. We, like others, have found our most inclusive and diverse teams deliver safety benefits, have a better corporate culture and are more productive than other teams. Therefore, we have a target of 20% Indigenous representation during operations and expect to achieve this target as we continue to create more opportunities for Indigenous peoples.

We are also committed to having a gender balanced operation. Today, we have approximately 37% women in the potash business.

Looking more locally we have donated CAD $35 million to the nearby local communities.
As I mentioned in the previous slide, we have built relationships over the past decade. As part of this process, we have taken the time to learn from our First Nations communities on culture, history, and their communities’ priorities.

The result is that we established voluntary agreements with all 6 First Nations in the surrounding areas near Jansen. This approach and these agreements are unique for the potash industry in Saskatchewan. They are built on transparent and respectful relationships. They outline a shared intent and objectives of the relationship and opportunities for Jansen. They provide all parties with a:

- governance structure,
- communication protocols,
- environmental information sharing mechanisms, and
- social value investments and other opportunities.

These agreements are refreshed every five years to address any new issues, approaches, or opportunities.

I am happy to report we recently have refreshed our agreements over the past year, which are in place for the next five years.

Here at Jansen, we live these agreement commitments as part of our daily work across the organization and through our regular engagements.

So, I hope what I’ve covered on social value demonstrates how we are working with the local communities, first nations, and stakeholders to build mutually beneficial opportunities for all parties.

With that, I’ll hand over to Rag for closing remarks.
Rag Udd

Thanks Lindsay.

Before I wrap up I wanted to emphasise a point that you will have heard throughout the presentation today. Namely, that Jansen was designed with sustainability in mind. We have taken steps to ensure lower emissions, and lower water usage from Day 1 of operation.

But we are not standing still. As you heard from Giles earlier we are already working on how to make Jansen even more sustainable.

So now I’d like to recap on why Jansen is setup for success.
Firstly, potash is an attractive future facing commodity with strong fundamentals. Secondly, Jansen is a world class, high margin and long life asset. Stage 1 delivers both healthy returns and a platform for potential future growth. The embedded competitive advantages the team have talked to today are challenging for our competitors to replicate, meaning Jansen is well setup for the decades to come.

Finally, we have built the capabilities we need to unlock value. We have an experienced and diverse team across mining, marketing and Social Value. We have a clear, well-scoped plan for the work ahead and are ready to progress Stage 1 into production.