

Rio Tinto 2021 Investor Seminar

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Growth Panel

Menno Sanderse (Head of Investor Relations): Great. Thank you, Jakob. This is an extremely exciting panel. This is about growth. This is about new things. It's also very complicated. So bear with us and please listen carefully.

Mark, let me start with you. Clearly, as the Head of our Project Development Organisation, there'll be a lot resting on your organisation to drive our objective to successfully double CapEx. What type of assets are you looking at in terms of scale, in terms of jurisdiction? And in broad terms, what do you think the portfolio will look like in 2030 if you are successful together with the product groups in identifying the opportunities?

Mark Davies (Chief Technical Officer): Look, I think it's very difficult to tell actually what the portfolio is going to look like in 2030, because we need to remain opportunity driven. We just shouldn't be spending for the sake of spending and growing. We need to find attractive value-accretive opportunities. And if you look at our history, that's probably the way we have grown. And over the last 140 years, our portfolio has changed every decade or two. And I think that will continue.

I think for the last decade, we've been very, very focused on Tier 1 copper assets in nice jurisdictions, and that's pretty small set. Resolution is a fantastic ore body but it is really difficult to make it happen. So I think one of the key changes that we are looking at making is really for our exploration and our project development teams opening up the portfolio, a broader range of options, I guess, a broader range of commodities probably focused around those commodities that support the energy transition, a broader range of countries, probably only one or two exceptions, maybe Russia but we wouldn't touch. But I think really opening up that portfolio, looking at smaller projects and a minimum viable project approach, where we start small and grow and create optionality.

And many of our assets actually over time have come from that. So if I was to summarise, Menno, I would probably say, we're going to move from a short green list to a very short red list and open those options coming into the portfolio. I think that'll allow us to actually not only better chance of success but we can kill things quicker because we've got the next thing to move on to, which I think will be successful.

Menno Sanderse: And the group here and online has heard a lot about Excel in development as a clear priority for us. What are you going to do differently in the project group to ensure we are indeed excelling in development and developing returns on that additional growth investment?

Mark Davies: Look, I think there's three – probably at least three dimensions. Firstly, it's about alignment, and secondly around our capabilities, and last, as Ivan mentioned, capital intensity.

On alignment, projects work really well when we bring together the best to the organisation. These things are hard to do. So if we get our projects organisation, our exploration, our commercial product groups, all working together, and that – alignment of that clear goal to grow is really important.

I think on capabilities, we have some fantastic capabilities. We preserved our exploration capabilities. And I'll use Bundoora as an example. We have the Jadar Project because that Bundoora facility could unlock a way to process that ore. That team is also working on unlocking other ore types and that gives us a competitive advantage as we move forward.

Menno Sanderse: Thank you. Bold, some people would argue you are one of the luckiest people in the room because you head up our Copper division.

Bold Baatar (Chief Executive Copper): I think so.

Menno Sanderse: And clearly, copper is a very exciting commodity. I think everyone – everybody in this room and online wants to own a lot more of it, the whole industry wants to own a lot more of it, which is easier said and done as we all know. So, can you help us understand how Rio Tinto can deliver on doubling the investments in value-adding growth in copper?

Bold Baatar: Now, thank you. We're actually very privileged with an amazing resource endowment that was discovered by our pioneers, our geologists, our projects team. And if you actually look at our pipeline of grade resource scale, no one has this. Not many companies can post around 2% copper and in some actually incredibly nice jurisdictions.

The first thing I would say is, of course, the elephant in the room is around is OT, and I reflect on my own personal story. Oyu Tolgoi led me to Rio Tinto. And I joined Rio Tinto because I saw what an amazing company it is to transform a nation and build capabilities and truly invest in the communities, in a partnership, in the spirit.

So when I look at our copper pipeline, we're going to go from a consolidated base of about 600,000 tonnes of copper to over 1.2 million. It's actually pretty simple, 400,000 tonnes of incremental growth is going to come from OT and we're going to work on that.

The next is, of course, Resolution. Resolution is in many respects actually not a greenfield but a brownfield on the back of an amazing existing infrastructure in the Arizona Copper Triangle with existing power lines, with existing rail lines, with amazing workforce, existing supplier base. This is not a greenfield in the Gobi Desert, which is actually quite amazing to think about.

And of course, we have to respect the wishes of all of our stakeholders and the local communities. But I must say that there is huge overwhelming support from the government in the state as well as the town of Superior, the labour unions, of course our supplier base, and of course, we have to make sure we reach and have an open discussion with one of the tribes, but there's also very strong support from many of the other tribes.

So it's very important to focus on the voice of support but also listen to the voice of dissent. I think when I think about Kennecott, this is the pride in history of Rio, and it's truly a flagship asset with over 120 years of history. And when I go there, I am just always struck by the amazing American can-do attitude and creativity to get things done. And it is one of only two US smelters that are operating.

And if you think about the US self-dependency on copper and its electrification of the US vehicle industry, I get very excited about the smelter future. And then, of course, the grade of the underground that we haven't really fully explored is amazing. We're talking about 2-3% copper in the underground right next to our open pit and we're going to touch the ore body with \$100 million and look at further characterisation of that.

So a combination of those three projects actually have a very good organic growth pipeline that doesn't call for inorganic growth. And I think our Winu project in Australia will test our ability to get things done faster, avoid bureaucracy, and we'll see obviously it has to respect the timeline of our Traditional Owners.

And then lastly, I promise the project that I'm actually very excited about is Nuton, which is really the sulphide leaching nirvana. If you can crack that code in primary sulphides, it opens up massive districts for us in the Andes, and there's of course extracting copper from waste and tailings. So we're going to spend a bit more time there and I think we're looking for further partnerships.

I must say it's not a new technology. We're re-branding Nuton. This has been going on for over ten years to resolve the acid rock drainage in La Granja [Peru] and we actually now think it has far broader commercial deployment beyond a single resource.

Menno Sanderse: Thank you, Bold. Obviously, it wouldn't be right if we didn't touch our biggest copper growth project, Oyu Tolgoi, where we are tripling copper output with the development of the underground. Can you talk us through where the project is and how your discussions with the government of Mongolia are going?

Bold Baatar: Well, Mongolia is my homeland, so I love my country dearly. And, of course, it continues to be an attractive investment destination for us, because I think about the people; 12,000 Mongolians, 95% workforce, we have 30 flights a week. We're using 74,000 pairs of gloves. And in all this COVID time, they continued to build the project. It hasn't stopped. And it's been a very difficult operating environment and globally due to COVID.

I think in terms of our discussions with the government – of course, I see some journalists here – don't believe everything you read in the media. The relationship is, of course, needs trust and repair. It needs to

make sure that we have to listen, and we have to be humble. And of course, we do make mistakes. We're not perfect but everyday our teams get up and strive to do things better and learn from the mistakes.

And if there are mistakes we made, we acknowledge. But we want to look towards the future in building the project. We're over 80% complete; and I was just reading the underground progress update, we're 99.8% finished on the material handling system, and that's a massive feat. It's a conveyor to surface system 16 kilometres underground. And now there I think, Mark, they're cleaning the walkways or something; but look, I think it's a massive investment.

And of course, the government is disappointed. So are we, that we had a cost overrun and schedule overrun and it has delayed the dividends. It potentially implies a bit more debt on the government's entity. So we are trying to resolve that and we're working and negotiating and it's a very sensitive moment, so it's not the best time to react publicly in media what's going on. But I must say, I'm a Mongolian, I want – I don't have a Rio Tinto passport. I have a Mongolian passport, but we are partners in the country and we have to listen to the voices. And that's absolutely what I'm committed to do and make sure that I bring my home company and my homeland together to resolve this issue. So working through it. It may take time but we're – we'll just have to listen and be respectful.

Menno Sanderse: Thank you, Bold. And Sinead, thank you very much for your patience. Jadar, clearly, our most recent project announcement. Can you explain to the group what makes Jadar so attractive, and what the outstanding internal and external important steps are in terms of approvals before we can commence construction?

Sinead Kaufman (Chief Executive Minerals): Yeah, sure. So we took the really unusual step for us earlier in the year to seek early support from the Board of the Jadar Project and we'll finish the feasibility study at the end of this year.

But I really see Jadar as playing an important part in our battery mineral strategy. It's a long-life, low-cost lithium and borates business. It's first quartile for both products. It's 58,000 tonnes of lithium carbonate and then the additional boric acid revenue as well. And it's going to be one of the largest operations in the region on a lithium carbonate equivalent basis for quite a while.

We see the boric acid obviously will bring in significant volumes, additional volumes into the market and we see that as a real opportunity to review how do we maximise that value across the portfolio with those additional boric acid tonnes in that area. But with the Board's support, the next steps for us are to work through with all of the stakeholders around approvals. And so that's really about working with the local communities with this – with the local governments and also with the government of Serbia and civil society around what are the permits and licenses we need next.

So our next step is – what's called the exploitation field license, and that essentially is the approval for us to publish our environmental impact assessment that we've been working on for quite a while, and sharing that publicly for comments and feedback. And once we've done that, the next step is to seek the construction permits. So we expect at this point to be starting construction next year and then in production in 2026.

Menno Sanderse: Thank you, Sinead. And clearly, Jadar very attractive as a standalone asset, but how does it tie into our overall battery mineral strategy? And can you provide some colour to the group of where you would like that battery material business to be by 2030?

Sinead Kaufman: I recently visited Jadar, and I was just struck by what a fantastic asset it is. It's the key building block for us to develop a battery minerals portfolio. And obviously we've had Jadar in the portfolio for a while. It was discovered in 2004, but it's a great time to bring it to the market. And I see it being a core part of our vision on how we supply materials going forward into a transition for low-carbon economy.

So as I said, it's low-cost, it's long life and it's a really large resource right on the doorstep of the European market. So our ambition is to be a significant player in the battery materials area and really could create compelling value for shareholders. But in doing that, we can use the technologies and the capabilities that we have, such as our demonstrated refining and processing capabilities that we see across several commodities.

A good example of that also is in our critical minerals area, and where we can see future battery materials business will really build on those skills and expertise we have upstream and exploration, also in some partnering and then – and also leveraging some of the technologies that we really have to extract materials from existing ore bodies and newer existing ore bodies.

But I think one thing we have to consider in this is battery materials, as we know, is a really hot market right now, and whatever decisions we make need to make sure that they can add value for Rio Tinto and that we're very rigorous in how we evaluate and determine what the best projects are to take forward.

Menno Sanderse: Thank you, Sinead. But Bold, coming back to you, clearly, high-grade corporate resources are the industry's nirvana, but they're often found in locations which some would argue are maybe challenged in terms of geopolitical conditions. Can you talk about our approach to operating in these slightly more difficult environments for copper?

Bold Baatar: Now, thank you. You know the Apple phone gives you reminders of the locations where you've been. And I was recently looking at our African continent; and of course I ran the assets in Madagascar, South Africa, Namibia, Guinea and I passed through Rwanda and many other African countries. And I must say we have a long proud history of operating in difficult jurisdictions, but everywhere I went, we were part of a nation-building project. So incredibly proud of that history.

So I don't think jurisdictions scare away us. I think we actually go in and we have amazing team members that go and build projects anywhere. I think in terms of our existing projects, of course, my fellow country nomads in Kazakhstan, it would be an amazing project if I can get it to be – we're going to look at that with exploration. We have existing obviously agreements in British Columbia. We have obviously the Paterson Province in Australia. So we are definitely looking and we're open to many forms of collaboration in terms of minority stakes earnings and etc. So definitely is on the list.

Menno Sanderse: Thank you. And Sinead, you obviously have managed through a particularly challenging situation at Richards Bay in South Africa. And in August, you mentioned you had restarted the operations there. How should we think about Richards Bay going forward and our ability to operate effectively in South Africa?

Sinead Kaufman: The loss of Nico Swart in May this year was an absolutely tragic event. And I think the first priority for us across the Richards Bay Minerals business has really been around how we can prioritise the safety and well-being of our employees and their families. And I really am impressed with the resilience and the leadership of the team in Richards Bay as they work through those really challenging issues and restarting.

Part of the work that we've done during that time is to review our ability to operate in jurisdictions like South Africa and really make sure, as I said, that we are aligned with how do we maintain that safety for our people and also for their families. And I happened to be in Richards Bay the week that the operation started to get back on its feet and restart. And I'm really confident that we can continue to operate in places like South Africa and deliver value both for shareholders but also for the surrounding communities and continued collaboration in that area with the government of South Africa and also with the host communities that we're based in is really important to maintaining that stability and reliability.

So Richards Bay and the community stakeholders in the area have reached agreement to modernise some of the community trust agreements that we have with the host communities. And the intent of those agreements is to achieve broad-based benefits for the communities themselves. And I think it's really great to see that symbol of confidence that we have that we can continue to work in that area and also make sure those agreements will stand the test of time.

But the other thing to call out is, during the shutdown, the team did some really interesting innovative work on how they could maintain the furnaces and do that through what was a longer time than traditionally we would've been able to do that. So some examples of that were running the smelters at a really low electrical rate so that they could continue to maintain the integrity of the furnaces as much as possible for a prolonged period of time.

And the other example was using tailings and reprocessing some tailings material to be able to make sure that we could maintain the integrity of feed for the furnaces.

As I said, Menno, we've restarted the operations now. We're continuing to ramp up and hope to be back up to full production early next year.

Menno Sanderse: Thanks, Sinead. And obviously, Richards Bay is part of a broader, I would say, very good TiO₂ business. How is Richards Bay aligned with that overall broader titanium dioxide strategy that you see for the near future?

Sinead Kaufman: Yeah, look, RTIT as a suite of assets is a key part of the portfolio. It's a long-life asset. They are low cost. And what I really like about them too is they really maximise how they can extract all of

the materials that we mine and we've been doing some really interesting work on that recently from an innovation perspective.

So within RTIT, Richards Bay is a key part of that around the supply of ilmenite and zircon, QMM in Madagascar, which Bold has just mentioned, and also RTFT in Canada. And between those three assets together under the one umbrella, they really help us to offer a wide range of compelling different products in iron and titanium, and also are at the forefront of innovation around some of the other products we can develop. And Alf, I think, mentioned earlier on, the scandium aluminium alloy and producing that scandium out of our process stream at RTFT is really good example of that.

Menno Sanderse: Thanks, Sinead. Bold, back to you. I wanted to talk about Simandou, clearly a fantastic ore body but obviously people want to understand how you can turn it into an interesting business, an interesting project. And there are lots of moving parts, not in the least, in the last couple of weeks clearly. So can you talk us through how Simandou fits in the world of green steel and how you are working to move that project forward?

Bold Baatar: I'm a huge fan of our exploration team and everything starts with the ore body. Simandou is the Rolls Royce of iron ore. It's 67% grade. The maximum you can achieve is 70%. So it doesn't get any better. And mother nature has endowed it with an amazing quality and grade with low impurities that is absolutely necessary for decarbonisation of steel and potentially for direct reduction iron.

So Simandou is not about the ore body. It's actually about the infrastructure and the cost of the capital infrastructure. I think that is actually about a partnership. It's how can we crack the code in a partnership with government of Guinea, our Chinese stakeholders, large customers, some of them are shareholders, and of course, an amazing high-speed disrupter that's come into the Guinean bauxite industry called WCS. They have built a track record because they have just completed a railway in Guinea.

So the stars are aligning in terms of capacity, local capabilities and building a railway. And of course, the time is coming for Simandou to come into the market to decarbonise the world. How this partnership is going to be shaped and how we interact with the government, obviously we need to still work that through.

So more to come on this. But, I think another exciting prospect for our iron ore portfolio because it gives us a range of options across a broad spectrum of assets.

Menno Sanderse: And sticking to iron ore, Sinead, you run a quite unique business as well, Iron Company of Canada, a very large ore body, its own railway, its own port and great quality for green steel iron making. So can you just remind the group of how you plan to lift the base performance of that asset and clearly what things you are thinking about and exploring to drive this business onwards either DRI or other types of expansion?

Sinead Kaufman: Look, IOC is a fantastic ore body, as you said. It's really well-positioned with respect to high-grade, low impurity iron ore, and to continue to provide that for future years. The business has been going a long time. It still has over 50 years life left in the current ore body and it's in an incredibly attractive low-cost jurisdiction that we know and understand.

Look, the priority for IOC in the short-term and short-to medium-term is really around how we uplift current operating performance. And as Arnaud mentioned earlier on, using the Safe Production System, it really is about how do we ensure we can de-bottleneck the business and use leadership routines and rigour around how we make operational decisions and engage the workforce to really get full potential out of the asset. And we're working through that at the moment with the team.

The other is really to approach how do we maximise growth of the existing asset and then look at brownfield expansions of the mine, the plant, the rail and the port. And we have significant latent capacity in our railway system as well at IOC, which could in the future become an enabler – key enabler for greenfield expansions in the region.

But from a broader Canadian perspective, as Ivan touched on earlier, we also have to look at how can we best use the renewable energy that's available to us in that region. And with partners, as I think we've mentioned a couple times now, we're developing the HBI, Hot Briquetted Iron project, which will use green hydrogen to produce from renewable electricity.

And so, part of that process – once that's running - is actually to help customers reduce their steelmaking carbon footprint by about 85% for that part of the process. And our studies and site selection in Eastern Canada are ongoing at the moment. And the ambition there is to initiate development of a one to two million tonne a year HBI plant by 2026. So that will be moving along at pace. So I think there's a really fantastic

exciting future for IOC as a part of the low-carbon economy but also really maximising the benefit from the fantastic asset that we have.

Menno Sanderse: Thanks, Sinead. And I would like to stay, as a last question, on the topic of innovation and exploration, and Mark, for you as well. How are we going to use, as a company, exploration and more innovation to build an early project pipeline? And how are we going to make sure we build businesses for the future? Mark, may be to start with you here.

Mark Davies: Look, as I mentioned earlier, I think it's about expanding that portfolio that we allow exploration to go looking at, moving from that very short green list to a very short red list. And not to say that we're going to move away from copper. We have 36 copper projects in our exploration pipeline today. We have a heavy focus in North America and Australia, including, I think, we have 70% of the Paterson under exploration rights.

So we've got a great opportunity there. But it is about creating options. And I think the example I will quote is the diamond joint venture in Angola last week. We're expanding a set of horizons creating more options for us to move forward.

Menno Sanderse: Thank you. Sinead, do you want to chip in there?

Sinead Kaufman: Yeah, sure. Look, I'm with Bold on this one. I think we have a fantastic exploration team. And from a battery material and the critical minerals perspective, we're working with exploration and also with the strategy teams on how can we identify growth options in those areas.

So we really are looking, as Mark said, at an unconstrained view of the globe and where we can be looking at materials. We're really partnering on promising projects as well and continuously looking at greenfield opportunities, downstream opportunities and also focusing on how do we maximise benefit from the existing ore bodies and the surrounding deposits as well.

And this includes mining waste and valorising products from their existing processing activities. So maybe an example of that I've mentioned is the scandium project in Canada. So that's a commercial scale demo plant which is basically producing high-quality scandium in Canada out of the processed liquor from our existing operations at RTFT. And that will make us one of the largest scale producers in the Western world of scandium and it's at capacity to supply about 20% of the world market at the bottom of the cost curve as well. So a really clear market, really high margins and scalable as we continue to expand that project, and alongside our aluminium business that produces the scandium aluminium alloy that Alf mentioned earlier on.

The other example is with lithium in our Californian operations, our boron operations in California, we also have a plant, a demo plant that's been built there, and that's about extracting lithium from a centuries old tailings dam from the boron business and looking at the potential of how we can, again, expand that plant to a larger scale.

It really has the capacity to produce enough lithium for about 70,000 light vehicles. And that's from existing mine waste. So some very exciting opportunities there that we look at both upstream and downstream.

Menno Sanderse: Thank you, Sinead, and thanks everybody for listening. And over to Peter now for the final presentation.

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