

George Bauk on the evolving heavy rare earths story of Northern Minerals

George Bauk, Managing Director and CEO of Northern Minerals Limited (ASX: NTU) (“Northern Minerals”) in an interview with InvestorIntel Senior Editor, Peter Clausi updates us on the Browns Range dysprosium rare earths project and his recent financing. Stating that mining is well underway and is expected to be completed by November, George adds that Northern Minerals “...fabrication is on track in China with a first shipment arriving in October.”...to access the complete interview, [click here](#)

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Northern Minerals Signs, Seals, Delivers Future

George Bauk, Managing Director and CEO of Northern Minerals Ltd. (ASX: NTU) in an interview with InvestorIntel Editor Peter Clausi discuss the Browns Range rare earth project in Western Australia. Delving into the history of Northern Minerals’ history with George, the focus of this interview is on his commitment to achieving milestones moving forward for shareholders. The pilot plant will extract dysprosium and terbium from the xenotime mineralization for 3 years with 100% of production signed off under an off take partner.

Peter Clausi: How was the flight in?

George Bauk: From Shanghai to Hong Kong to here, 15 hours all good.

Peter Clausi: You must have a great project to talk about to make that flight worthwhile.

George Bauk: Absolutely. It's been 7 years in the making.

Peter Clausi: 7 years. Is that when it was first staked, found?

George Bauk: Discovered in 2010 and from there exploration success, project development and the trucks are rolling in right now.

Peter Clausi: When did you join the company?

George Bauk: 2010.

Peter Clausi: So it's all been with you.

George Bauk: Absolutely.

Peter Clausi: Fully permitted?

George Bauk: Yes.

Peter Clausi: Let's talk about the project then. What kind of metals are we looking for?

George Bauk: Okay. We've got a xenotime mineralization, which hosts heavy rare earths. We've got a very dominant dysprosium, about 9% and terbium. That's the second biggest. They're the dominant minerals in our deposit.

Peter Clausi: If you're into mining then you must have your metallurgy figured out.

George Bauk: Yes. We've been doing metallurgy since like 2010. We actually started metallurgy before we drilled our first

hole to make sure that it could be processed.

Peter Clausi: You had a big event happen in the middle of April.

George Bauk: Yeah, absolutely. The board got together on the 18th of April just after Easter and we approved the project to go forward and commence mining.

Peter Clausi: How will you fund that?

George Bauk: It's being funded in a very interesting way because obviously with industrial minerals it's a much more complex project to finance as opposed to gold and iron ore so through equity, through prepayments from our offtake partner and also a deferred payment from our Engineering, Procurement, and Construction (EPC) contractor as well as some debt factoring on our research and development we get from the Australian government...to access the full interview, [click here](#)

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George Bauk on the rare earth market turning as Northern Minerals focuses on offtake agreements

September 11, 2015 – In a special InvestorIntel interview, Publisher Tracy Weslosky, speaks to George Bauk, Managing Director and CEO for **Northern Minerals Limited** (ASX: NTU) on his recent trips into both China and Japan discusses the

fallen rare earth prices, particular dysprosium. George explains that the feedback he is getting is that the industry believes we are at the bottom. "We're getting a sentiment that there's a general procurement of people back in the market starting to purchase again." he says. They go on to discuss Northern Minerals rising leadership position in the rare earth market, specifically for providing magnetic materials. George explains how Northern is providing a wider range of magnetic material concentrates as they focus on offtake agreements along with construction financing for the upcoming year.

Tracy Weslosky: I'm so happy to speak to you because we all want to know what's happening with the rare earth prices out of China and we know that you're in China all the time. What's happening specifically with dysprosium George?

George Bauk: Okay Tracy, Yeah, recent trips into both China and Japan, the feedback we're getting is that the process of rare earths, and particular dysprosium, people believe it's at the bottom. Now that's a big statement cause we've seen prices decline steadily over 2015, but we're getting a sentiment that there's a general procurement of people back in the market starting to purchase again. Stockpiles are declining.

Tracy Weslosky: Of course your forecast on the rare earth prices is outstanding news for all of us in the industry George, but you've also been putting out a lot of great news lately, including an update on your Browns Range project. Can you tell us about this?

George Bauk: 2015 continues to be a busy year for us. We've put out a couple of outstanding press releases in the past few weeks. One of them relates to the marketing side of our project. Now if you go back to our definitive feasibility study we put out on in March of this year we talked about sending a mixed rare earth carbonate. As part of our detailed discussions with customers we've realized the need to provide

a variety of products to the market so we're expanding our product offerings from remixed rare earth carbonate into individual oxides as well as Dy-metal. We're now talking about entering into toll trading arrangements with solvent extraction plants and metal converters so that we can provide more things to the market. The other thing we've been able to achieve is the removal of yttrium. Now a lot of people saw the volume of yttrium we had as a bit of an issue given its xenotime – and xenotime has over 60% of its distribution as yttrium. We needed to look at how we could reduce that and one of the most successful things we've done is to be able to do that within the hydrometallurgical plant and that allows us to have a significant cost benefit.

Tracy Weslosky: I don't think people understand how advanced your heavy rare earth project is as you are vying literally for the top of the food chain in the rare earth industry right now, specifically in magnetic materials. I mean, you're going towards construction here in this next year. Let me just back you up. What you're telling us is that you're really aggressively going after offtake agreements with this wider range of magnetic material concentrates. Is that what you're saying?

George Bauk: Tracy, you're exactly right. What the focus is of the company at the moment is offtakes and financing. We're trying to bundle that together so we get our funding in place to...[access the complete interview, click here](#)

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George Bauk on Northern Minerals' DFS and being the next dysprosium supplier

March 2, 2015 – In a special **InvestorIntel** interview, the  Editor-in-Chief and Publisher Tracy Weslosky interviews George Bauk, Managing Director and CEO for **Northern Minerals Limited** (ASX: NTU) on the Browns Range Definitive Feasibility Study that has just been released, which positions Northern Minerals' as the next dysprosium supplier.

Tracy Weslosky: I have to say by saying congratulations. The news you are literally putting out as we speak for your definitive feasibility study is out and on time.

George Bauk: Yeah, absolutely Tracy. We said we were going to get it out at the end of February so it's out. More importantly it's got some improved and other factors in the announcement.

Tracy Weslosky: I just want to back you up because I'm still savoring the fact that it's on time. You know, the heavy rare earth march to market in production has been a real battle over the years and you're on track. Can you give us the highlights of your feasibility study?

George Bauk: Sure. Look the NPV has gone up so we've seen an increase by about \$100 million dollars to over \$550 million dollar NPV. Our cash costs have come down, which it's come from \$40.00 to \$37.60. We've seen the capex move slightly up about \$15 million dollars, but that's a result of a couple of things. One is the mining, the timing of our portal coming in means that this \$10 million dollars moved from sustaining to preproduction capital. We've also enhanced the hydrometallurgy plant with an increase of 5% to recoveries from 88 to 93.

Tracy Weslosky: For anyone in the InvestorIntel audience that's not familiar with Northern Minerals, this is a story that all our writers love and recommend. Of course, you've got a xenotime – you're one of the best heavy rare earth projects in the world. Wasn't it just last week I think you announced another \$49.5M, nearly 50M raise?

George Bauk: That's right. If you go back in time, the last 5 years we've raised \$75 million dollars and invested into the project. Now we're at the next stage of getting the serious backers into to take us into production, which with a capex in Aussie dollars of about \$330 million dollars, now is the time to really position ourselves with the investors that are going to now lead progress into production. We've been very fortunate enough to join forces with...to access the rest of this interview, [click here](#)

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