

Jack Lifton on the biggest move by the US Federal Government in the rare earths space

“What has happened finally with the US government is that they have recognized the supply chain problem and that we have been too dependent on China for too many things. The two things that are mentioned the most inside the Federal government are pharmaceuticals and rare earths... Rare earths are very much on the radar of the US federal government. In fact, one of our senators, Senator Rubio of Florida is a champion in the US to revive the rare earth supply chain. It is very exciting and it is the biggest move in this commodity that I have seen from the US government.” States critical materials expert Jack Lifton, in an interview with InvestorIntel’s Tracy Weslosky.

Jack went on to say that we should look at the total rare earths supply chain and then try to make that domestic in North America (The US and Canada) or with closest allies like Australia. Jack continued, “The anchor of any supply chain is the mine, the source of the minerals. We have got several in North America and we have 2 or 3 close to production. In Australia, we have two in operation – Lynas and Northern Minerals. The next step is separating these materials. The mixed rare earths into individual rare earths that can be further processed into products that we actually use.”

Jack also said that there is no heavy rare earth separation operation outside of China and if we consider health and safety requirements of North America then Chinese materials will be unacceptable.

To access the complete interview, [click here](#)

The U.S. Rare Earths Supply Chain Challenge – Part 4

In an ongoing series on how to solve the U.S. rare earths supply chain challenge, 3 Sr Editors from InvestorIntel and well-known Rare Earths Consultants debate on what are the skills needed to create a rare earths supply chain in North America.

Participants include Tracy Weslosky, InvestorIntel's Sr Editor, Publisher and Rare Earths Consultant; Jack Lifton, InvestorIntel's Sr Editor, Host and Rare Earths Advisor; and Alastair Neill, InvestorIntel's Sr Editor and Rare Earths Expert.

Alastair started by saying that there is no facility in the US to convert rare earth alloys to magnets. Jack continued by saying that "the US Department of Defence doesn't want any rare earth permanent magnet from China. The only thing they will accept from China is the raw material which the Chinese do not export. They want extraction, separation, metal making and alloy and magnet making done either in the US or in NATO or SEATO ally countries."

Alastair concluded the discussion by saying, "To achieve this goal it is going to take a couple of different skill sets. It is one set of skills to get something out of the ground and turn it into a separated oxide. That is completely different from metalization and alloy production and then getting into assembly. So you will need three special types of industries that need to be managed. That is where you have to have someone with a vision to be able to bring that type of team together to be able to manage such a diverse set of skills."

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The U.S. Rare Earths Supply Chain Challenge – Part 3

In an ongoing series on how to solve the U.S. rare earths supply chain challenge, 3 Sr Editors from InvestorIntel and well-known Rare Earths Consultants begin the debate on what are the challenges in creating a rare earths supply chain in North America.

Participants include Tracy Weslosky, InvestorIntel's Sr Editor, Publisher and Rare Earths Consultant; Jack Lifton, InvestorIntel's Sr Editor, Host and Rare Earths Advisor; and Alastair Neill, InvestorIntel's Sr Editor and Rare Earths Expert.

Jack starts the debate with: "When you extract rare earths from ore you get a mixture of rare earths and other things that were in the ore that came out in the extract which is usually an acid. The first thing that you have to do is make a pregnant leach solution. What that means is that you put the metal values in the minerals into the solution. Then you separate out those things that are not rare earths or rare earths that you don't really want for example cerium. Now that solution which is normally a hydrochloric acid extract goes into a separation system which in the US has only been a solvent extraction for light rare earths."

Alastair added "There are other companies looking at novel

ways to separate rare earths in an environmentally friendly process to tackle this and compete with the Chinese. The benchmark is the Chinese separation cost which is about \$2.50 to \$3 a kilogram.”

The experts panel also discussed some of the major problems in the North American rare earths supply chain. The panel discussed that the problem in the North American rare earths space is the absence of rare earth separation facility and metallization capability in North America.

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The U.S. Rare Earths Supply Chain Challenge – Part 2

In an ongoing series on how to solve the U.S. rare earths supply chain challenge, 3 Sr Editors from InvestorIntel and well-known Rare Earths Consultants begin the debate on what is the actual formula to create a supply chain in North America.

Participants include Tracy Weslosky, InvestorIntel’s Sr Editor, Publisher and Rare Earths Consultant; Jack Lifton, InvestorIntel’s Sr Editor, Host and Rare Earths Advisor; and Alastair Neill, InvestorIntel’s Sr Editor and Rare Earths Expert.

Alastair starts the debate with: “First of all the key is to find a deposit that has a reasonable cost structure and also reasonable content particularly the magnetic four – neodymium, praseodymium, terbium, and dysprosium because those will drive

85-90% of the revenue of any deposit. Then you have to be sure that you can convert that deposit into a concentrate and after that you have to be able to separate it into the oxides. When you talk about magnets you then have to go to the subsequent steps of conversion to metal and then into alloy before you can even get to the magnet manufacturing stage.”

Jack added, “The first thing you do is ask the customer what he wants to buy. Then you can go upstream in the supply chain and find out what you need to do.”

The experts panel also discussed the exploration and extraction plays in North America. Tracy said that some of the exploration plays in North America include Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF), Search Minerals Inc. (TSXV: SMY), Ucore Rare Metals, Imperial Mining Group, etc.

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