

# American Rare Earths Releases 1.43Bt Maiden Resource at the Halleck Creek Rare Earths Project in the USA

written by InvestorNews | April 3, 2023

[American Rare Earths Limited](#) (ASX: ARR | OTCQB: ARRNF) (“ARR”) is focused on developing its 100% owned Halleck Creek Rare Earths Project in Wyoming and La Paz Scandium and Rare Earths Project in Arizona. ARR [stated](#) that these projects “both have potential to be among the largest, rare earths deposits in North America.” The Company also owns the Searchlight Rare Earths Project in Nevada, USA.

## American Rare Earths 3 projects in the USA

### Key sites

#### 1 Halleck Creek, WY

- Exploration Target of 1.01 to 1.27 billion tonnes
- High value magnetic metals (NdPr)
- JORC Resource Drilling Completed Dec 2022
- Significant JORC Resource Q1 2023

#### 2 La Paz, AZ

- JORC resource of 170 million tonnes
- Exploration target of 742 to 928 million tonnes
- High value magnet metals (NdPr & Scandium)

#### 3 Searchlight, NV

- <30km from only producing REE mine in US
- Initial sampling encountered substantial grades of heavy and magnet REE



#### High value magnet REEs

60 Nd Neodymium	59 Pr Praseodymium
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Source: [Company presentation](#)

*Note: The Halleck Creek Project now has a resource not yet shown*

on the image above (see below for details)

## Halleck Creek Rare Earths Project in Wyoming – Maiden Resource – 1.43B tonnes

The Halleck Creek Project stands out for its good grade and potential huge size, as well as having the key magnet rare earths Neodymium and Praseodymium (NdPr).

ARR's [March 17 news release](#) gives some idea of the huge project size [stating](#): *"Final drill assays indicate a significant rare earth deposit in Wyoming, spanning over 10 square kilometers to depths of 150 meters."*

Then on March 31, 2023, ARR announced some very important news when it reported a maiden JORC Resource estimate for its Halleck Creek Rare Earths Project. The news [stated](#):

*"The JORC Resource at Halleck Creek is **1.43 billion tonnes with an average TREO grade of 3,309 ppm, and an average NdPr grade of 734 ppm**. The JORC Resource estimate has exceeded expectations in comparison to previous exploration target estimates and has demonstrated the Halleck Creek project has the potential to become a world class deposit."*

*Note: Bold emphasis by the author.*

ARR's CEO [stated](#):

*"With a maiden JORC Resource estimate of 1.43 billion tonnes this project is strategically significant, containing over 4.73 million tonnes of rare earth oxides. With only a quarter of the licence area drilled and remaining open at depth, the upside potential is significant. The Halleck Creek project is shaping up to be a strategic asset for the USA to supply rare earths*

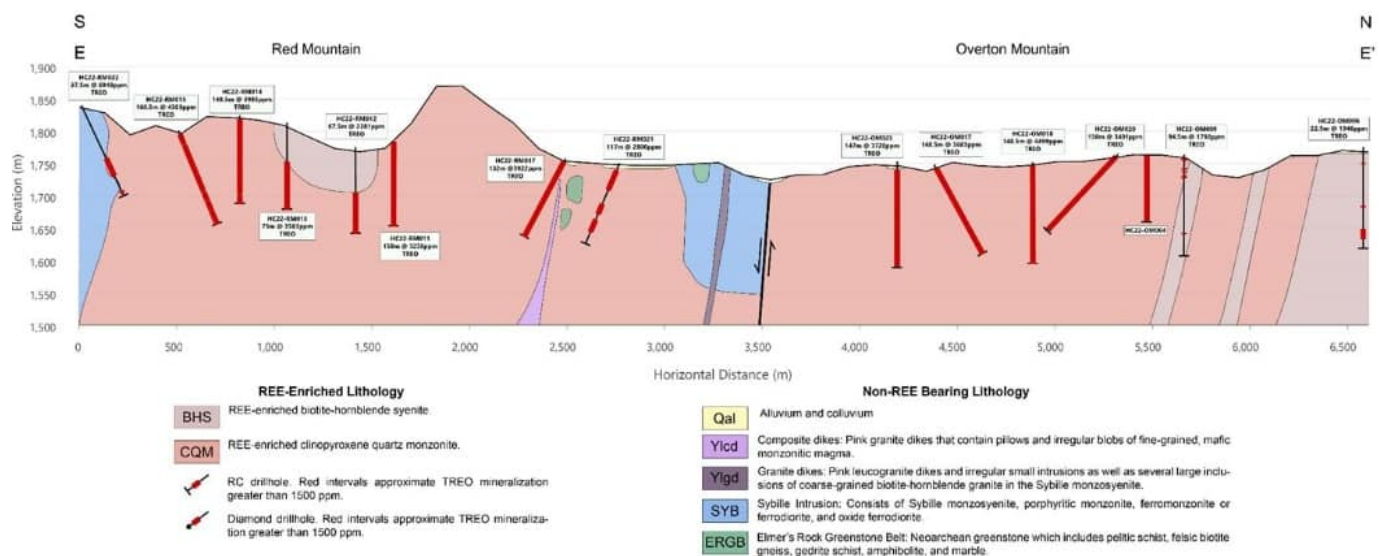
*for future generations...*

*Global magnetic rare earth oxide consumption is forecast to more than triple by 2035. The US government has made no secret that it is seeking to onshore supply of all critical materials for supply chain and national security purposes. There is only one producing rare earth mine within the USA, the Mountain Pass mine in California. The USA needs a number of these mines to secure onshore supply of rare earths and we believe Halleck Creek is part of the future solution."*

Halleck Creek test work already demonstrates that the ore responds well to conventional processing technology, which reduces operating and capital costs. The ore has exceptionally low levels of radioactive penalty elements such as uranium and thorium, which is great news as this allows for further reducing processing costs while boosting the ESG profile. Finally, the Project is close to infrastructure and a highly skilled workforce.

The [next steps](#) for the Project include metallurgical test work and a Scoping Study later in 2023.

**Halleck Creek Project cross section below provides an overview of the Red Mountain and Overton Mountain areas**



Cross Section of Overton Mountain and Red Mountain

Source: [ARR news release March 17, 2023](#)

## Why is American Rare Earths' stock price virtually unchanged since the great resource announcement?

A "world class deposit" and in the USA. This is superb news for the Company, yet the stock price barely moved. Why?

The reason may be that Tesla recently [announced](#) plans to eliminate the use of rare earths in its 'next generation' EVs. This is the platform to build a cheaper EV, often called Tesla Model 2 or the Tesla Compact Car. It remains to be seen if this change will succeed or eventually move across to all Tesla models. Some of [Tesla's Investor Day 2023](#) comments were:

*"We have designed our next drive unit, which uses a permanent magnet motor, to not use any rare earth materials at all.....so we can make lower-cost products that are still efficient and compelling, and we can make them at scale."*

To be clear, it still needs still to be seen if Tesla can

achieve this goal. We need to remember that the most powerful and efficient electric motors use the magnet rare earths NdPr. By having an efficient motor, you use less power and can therefore use a smaller battery for the same output, thereby reducing battery costs.

Furthermore, EV drivetrains (essentially the motors) are just one part of the global total demand picture for Neodymium Iron Boron (“NdFeB”) magnets, representing [21% of rare earths demand](#) in 2022. Other key demand drivers for NdFeB magnets include wind turbine motors, electrical appliances (PCs, smartphones, etc), and various other electric motor uses.

What this all means is that while EVs are an important driver of NdPr demand, they are by no means the only driver. Also, for now, NdFeB magnets remain the preferable option for use in most EVs, especially those sold into western markets where quality matters.

Tesla boasted at [Tesla Battery Day](#) in 2020 that they would start producing lithium from clay using only salt. Of course, this has never happened. Perhaps that was a ploy to get lithium prices lower while Tesla continued to secure supply. One can question Tesla’s motives regarding rare earths, only time will tell.

## Closing remarks

The current dip in sentiment in the magnet rare earths space caused mostly by the Tesla news but also by a Q1/2023 China EV sales slowdown, should only be a temporary blip along the way for what still looks like a very strong decade for the magnet rare earths.

Companies such as American Rare Earths that can progress large-scale quality projects in the USA should do very well.

American Rare Earths trades on a market cap of [A\\$93 million](#).

ARR is definitely worth a second look after the recent great resource announcement at Halleck Creek and the potential for Halleck Creek to become the largest North American rare earths deposit and a world-class deposit.

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# Marty Weems of American Rare Earths on “outstanding” drill results and US govt project backing

written by InvestorNews | April 3, 2023

In this InvestorIntel interview with host Tracy Weslosky, [American Rare Earths Limited](#)'s (ASX: ARR | OTCQB: ARRF) President – North America, Marty Weems talks about its recent “outstanding” drill results from its Halleck Creek Rare Earth Project in Wyoming.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel ([click here](#)), Marty discusses the results from the first four holes reported from the maiden drilling program at the Halleck Creek Rare Earth Project which “confirmed mineralization is consistent surface to depth, and we had mineralization at depth, so we’re really excited about what we see in both size and grade opportunity.” With the reported magnetic rare earth oxides comprising approximately 26% of TREO (Total Rare Earths Oxides) “by our estimation that puts it in a

fairly world-class distribution,” Marty continues, “so we’re quite excited to see that number being as high as it is.”

Marty also discusses American Rare Earths’ recent announcement that its wholly owned US subsidiary, Western Rare Earths, is the sole industry member of a consortium that has been awarded research funding from the U.S. Defense Advanced Research Projects Agency (DARPA) to develop scalable, bio-based separation and purification of rare earths elements using Western Rare Earths’ feedstock. “I’m excited to see substantive, robust engagement by the U.S. government and putting budget dollars to support onshoring the supply chain, and I think it bodes really well for us.”

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

Don’t miss other InvestorIntel interviews. Subscribe to the InvestorIntel YouTube channel by [clicking here](#).

### **About American Rare Earths Limited**

American Rare Earths Limited is an Australian company listed on the ASX with assets in the growing rare earth metals sector of the United States of America, emerging as an alternative international supply chain to China’s market dominance of a global rare earth market expected to expand to US\$20 billion by the mid-2020s. The Company’s mission is to supply Critical Materials for Renewable Energy, Green Tech, Electric Vehicles, National Security, and a Carbon-Reduced Future.

Western Rare Earths (WRE) is the wholly-owned US subsidiary of the Company. ARR owns 100% of the world-class La Paz Rare Earth Project, located 170km northwest of Phoenix, Arizona. As a large tonnage, bulk deposit, La Paz is potentially the largest, rare-earth deposit in the USA and benefits from containing exceptionally low penalty elements such as radioactive thorium

and uranium. Approximately 742 – 928 million tonnes of Rare Earths mineralized rocks are identified as an exploration target in the La Paz Rare Earths project's Southwest area with an average TREO Grade of 350 – 400ppm and Scandium Oxide grade of 20-24.5ppm. The new exploration Target is additive to the La Paz Rare Earth project recently upgraded 170MT Resource. (ASX Announcement, 29 September 2021). During the period from February to April 2022 the Company drilled nine holes for 821 metres and collected 677 samples in the La Paz southwest area. The assay results from the first 332 samples demonstrate rock type associated with higher rare earth grades. The enhanced grades and thickness of the mineralized zone have accelerated exploration planning. The Company is working on establishing a JORC resource for the southwest area (ASX Announcement, 14 June 2022). Preliminary metallurgical test work demonstrates that La Paz ore can be effectively concentrated using conventional magnetic separation, selective grinding and direct flotation. Under the guidance of Wood Australia, advanced metallurgy and mineral processing test work is near completion with Nagrom Laboratories in Perth Western Australia (ASX Announcement, 7 April 2022).

In the first half of 2021, ARR acquired the USA REE asset, the Halleck Creek Project in Wyoming. Since acquiring the asset the company has increased the land holding to over 6,000+ acres. Approximately 308 to 385 million tonnes of rare earths mineralized rocks were identified as an exploration target for the Halleck Creek project area with an average Total Rare Earth Oxide (TREO) grade of 2,330 – 2,912 ppm. Initial surface sampling of the Overton Mountain area conducted in 2018 revealed average TREO values of 3,297 ppm, average Heavy Rare Earth Oxide (HREO) values of 244 ppm, and average Magnetic Rare Earth Oxide (MREO) values of 816 ppm. (ASX Announcement, 26 April 2022). The maiden exploration drilling program was completed in April 2022.



The Company is updating the existing exploration target and developing a more comprehensive drilling program with the objective of defining a high tonnage maiden JORC resource.

La Paz and Halleck Creek's mineral profiles are incorporated into emerging US advanced rare earth processing technologies in collaboration with US national laboratories, major universities and the US DOE innovation hub, the Critical Materials Institute.

To know more about American Rare Earths Limited, [click here](#)

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If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at [info@investorintel.com](mailto:info@investorintel.com).

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## **Search Minerals moving forward with growing rare earths resource, new PEA and a commercial magnetic separation plant**

written by InvestorNews | April 3, 2023

It has recently been reported that the U.S. Government (subject to approval of [the proposal](#)) is likely to widen their definition of "domestic source" in the Defense Production Act to include the United Kingdom of Great Britain and Northern Ireland and Australia. This is in addition to the current inclusion of Canada and of course the USA. If passed, this is great news for critical material miners located in these countries.

One such company is focused on the high value magnet rare earths and is advancing their project in Canada. Magnet rare earths prices, such as neodymium, [have increased very significantly](#) over the past year as EV demand surged.

[Search Minerals Inc.](#) (TSXV: SMY | OTCQB: SHCMF) (Search) is developing their rare earths projects in Labrador, Canada. Their three projects include:

- The Port Hope Simpson (PHS) Property (flagship) – Includes Foxtrot, Deep Fox, Silver Fox, Awesome Fox, and Fox Meadow deposits. Prospective for Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy), and Terbium (Tb), as well as Zirconium (Zr) and Hafnium (Hf). The updated 2022 PEA is due soon in Q2, 2022.
- The Henley Harbour Area in Southern Labrador.
- The Red Wine Complex located in Central Labrador.

**Search Minerals PHS Property showing the Foxtrot & Deep Fox deposits and other targets**



Source: [Search Minerals website](#)

Search's flagship PHS Property has been the Company's focus with a [PEA completed in 2016](#) on Foxtrot only, an updated Resource recently released (now includes both Foxtrot & Deep Fox), and an updated PEA to follow very soon. Given the larger resource (hence potentially longer mine life) and higher rare earth prices, the upcoming 2022 PEA is expected to potentially improve significantly on the 2016 PEA. Search President & CEO Greg Andrews, discusses the positive impact on their upcoming PEA in a recent InvestorIntel video [here](#).

**Details of the updated resource at Foxtrot and Deep Fox**

As a result of the recent [updated resource](#) news the Foxtrot resource has grown by approximately 60% from the 2016 estimate and the Deep Fox resource has grown by 25% from the 2019 estimate. Search state in their April 11, 2022 resource [announcement](#): “Revenue attributable to Pr, Nd, Dy, and Tb represent approximately 92% of the total revenue.”

## **Estimated Mineral Resources for the FOXTROT and DEEP FOX Projects as of December 31, 2021**



Source: [Search Minerals announcement on April 11, 2022](#)

Both Foxtrot and Deep Fox Resources include open pit (OP) and underground (UG) components as shown on the models below. They will form the basis of the upcoming updated 2022 PEA. In both cases, mineralization remains open at depth.

## **Models showing the open pit and underground resource at Foxtrot and Deep Fox**



Source: [Search Minerals announcement on April 11, 2022](#)

## **Next steps (including steps towards a full commercial magnetic separation plant)**

The next steps for Search at their PHS Property will be the 2022 PEA release, further drilling to grow the resource (including at Fox Meadow), and further advancements with off-take agreements. In 2021 Search signed a [non-binding MOU](#) with USA Rare Earth LLC for the future delivery of a rare earth mineral concentrate supply containing 500 tpa of NdPr. The MOU also included a plan to expand the collaboration to include discussions regarding separation, marketing, and offtake of a portion of the future

production at Search's Deep Fox and Foxtrot deposits. There will also be the upcoming results from Search's [magnetic separation program](#) using bulk samples from the PHS Property (Foxtrot & Deep Fox). The results of the testing will be used as part of a 'scale up' to a full commercial magnetic separation plant.

Search President & CEO, Greg Andrews, [states](#): "We continue with our "Sprint to Production" and this is a very important step to scale up and produce more material for further separation into individual oxides of the permanent magnet material, Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy) and Terbium (Tb). These are the key elements which create the value in the rare earth element supply chain. Upon producing the oxides, Search will demonstrate the transformation of the permanent magnet oxides into metal."

## **Closing remarks**

Last month Search released a significant Resource upgrade at Foxtrot and Deep Fox deposits on their PHS Property. The results were strong growing the resources by 60% and 25% respectively. Both remain open at depth and the PHS Property has numerous other exciting rare earth targets such as Silver Fox, Awesome Fox, and Fox Meadow. This means the PHS Property should potentially continue to further grow the total resource size in years to come. Search did recently release [encouraging assay results](#) at the Fox Meadow target where Search plans to commence a 6,000 m drill program this fall.

The big next catalyst for Search is the upcoming updated 2022 PEA which should potentially see a significant improvement on the 2016 PEA. Following that it will be interesting to see Search's progress towards becoming a rare earths miner as well as processor.

Search Minerals trades on a market cap of [C\\$65 million](#).

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# Marty Weems on how American Rare Earths is focused on becoming a NA Rare Earths Producer

written by InvestorNews | April 3, 2023

In a recent InvestorIntel interview, Chris Thompson spoke with [American Rare Earths Limited](#)'s (ASX: ARR | OTCQB: ARRNF) President – North America, Marty Weems, about the positive field [assay results](#) from the La Paz Project in Arizona. Marty highlights how American Rare Earths' La Paz Project is on track to become a North American rare earths producer.

In this interview, which may also be viewed on the InvestorIntel YouTube channel ([click here to subscribe](#)), Marty comments on the United States government's push to develop a rare earths supply chain outside of China. With rising demand for electric vehicles, wind turbines and defense applications, Marty highlights how the American Rare Earths' La Paz Project already has a 170.6 million ton JORC compliant resource and provides an update on the new Southwest Zone.

To watch the full interview, [click here](#)

## About American Rare Earths Limited

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global rare earth market expected to expand to US\$20 billion by the mid-2020s. The Company's mission is to supply Critical Materials for Renewable Energy, Green Tech, Electric Vehicles, National Security, and a Carbon-Reduced Future. Western Rare Earths (WRE) is the wholly owned US subsidiary of the Company. ARR owns 100% of the world-class La Paz rare-earth Project, located 170km northwest of Phoenix, Arizona. As a large tonnage, bulk deposit, La Paz is potentially the largest, rare-earth deposit in the USA and benefits from containing exceptionally low penalty elements such as radioactive thorium and uranium. ARR plans to deliver its first Preliminary Economic Assessment for La Paz by 2022 and is working with leading USA research institutions. La Paz's mineral profile is incorporated into emerging US advanced rare earth processing technologies. In early February 2022, the Company commenced further drilling at the La Paz project to explore lateral and vertical extent in the new southwest area. Approximately 742 – 928 million tonnes of Rare Earths mineralized rocks are identified as an exploration target in the La Paz Rare Earths project's Southwest area with an average TREO Grade of 350 – 400ppm and Scandium Oxide grade of 20 – 24.5ppm. The new exploration Target is additive to the La Paz Rare Earth project recently upgraded 170MT Resource. in the first half of 2021, In June 2021, ARR acquired the USA REE asset, the Halleck Creek Project in Wyoming. With permits in hand, the maiden exploration drilling program commenced in March 2022 and will provide initial mineralization, lithology and fresh rock core material for metallurgical and process testing. Approximately 308 to 385 million tonnes of rare earths mineralized rocks were identified as an exploration target for the Halleck Creek project area with an average Total Rare Earth Oxide (TREO) grade of 2,330 – 2,912 ppm. Initial surface sampling of the Overton Mountain area conducted in 2018 revealed average TREO values of 3,297 ppm, average Heavy Rare Earth Oxide (HREO) values of 244 ppm, and average Magnetic Rare Earth Oxide

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If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at [info@investorintel.com](mailto:info@investorintel.com).

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## **Don Bubar on the ORE Act and Avalon's lithium and rare earths projects**

written by InvestorNews | April 3, 2023

"The ORE Act is a great start. There is no doubt that if we are going to see these rare earths supply chain established in North America government has to help by providing incentives to businesses and entrepreneurs to make that whole supply chain happen. It is not as simple as just starting a new mining operation and everything will happen easily after that. I think it is encouraging that they recognize that now that they do need to provide these incentives and maybe we will actually start to see them." States Don Bubar, President, CEO and Director of [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), in an interview with InvestorIntel's Tracy Weslosky.

Don went on to say that the whole COVID-19 pandemic has raised awareness in the public about the vulnerability of supply chain in North America by relying on a sole source of supply, especially when it comes from a country like China. He added, "There is increasing trade tension between China and the US. If that continues to grow then for sure there is real risk of China weaponizing their control on the supply chain of rare earths and other critical minerals."

Don also provided an update on Avalon's Separation Rapids Lithium Project. He said that the company is increasingly seeing real opportunities with their Separation Rapids Lithium Project. There is a lot of innovation happening in the glass ceramics space that prefers a form of lithium that is in the high purity mineral petalite at Separation Rapids. The demand from the battery sector is also continuing to grow.

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

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