

Tom Drivas on the 3 world-renowned rare earths experts on Appia's Critical Minerals Advisory Committee

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In a recent interview with host Tracy Weslosky, Tom Drivas, CEO and Director of [Appia Rare Earths & Uranium Corp.](#) (CSE: API | OTCQX: APAAF), [announced](#) the significant addition of Constantine Karayannopoulos to Appia's Critical Minerals Advisory Committee. Tom discussed how this move is a major endorsement of Appia's projects, given Constantine's reputation in the rare earths sector. Constantine, who is well known for his leadership in the critical mineral sector lead the Neo Materials deal by Molycorp in 2012 for C\$1.3 billion. He was also the co-founder and Chairman of the Board of Neo Lithium Corp. when it was sold to Zijin Mining Group Co., Ltd. for \$960 million in 2022.

Constantine Karayannopoulos joins Appia's Advisory team, alongside world renowned critical minerals expert and the co-founder and Co-Chair of the [Critical Minerals Institute](#) (CMI) Jack Lifton. Jack who was the co-editor of the recently published textbook, [Rare Earth Metals and Minerals Industries: Status and Prospects 1st ed. 2024 Edition](#), is joined with Don Hains, P. Geo who is a Consulting Geologist and well-known expert in ionic clay projects. In this interview, Tom emphasizes how having three of the world-renowned rare earths experts on Appia's Critical Minerals Advisory Committee supports the commitment to leverage top-tier expertise to advance Appia's Projects in Canada and Brazil.

Appia's recent [announcement](#) of exceptional diamond drill results

from the PCH ionic adsorption clay project in Brazil was also discussed in the interview. These results have revealed significant concentrations of Total Rare Earth Oxide (TREO) within the top 20 meters from the surface. Tom added, “Just for comparison, there is a deposit that went into production in the same area, and their average grade is 1,200 parts per million (PPM). We’re getting up to 93,000 PPM.”

Moreover, Tom outlined Appia’s broader strategy, which encompasses both rare earths and uranium projects. Tom outlined Appia’s involvement in the uranium sector, noting several uranium projects in the Athabasca Basin in Saskatchewan and Ontario. With plans to [begin drilling](#) at the Loranger Uranium-Bearing Property in Saskatchewan, Tom explains how Appia is positioning itself to capitalize on the rising uranium market. To access the full interview, [click here](#)

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About Appia Rare Earths & Uranium Corp.

Appia is a publicly traded Canadian company in the rare earth element and uranium sectors. The Company is currently focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, as well as exploring for high-grade uranium in the prolific Athabasca Basin on its Otherside, Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 113,837.15 hectares (281,297.72 acres) in Saskatchewan. The Company also has a 100% interest in 13,008 hectares (32,143 acres), with rare earth elements and uranium deposits over five mineralized zones in the Elliot Lake Camp, Ontario. Lastly, the

Company holds the right to acquire up to a 70% interest in the PCH Project (See June 9th, 2023 Press Release – Click [HERE](#)) which is 40,963.18 ha. in size and located within the Goiás State of Brazil. (See January 11th, 2024 Press Release – [Click HERE](#))

To learn more about Appia Rare Earths & Uranium Corp., [click here](#)

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Technology Metals Report (01.19.2024): Rainbow Rare Earths Discovery, Middle East

Critical Minerals Chess Play, and ANSTO Invests in Critical Minerals Research

written by Tracy Weslosky | February 13, 2024

Key highlights in this Technology Metals Report include significant developments such as Rainbow Rare Earths Limited's discovery in South Africa, China's unveiling of the new heavy rare earth mineral Bayanoboite-Y, and the Australian Nuclear Science and Technology Organisation (ANSTO)'s \$13.9 million funding for critical minerals research.

eResearch Report on Search Minerals offers investors a 'staggering' volume of information on the rare earths market

written by Tracy Weslosky | February 13, 2024

Over the years I have lost count of the times I have recommended that public companies secure a research report, simply because I personally love the benefit of third-party analysis and metrics. Toss in an analyst with more financial degrees than most CFOs such as eResearch's Chris Thompson, and the analysis can prove beneficial to everyone reading the content, including the

company and all of us interested in critical minerals. Having followed rare earths company [Search Minerals Inc.](#) (TSXV: SMY | OTCQB: SHCMF) (“Search”) for a decade now, the recent [eResearch analyst report](#) blind-sided me by the coverage in that it was a staggering 72-page overview, review and historical biography of not only Search Minerals, but a worthwhile read on the rare earths sector.

Now for my notes extracted from my review of the eResearch Report on Search, but again I urge you to access the [eResearch analyst report](#) directly to secure any answers you may be ‘searching’ for...

Search Minerals is developing their rare earths projects in Labrador, Canada. Their flagship project is the **Port Hope Simpson (“PHS”) Property** which includes the Foxtrot resource, Deep Fox resource, Silver Fox, Awesome Fox, and Fox Meadow deposits. The Property is prospective for rare earth elements (‘REE’) Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy), and Terbium (Tb), Zirconium (Zr) and Hafnium (Hf). Search Minerals plans mining and primary production of the Deep Fox and Foxtrot deposits all going well by 2025 in Labrador and further refining of concentrate into REE oxides and carbonates on the Island of Newfoundland thereafter.

The updated 2022 PEA resulted in a [post-tax NPV8% of C\\$1.31 billion](#) and a post-tax IRR of 41.5%. Initial CapEx was estimated at [C\\$422 million](#) (including a C\$61 million contingency) with a mine life of 26 years.

Foxtrot and Deep Fox Resource estimate – 31 December 2021



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

Search Minerals development timeline plan



Source: [eResearch report on Search Minerals p.15](#)

Highlights of the eResearch report (“The report”) on Search Minerals, which was initiated on September 14, 2022:

- **The Importance of Rare Earth Elements (REE)** – If you are new to rare earths, this report highlights the many uses of rare earths including their role in the EV sector. Of interest was the [quote on page 4](#): “Neodymium (Nd) is the strongest known magnetic substance and Nd magnets are used in applications that require strong, compact permanent magnets, such as cellular phones, electric motors, hard disk drives, televisions, and medical devices.” Also an interesting point for your next trivial discussion with friends over a glass of wine, is that the smartphone (screen and electronics) contains at least 9 rare earth elements.
- **Search Minerals PEA (2022) Highlights (based on the Foxtrot and Deep Fox Resource)** – Mine production of 2,000 tpd (720,000 tpa) over a 26-year mine life, including both open pit and underground operations...Underground mining capital in Year 7 of C\$54 million is funded from operations...Annual production of approximately 1,437 t of Magnet Rare Earths Oxides (Nd+Pr: 1,291 t, Dy: 125 t, and Tb: 21 t).
- **Key Projects Funded for C2022:** Funded for Deep Fox exploration, preparation of 70t bulk sample, and working towards the start of a Feasibility Study.
- **Strong Management Team** – Management has extensive experience, geological knowledge of the region, and are experts in REE processing. Since I know many of the members of this team, I urge you to review the geological team as many in this sector often refer to them as the

best in the business, specifically Dr. David Dreisinger whom Jack Lifton and I have used in numerous interviews over the years to help the InvestorIntel.com audience understand the rare earths market.

- **Search Minerals Appears Inexpensive Using Different Valuation Metrics** – The Report looked at several different valuation methodologies for Search Minerals. eResearch initiates coverage on Search Minerals and reports a Speculative Buy Rating.

Again, the eResearch report makes for compelling reading and I would encourage anyone serious about investing in rare earths investors to review the entire report.

Most certainly the potential 17x upside (p 5) if Search Minerals succeeds to production is something to consider, especially given the backdrop of forecast shortages of the key magnet rare earths this decade as the EV and wind energy sectors potentially boom. Investors should also consider the various risks that junior miners face as not all will succeed.

Search Minerals Inc. currently trades at C\$0.10 with a market cap of [C\\$41 million](#).

Disclosure: The valuations presented in this article are those of eResearch and not InvestorIntel. Search Minerals is a digital media advertiser on InvestorIntel.com and pays for both banner ads and interviews, however, neither eResearch nor Search Minerals have paid for this content.

Ucore CEO Pat Ryan on becoming a key supplier of critical materials to Tier 1 component makers

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In this discussion, InvestorIntel's Byron W. King interviews Pat Ryan, Chairman and CEO of [Ucore Rare Metals Inc.](#) (TSXV: UCU | OTCQX: UURAF). They discuss the rapid move to electrification within the global auto industry, and how Ucore is positioned to become a key supplier of critical metals to Tier 1 component makers. Presently, Ucore is focused on a specific, highly profitable, downstream market segment that goes well beyond mining and mineral concentration. Ucore has strong support for startup operations from the State of Alaska, with eventual plans to build out facilities in other areas of North America to meet the fast-growing demand for rare earth materials.

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

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About Ucore Rare Metals Inc.

Ucore is focused on rare- and critical-metals resources, extraction, beneficiation, and separation technologies with the potential for production, growth, and scalability. Ucore has a 100% ownership stake in the Bokan-Dotson Ridge Rare Earth Element Project in Southeast Alaska, USA. Ucore's vision and plan is to become a leading advanced technology company, providing best-in-class metal separation products and services

to the mining and mineral extraction industry.

Through strategic partnerships, Ucore's vision includes disrupting the People's Republic of China's control of the US REE supply chain through the development of a heavy and light rare-earth processing facility – the Alaska Strategic Metals Complex in Southeast Alaska and the long-term development of Ucore's heavy-rare-earth-element mineral-resource property located at Bokan Mountain on Prince of Wales Island, Alaska.

To learn more about Ucore Rare Metals Inc., [click here](#)

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GM bets big on MP Materials being the Holy Grail for an American rare earth magnet supply chain

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What a difference a year makes as we review the reincarnation of the rare earths mining project in California, just across the Nevada border at the Mountain Pass mine – [MP Materials Corp.](https://www.mp-materials.com) (NYSE: MP), which began trading on the NYSE on November 18, 2020...announces a new rare earths magnet facility and binding long-term agreement with General Motors (GM).

Looking in the rear-view mirror for a moment, "Best Quarter Ever" would be their headline for their Q3-2021 just announced

last month. By the numbers from Q3 alone, they should be proud – 98% uptime, steady and sustainable processing cost improvements, 46% margin – all things that point to a great quarter, especially with the increases in rare earths prices in the past 12 months. MP Materials saw a 127% increase in their realized rare earths oxide price compared to Q3-2020.

My phones are ringing, the experts are whispering a wide range of feedback to me as the ‘new and improved’ MP Materials still has many bridges to cross before the trust of those that rode the dusty trails on Mountain Pass previously will be rebuilt. Surely this is a good sign?

The GM deal with MP Materials is to “supply U.S.-sourced and manufactured rare earth materials, alloy and finished magnets for the electric motors in more than a dozen models using GM’s Ultium Platform, with a gradual production ramp that begins in 2023.”

The selection of Fort Worth, Texas as the location for the MP facility will be worthy of many debates but stands a distant second to the issues around securing the talent that can make this dream come true. These obvious challenges aside for a moment, management has delivered in clearly articulating where they are taking this REE program next. They told the market that the announcement of a Stage III facility would be made before the end of 2022 and here it is.

Kudos .

Mountain Pass is the only rare earths mining and processing site of commercial scale in the Western Hemisphere and currently produces approximately 15% of global rare earth content, according to them. The mine has been in production off and on since 1952 but was restarted in 2017. On going public, the MP Materials team highlighted their plan for Stage I (restore

production and get the bugs out), Stage II (facilities to produce separated rare earths oxides) and Stage III (rare earths-based magnet production 2025-ish).

Sometimes you have to have a little luck to be good, toss in some deep pockets and MP Materials are reaching for quite a star, but I must confess their timeline is virtually inconceivable to everyone I know. Their original target for magnet production was 2025-ish and zealous. Now management is now saying 2023. In less than 24 months, MP Materials expects to permit and build a 200,000 square foot greenfield facility and commence commercial production of sintered permanent magnets. They also need equipment to do this – hopefully, it has already been ordered, because this is not a run-of-the-mill facility. Creating a sintered Neodymium-Iron-Boron (NdFeB) permanent magnet is not like building a washing machine, which GM must certainly be aware of. The development of permanent magnets originated in the US, but other than the equipment formerly-owned by Hitachi Metals now acquired by another nascent US rare earth producer, the US has virtually no capacity to produce sintered NdFeB permanent magnets today.

Again, on paper, this looks like an absolutely incredible strategy to re-establish a domestic source of rare earths permanent magnets in NA. Music to many our ears, if they prove they can make this happen. Having been in these trenches for too long, my experience is that the few that have the experience may be counted on one hand, and while MP Materials pockets are deep – it's going take every bit of their cash to build the magnet facility and get it operational, especially with the Stage II plans for Mountain Pass still to be executed.

With the valuation on this stock being priced as if Stage III has been accomplished and at full production, MP Materials needs this to work, as does General Motors. It's a big bet.