

Rare Earths market interest leads investors seeking value looking at Neo Performance Materials

Neo Performance Materials Inc. (TSX: NEO) definitely has attracted market attention as the company's share price closed at C\$13.78 on December 31, 2020, ending the year up from \$12.38 on December 28, 2019, but not reflective of the fact that the share price was as low as \$5.75 in early April, 2020. January 25, 2021 – over \$17.00/share!

The interest in the company has been highlighted by the resurgent interest in the rare earths space –NEO is our solid #3 pick for 2021, a position not to be taken lightly, given the number of companies in rare earths at this time. Lead by renowned rare earths executive, Constantine Karayannopoulos, as President and CEO, Neo has many things going for it, including the fact that it is the only other rare earths processing facility in the world that is not in China (theirs is located in Estonia).

The company has 11 manufacturing facilities around the world and is a world leader in innovation and the production of permanent magnet powders, through its Magnequench business unit. Neo has also been touted as a takeover target for MP Materials, as several Neo assets were once part of Molycorp, but with Neo's prospects, it is likely that the shareholder base would demand a massive premium to approve that transaction. And the price continues to get higher.

The company has a very strong shareholder base and notably the investment funds managed by Oaktree Capital Management, L.P continue to reduce their ownership of Neo. The company has

continued the quarterly dividend of CAD\$0.10 per share as customer demand is returning and slowly growing as we enter into the vaccination stage of the global pandemic.

Recall that the company announced on December 4, 2020 that a group of selling shareholders had entered into a secondary bought deal financing for the sale and purchase of 3.9 million shares at CAD\$12.10 per share for gross proceeds of CAD\$47.6 million. As this was a secondary offering from existing shareholders, the company will not receive any of the proceeds.

On January 25, 2021, the company announced another bought deal offering of secondary shares. A syndicate of underwriters have agreed to purchase from the selling shareholders 4.5 million common shares of the company at a price of \$15.75 per common share for total gross proceeds to the selling shareholders of approximately \$70.9 million. The company will not be receiving any of the proceeds of the offering. In addition, the underwriters have been granted an option to purchase up to 15% of the base offering, exercisable up to 30 days following closing. The common shares will be offered by way of a short form prospectus to be filed in all of the provinces of Canada other than Quebec. Private placement offerings in the United States will be made to qualified institutional buyers pursuant to Rule 144A of the United States Securities Act of 1933.

That's a lot of gobbledeygook jargon, but it's important for a number of reasons. First, the company has interested investors across Canada and the United States. Secondly, they are also willing to pay \$3.65/share (30%) more per share for a secondary offering that is also about 50% larger than the last secondary offering done on December 4, 2020. That's less than 2 months ago.

Year-end 2020 financial results will not be out for a while yet, but investors have clearly done the arithmetic – at September 30, 2020, the company had cash, cash equivalents

plus restricted cash of US\$78.6 million and positive working capital of US\$173 million (including \$115 million of inventories). Add \$47.6 million of new equity in December 2020, another \$70.9 million in January 2021 (before fees) and clearly Neo is ready for the next phase in the rare earths industry. With a strong balance sheet (and perhaps a war chest of capital?).

Neo manufactures the building blocks of many modern technologies that enhance efficiency and sustainability. Presumably, the US government change will not overtly affect the previous stated mandate to create a national critical metals reserve, but stay tuned. Neo's advanced industrial materials, magnetic powders and magnets, specialty chemicals, metals and alloys are critical to the performance of many everyday products and emerging technologies and the company is a dominant global player.

Operating global advanced materials manufacturing facilities in countries including Canada, China, Estonia, Germany, South Korea, the US and Thailand, with two dedicated research and development centres in Singapore and the United Kingdom, Neo is very well positioned to continue as a global leader in the rare earths.

It is important to remember that Neo has developed dual supply chains inside and outside China for rare earths separation and rare earths advanced materials. While the world strives to build a "new" rare earths supply chain not dependent on the Chinese, this will take time and is fraught with uncertainty and very significant capital requirements. The fact that Neo also owns the only rare earths separation facility in Europe means in the unlikely event of a global upset, it is one of only two companies which remain positioned to supply the rare earths products to a growing industry.

Blowing through the half billion-dollar (Canadian) market capitalization this year and on the way to a billion dollar

market capitalization, Neo is leading the way in an industry that is continuing to evolve and grow. The company is innovative, and management has the expertise and knowledge and the potential to continue to innovate and lead the pack.

Lifton on Biden and the security of supply of rare earths

The Washington bureaucracy has injected politics into the issue of obtaining a secure supply of critical materials. The first shots were fired immediately after the inauguration of the new American president. To ensure that the monetary awards would not be seen to be supporting the policies of former President Trump, the permanent civil servants in the Pentagon and the Department of Energy announced within 24 hours of the new president's inauguration that \$30 million of Defense Department money would be granted to Australia's Lynas Rare Earths. The company also agreed to match those funds to construct a 5,000 ton per annum light rare earth separation plant at a site in Hondo, Texas, operated by its American partner, Blue Line Chemical.

It should be noted that a separate grant of \$500,000 had already been awarded to the Lynas/Blue Line joint venture to design a heavy rare earth separation facility with a further grant of \$500,000 awarded to MP Materials also to design a heavy rare earth separation plant.

These second grants were part of a U.S. Army (Department of Defense) initiative called "The Cornerstone Project." Cornerstone awards were Phase I, which in bureaucracy speak,

means that the big money will be in Phase 2 and that only one of the recipients of the Phase I money will get Phase II money supposedly to build a heavy rare earth separation facility.

There is little cooperation between the Departments of Defense and Energy with regard to the security of supply of rare earths.

At the same time as the awards by the Department of Defense were made the Department of Energy also announced an award of \$22 million to Rare Element Resources (RER) to be matched by the same amount from RER's largest shareholder, General Atomics (GA), a prime military contractor. The purpose of this award was to determine if there are alternative downstream (of mining) processing regimes as compared to the traditional ones, so that a globally competitive American rare earth industry can be achieved.

In the case of RER it may be that a full scale solvent extraction plant will ultimately be constructed using the R&D work done by RER, before GA bought into it. A pilot plant was built in Germany by a GA subsidiary to prove out the efficacy of the solvent extraction system using RER ore (bastnaesite) from its Bear Lodge deposit in Wyoming. The development of a mine at Bear Lodge, however, is estimated to require at least \$350 million more.

Lynas faces the hurdle of mining the monazite feedstock for the Texas plant in Australia and then, also in Australia, removing the uranium and thorium from the ore before a concentrate is shipped from Australia to Texas. The ore would be mined at Lynas' Mt Weld property, which now supplies an ore processing plant in Malaysia – Lynas has agreed to restrict to radioactinide-free feedstocks by 2023. A significant cost will be incurred by Lynas in duplicating the ore processing plant now in Malaysia, estimated at some \$500 million, according to the company. In addition, the freight cost from Australia to the USA (a Texas Gulf Port) will be significant. The Lynas ore

processing/solvent extraction plant in Australia cost more than (U.S.) \$800 million with capacity of 22,000 tpa of TREO. To construct a 5,000 tpa plant in Texas for \$60 million will be a challenge to Lynas, especially as it has also proposed to the U.S. DoD that it will build additionally a heavy rare earth separation facility at the same location.

The commercial production of actinide free mixed rare earth carbonates will begin at the White Mesa Mill operations of Utah's Energy Fuels in March. It is expected that 200 tons per month of the concentrate will be offered into the market beginning in Q2 of this year. I hope that the Defense Department might consider buying this material, since comparable material is not expected to be available from either MP Materials or Lynas for several years! White Mesa will be processing monazite derived from the heavy mineral sands operations in Georgia of American owned and operated Chemours, which processes the mineral sands to extract zircon and the titanium mineral, ilmenite.

The Environmental Assessment of “one of the purest lithium deposits globally” is on its way to being completed

“The economy of tomorrow will be driven by strategic sectors, like the electric vehicles and batteries sectors. This vision aligns perfectly with our vision to become a large responsible supplier of lithium to the flourishing electric vehicle and energy storage systems industries.” Jean-

*Sébastien Lavallée, CEO, Critical Elements Lithium Corp. –
excerpt from January 20, 2021 News Release*

Critical Elements Lithium Corp. (TSXV: CRE | OTCQX: CRECF) is a junior mining company in the advanced exploration stage with their flagship project, the Rose Lithium-Tantalum project, located in James Bay, Northern Quebec, Canada. The Company also has several other projects with exploration potential for copper, nickel, zinc, lead, gold, silver, rare earths, and platinum group metals.

The company is continuing to make progress in 2021 with the 100%-owned Rose Lithium-Tantalum project which, according to the company is one of the highest purity undeveloped lithium projects in the world. The company's near-term focus is on securing final permits and project financing with first production targeted for 2022 and expects that the Rose project is on track to be fully permitted in 2021.

Early in January, the company announced that it had engaged Cantor Fitzgerald Canada Corporation to pursue, engage and evaluate global strategic partners and investors to advance the Rose Project to production. The company announced on January 18, 2021 that it was informed that the public hearings for the Rose Project would be held in February, 2021 via webcast meetings. This is a significant step towards obtaining the governmental authorizations for the go ahead of the Rose project.

Continuing with a busy month, on January 20, 2021, the company also announced that the environmental assessment of the Rose project is on its way to being completed. The Joint Assessment Committee established by the Impact Assessment Agency of Canada and the Cree Nation Government confirmed on January 14, 2021, have received all information required to allow the completion of the environmental assessment of the Rose

Lithium-Tantalum project and prepare the draft environmental assessment report.

According to the company, this is a significant step in the federal process of obtaining the authorization for the project, which runs parallel to the provincial process updated in the news release of January 18, 2021.

Recall that the Rose Lithium-Tantalum project in northern Quebec, Canada is a highly prospective discovery. The NI 43-101 report issued in 2017 provided mineral resource estimates and a mineral reserve estimate that were used in a Phase 1 Feasibility Study that estimated an after-tax internal rate of return of 34.9% and a net present value of \$CAD 726 million at 8%, a payback of 2.8 years and a mine life of approximately 17 years.

These are very robust economics. Recall that the deposit is highlighted by excellent ore characteristics and the deposit is a hard rock resource that hosts high purity lithium material with low iron and low mica content. This is important as new sources of high quality grade lithium material are urgently needed as the demand for lithium hydroxide is growing and current inventories are reaching their production limits.

The fact that the Rose project hosts high purity material which is required by the electric vehicle industry translates to a very attractive project in terms of mining costs, profitability and desirability by end-users. The company intends to become a major player in the future world of lithium supply.

Equally important is that the Rose Project, located in Quebec, is in an excellent jurisdiction for mining. The company has great access to infrastructure, including roads, low-cost power and skilled labour. The company has been very diligent in their interactions with the local communities and notwithstanding the upcoming public hearings, notes their

strong relations with First Nations communities and local and provincial governments.

The flurry of news early in 2021 has not gone unnoticed by the capital markets. The company has seen a near-doubling in its share price in 2021 as they are now approaching a CAD\$ 225 million market capitalization.

While mining projects always take time, the team is well-experienced and has a very well defined plan and timeline for execution. The company also has a guaranteed maximum price for the engineering, procurement and construction of the Rose Lithium-Tantalum project on a lump sum turnkey basis that is in line with the Project's feasibility study from 2017.

Expect further news flow in 2021, as it a pivotal year towards planned commercial production from the Rose project in 2022.

Biden's defense plan and some stocks set to benefit

Yesterday marked a turning point in US history as President Joe Biden was inaugurated as the 46th President of the United States. Much of the focus has been on Biden's policies regarding an American Rescue Plan and Biden's \$2 trillion green infrastructure and jobs plan; however today I take a look at Biden's defense plan and what it means for the sector, including the defense metals companies.

Biden was a member of the Senate Foreign Relations Committee for 12 years. In that time Biden helped shape U.S. foreign policy on terrorism, weapons of mass destruction, the Middle East, Southwest Asia, and the end of apartheid. Biden favors

nuclear de-escalation and has promised to renew New START, the New Strategic Arms Reduction Treaty. A key summary of what Biden will do is stated by Defense News:

“To affordably deter Russia and China, Biden said he would shift investments from “legacy systems that won’t be relevant” to “smart investments in technologies and innovations – including in cyber, space, unmanned systems and artificial intelligence.”

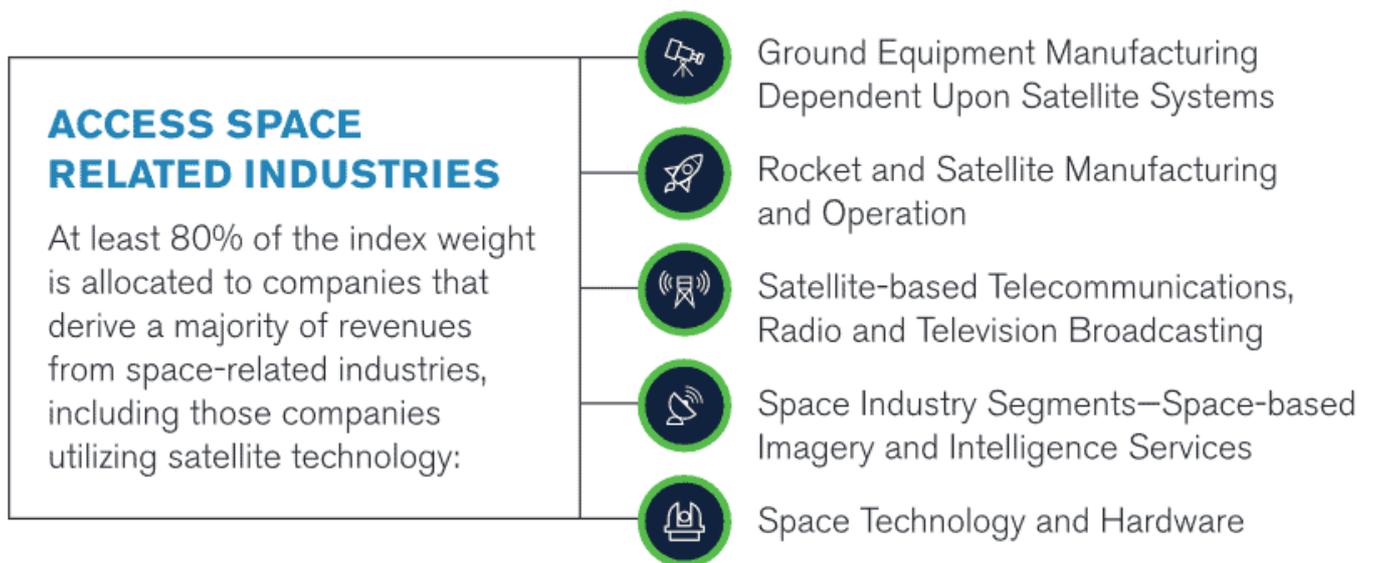
US cybersecurity

The leading cybersecurity ETF is the ETFMG Prime Cyber Security ETF (NYSE Arca: HACK). Top holdings of interest include CrowdStrike Holdings (NASDAQ: CRWD), Zscaler (NASDAQ: ZS), and FireEye (NASDAQ: FEYE).

Space

The iShares U.S. Aerospace & Defense ETF (CBOE: ITA), SPDR S&P Aerospace & Defense ETF (NYSE Arca: XAR), Procure Space ETF (NASDAQ: UFO) and the SPDR S&P Kensho Final Frontiers ETF (NYSE Arca: ROKT) are four ETFs that broadly cover aerospace and some defense stocks. Maxar Technologies (NYSE: MAXR) is a key holding in three of these ETFs. Maxar specializes in manufacturing communication, earth observation, radar, and on-orbit servicing satellites, satellite products, and related services. Some other key aerospace and defense stocks include Northrop Grumman (NYSE: NOC), Lockheed Martin Corporation (NYSE: LMT), and Boeing (NYSE: BA).

The Procure Space ETF (UFO) summary of exposure to space related industries



Source

Unmanned systems (including unmanned aerial vehicles (UAVs))

UAVs are increasingly being used by the military for surveillance and other operations such as border patrolling, combating terrorism, and intelligence gathering ('spying'). The largest UAV companies by market share include Northrop Grumman Corporation, General Atomics Technologies Corp. (private), Boeing, Textron Inc. (NYSE: TXT) and AeroVironment Inc. (NASDAQ: AVAV). Boeing is growing in military drones/UAVs with several US Defense contracts including the Airpower Teaming System ("Loyal Wingman") military UAV. It will use artificial intelligence to fly alone or with other aircraft.

An unmanned Aerial Vehicle (UAV) patrolling the earth



Source: iStock

Artificial intelligence (AI)

AI stocks involved in security (facial and voice recognition etc), UAVs/drones, autonomous vehicles, space technology, and the defense sector in general stand to be the winners. Elon Musk's SpaceX and Tesla (NASDAQ: TSLA) are rapidly becoming global leaders in AI.

Defense metals stocks

Generally speaking the rare earth magnet metals, uranium (for nuclear weapons etc), and key critical materials companies (cobalt for jet engines, scandium for lightweighting) have potential to do well.

Defense Metals Corp. (TSXV: DEFN | OTCQB: DFMTF) is an advanced mineral exploration company focused on metals and elements (including rare earths) commonly used in the electric vehicle (EV) market, military, national security and in green energy technologies; such as high strength alloys and rare earth magnets.

IBC Advanced Alloys Corp. (TSXV: IB | OTCQB: IAALF) makes mission-critical metal alloys and produces parts for use in U.S. defense systems, such as the F-35 jet and next-generation nuclear submarines, as well as in multiple commercial applications.

Neo Performance Materials Inc. (TSX: NEO) manufactures advanced industrial materials with a focus on magnetic powders and magnets, specialty chemicals, metals, and alloys. You can read more on them here.

Closing remarks

It is always good to have some defense stocks in your portfolio just in case we get a terrorist event or a deterioration in relations between the USA and some recent adversaries such as China, Russia, Iran, or North Korea.

Under President Biden defense spending will move towards smarter high tech methods of protecting US security. This means cybersecurity, space (satellites etc), unmanned systems (UAVs) and greater use of AI.

While global tensions are calm it may be the right time to buy into some new economy defense sector names or defense metals suppliers. What's your favorite Biden defense stock?

Clausi, Cashin and Kovacevic on the rising demand for scandium in aluminum alloys

In a recent InvestorIntel interview, Peter Clausi speaks with Peter Cashin, President and CEO of Imperial Mining Group Ltd.

(TSXV: IPG) and Gianni Kovacevic, CEO of CopperBank Resources Corp. (CSE: CBK), about growth opportunity in the scandium space and the factors affecting demand.

In this InvestorIntel interview, which may also be viewed on YouTube (click here to subscribe to the InvestorIntel Channel), Gianni went on to say, "Scandium is a market, that in my opinion in this decade can grow 20 fold." Peter added, "There is just not enough production capacity in the world to be able to satisfy what the potential growth in demand could be." Peter then went on to talk on the primary uses of scandium and explained that the factor holding back demand is limited supply of the metal. He continued, "If you can find the supply, I think the players and consumers are there waiting for it."

In the interview Peter also provided an update on Imperial Mining's Crater Lake Scandium project in Quebec and explained how the project benefits from being located in Quebec, which is the aluminum capital of Canada.

To watch the full interview, click here

About Imperial Mining Group Ltd.

Imperial is a new Canadian mineral exploration and development company focussed on the advancement of its copper-zinc, gold and technology metals properties in Québec. Imperial is publicly listed on the TSX Venture Exchange as "IPG" and is led by an experienced team of mineral exploration and development professionals with a strong track record of mineral deposit discovery in numerous metal commodities.

To know more about Imperial Mining Group Ltd., click here

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Imperial Mining Sets Comprehensive 2021 Plan at Crater Lake after \$2.6M Financing

After a positive summer drill program at its flagship **scandium-rare earth** Crater Lake Property in northeastern Quebec, Imperial Mining Group Ltd. (TSXV: IPG) successfully closed a \$2.6 million financing in December to accelerate the project forward in 2021.

Imperial Mining plans to use the proceeds to complete definition drilling at Crater Lake's "TG Zone", and to deliver both a 43-101 Resource Report and a Preliminary Economic Assessment (PEA) by the end of June 2021.

Last trading at \$0.16, Imperial Mining Group has a market cap of \$20 million and a PEA could re-rate the company, shifting it closer to the \$175 million market cap of NioCorp Developments Ltd. (TSX: NB | OTCQX: NIOBF) that has a Feasibility Study at its Elk Creek niobium-scandium project in Nebraska, United States.

Peter Cashin, President & CEO of Imperial Mining Group, recently commented, "I am very pleased of the positive response that the market has shown for our private placement. The financing was oversubscribed, and we believe that it was motivated by the recent significant announcements in the critical metal space, in particular for scandium and the rare earths."

Scandium Alloys at Home and in Space

Manufacturers in many industries, including automotive, aerospace, and defense, recognize that scandium-modified aluminum alloy materials could become a critical input into their production processes.

With the push for lighter and stronger materials to make vehicles more fuel-efficient and the need for tough and durable metal alloys for the resurgence in space activity, scandium-aluminum “superalloys” have been already used by NASA and the European Space Agency (ESA).

In a March 2020 speech at the Satellite 2020 Conference, Elon Musk, founder of Tesla (NASDAQ: TSLA) and SpaceX stated that the aerospace engineers at SpaceX were going to switch to a different alloy “pretty soon” to replace the current stainless-steel alloy, known as 301.

Scandium-aluminum alloys are highly valued as an important lightweight material and are one-third the weight of steel and 60 % of the weight of titanium alloys.

Scandium-aluminum alloys are also corrosion-resistant and can be used in a variety of industries, including aerospace, automotive, and consumer products, such as baseball bats, bicycle frames, and golf clubs.

A small percentage of scandium alloyed with aluminum enables aluminum to be effectively welded to another piece of scandium-aluminum alloy, without the need for heavy hardware to join the pieces together.

Scandium-aluminum alloys are currently being used by California-based Relativity Space, a private aerospace manufacturing company. Relativity Space’s massive 3D printer can create a rocket from raw material to flight in 60 days.

The automotive industry could be a large market opportunity for scandium. With scandium-aluminum’s self-welding abilities, engine blocks could be constructed using 3D printers.

In addition, according to a recent report, the average passenger vehicle contains over 150 kilograms of aluminum and the average light truck contains over 230 kilograms of aluminum. If only 1% of the traditional aluminum used in the approximately 17 million light vehicles (cars and light trucks) produced in the United States each year, switched to scandium-aluminum, that impact would create a demand for 35 tonnes of scandium each year.

With current scandium production estimated between 25-35 tonnes per year as such, this type of demand would immediately double the current supply requirement.

Scandium

Scandium is an element, sometimes classified as a rare earth metal, and currently, there are no primary scandium mines. Supply comes from the by-product of other mineral extractions from deposits in China, Russia, and more and recently, Australia.

Scandium is not traded on any metal exchange and the price is negotiated between buyer and seller. According to the most recent USGS data sheet on scandium, over the past five years, the price for scandium-oxide has averaged \$4,560 per kilogram.

Scandium and other “critical metals” were thrust into the spotlight last year when President Trump signed an Executive Order addressing the threat to the United States’ supply chain from relying on “critical minerals” from “foreign adversaries”, specifically identifying China. The 35 mineral commodities deemed critical under the definition included aluminum, gallium, graphite, lithium, manganese, niobium, the rare earth elements group, and scandium.

Crater Lake Property – Scandium & Rare Earth Metals

The 100%-owned Crater Lake Project is located 200 kilometres northeast of Schefferville, Quebec, and covers 2,780 hectares

(approximately 6,900 acres). The project hosts three zones of mineralization (Boulder, TG Zone (TGZ), and STG), determined by scandium-rich outcrops, boulders, and recent drilling.

Highlights from the summer drill program included Hole #CL20037 from the TGZ that returned intervals grading up to 253 grams per tonne (g/t) Scandium Oxide (Sc_2O_3) over 29.14 metres (m), including 9.3 m grading 299 g/t Sc_2O_3 and 21.69 m grading 271 g/t Sc_2O_3 including 9.16 m grading 299 g/t Sc_2O_3 .

Importantly, the true thickness of the scandium mineralized zone is estimated to be up to 110 m and is open at depth and along strike.

The company sees major positive factors with the project, including:

- The resource is exposed at the surface, so it is amenable to a low-cost open-pit operation.
- The deposit is high grade relative to its peers and could reduce the CapEx to develop the mine and the OpEx to run the mine.
- The preliminary metallurgy showed strong scandium mineral recoveries.
- The project is in the mining-friendly jurisdiction of Quebec and supported by Quebec's recently launched \$90 million "critical minerals" development fund and Plan Nord, Quebec's economic development strategy to develop natural resource extraction in northern Quebec.
- The deposit is located in close proximity to the 9 aluminum smelters and one alumina refinery in Quebec.

Final Comment

Look for the definition drill results, 43-101 Resource Report, and the PEA to potentially lift the stock price higher this year.

Critical Materials Corner with Jack Lifton – Impact of Biden Admin on Rare Earths

In the first episode of the **Critical Materials Corner** with Jack Lifton, Jack talks about if there is going to be any change in the focus on critical materials under the Joe Biden administration.

In this InvestorIntel video, which may also be viewed on YouTube (click here to subscribe to the InvestorIntel Channel), Jack went on to explain the role of bureaucracy and the US Federal government to drive policies on critical materials to make the US independent of China for critical materials.

Speaking on the electric vehicles sector, Jack said, “The big drive in the US is to get the price of the batteries down.” He continued, “If I were an investor, I would be looking at batteries, battery management, battery raw materials, and also the raw materials for solar panels and wind turbines because these are big pushes by the US government.” He further added, “You can store energy with lithium, cobalt, nickel and manganese. But you can’t make anything move without rare earth permanent magnets.” Speaking on the Department of the Interior’s list of critical materials he explained why copper should be on the list.

To watch the full interview, click here