

RHYOLITE RIDGE NEWSLETTER

AUGUST 2022

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PRESIDENT'S MESSAGE

Dear Readers,

I am pleased to say that in the last few months Ioneer has achieved several major milestones toward development of the Project:

- Announcement of binding lithium offtake agreements with two of the world's largest car manufacturing organizations ensures Nevada lithium will be used to power electric vehicles sold in the U.S.
- The commencement of trading of Ioneer stock on the NASDAQ under the symbol IONR. We anticipate Ioneer will gain greater visibility through a leading North American capital market trading platform suited for future-forward companies like ours.
- Submission of a revised Plan of Operations to the Bureau of Land Management for the Rhyolite Ridge Project. This revised plan outlines a path for the crucial products of lithium carbonate and boric acid to be produced in a safe and sustainable manner, while avoiding all direct impacts to Tiehm's buckwheat.

We feel confident that following BLM's review of this submittal, a Notice of Intent will be published and kick off the NEPA process, which will include a series of public meetings and scoping periods - we cover this in more detail later in this newsletter.

Advances have been made regarding our engineering work and we remain in close consultation with the permitting agencies and local authorities to ensure Rhyolite Ridge is prepared to begin construction once we receive the Record of Decision from the Department of Interior.

Finally, we are thankful to all those who attended our community meeting this month and for stopping in to say hello to us at other events throughout the summer - we remain honored by the amount of support we have received from families across Nevada. As we have done for years, we will continue to listen to your feedback and work closely with you as the Project develops.

Bernard Rowe, President

NEVADA LITHIUM FOR AMERICAN MADE ELECTRIC VEHICLES

Over the previous month, Ioneer announced binding lithium offtake agreements with two of the largest automobile manufacturing organizations in the world. These agreements ensure Rhyolite Ridge lithium will be utilized to manufacture batteries for the rapidly growing U.S. electric vehicle industry.

The first of these agreements - to supply lithium carbonate to Ford Motor Company - was announced on July 22. Bernard Rowe said:

“Simply put, this strategic relationship means Nevada lithium for American cars, and it will lead to job creation across all levels of the electric vehicle supply chain. We look forward to continuing to work with Ford and its partners to help develop a secure and reliable end-to-end U.S. EV industry.”

Under the agreement, Ioneer will supply Ford with 7,000 metric tons of lithium carbonate per year from Rhyolite Ridge beginning in 2025. Ford intends to utilize Ioneer’s lithium carbonate to produce batteries for use in Ford electric vehicles through BlueOval SK, the Ford-SK On battery manufacturing joint venture.

Lisa Drake, Ford Model e vice president, EV Industrialization, said, “We look forward to developing this new relationship with Ioneer. Helping unlock lithium in the U.S. will help us support localized production of battery cells going forward and, ultimately, support our efforts to deliver EVs for millions of customers.”

The second agreement - to supply lithium to Prime Planet Energy & Solutions (PPES) - was announced on July 31. PPES is a joint venture formed by Toyota & Panasonic in 2020 as the two companies came to a shared realization that meeting customer expectations around the world for electrified vehicles would help to realize a more sustainable society. Speaking to the Announcement, Ioneer’s Executive Chairman, James Calaway, said:

“Ioneer is grateful to announce another key milestone for our company in a lithium carbonate offtake agreement with PPES. PPES is a world-class organization, and we look forward to being their trusted partner. This and the previously announced Ford and EcoPro agreements solidify Ioneer’s focus on the U.S. Electric Vehicle supply chain infrastructure.”

Under the Agreement, Ioneer will deliver 4,000 tons of lithium carbonate to PPES per year over a 5-year term to be used to produce batteries for use in U.S. electric

vehicles. PPES’s President, Hiroaki Koda said of the agreement:

“Having an agreement with Ioneer provides PPES a first step in securing a U.S. supply of lithium, one of the most important parts for corresponding with the fast growing electrified vehicle industry. We have confidence in Ioneer’s technology of refining sedimentary sourced lithium and their competitiveness, and are expecting it to strengthen the PPES supply chain.”

The binding offtake agreements with Ford, PPES, and the previously announced agreement with EcoPro in 2021, total 18,000 tons per year of lithium carbonate produced at Rhyolite Ridge, and represents the completion of pre-production lithium carbonate supply commitments that we intend to make for the Project.

REVISED PLAN OF OPERATIONS SUBMITTED IN JULY 2022

In July of this year, Ioneer submitted a revised Plan of Operations for the Rhyolite Ridge Project to the BLM. We had previously submitted our Plan of Operations to the Bureau of Land Management in August of 2020. While the plan was originally accepted by the agency, based on feedback from both the BLM and the U.S. Fish and Wildlife Service, we elected to make a number of changes to our planned operations at Rhyolite Ridge. Importantly, this new plan seeks to eliminate any direct impacts to any of the populations of Tiehm’s buckwheat that occur within the Project Boundary.

A new feature in this plan incorporates the construction of a northern overburden storage facility (material that does not contain lithium or boron) which will be located away from all populations of Tiehm’s buckwheat. The plan also includes the development of a separate in-quarry overburden storage to minimize disturbance of the ground, and features site-tailored mining techniques to ensure stability of the quarry walls.

This resubmission is the first stage for the key federal permit needed prior to construction beginning at Rhyolite Ridge. This plan will be the guiding document for the National Environmental Policy Act (NEPA) review, where members of the public will have the opportunity to provide comment - we will communicate details and provide an ability for you to weigh in at www.therhyoliteridgeproject.com when the process begins.

The NEPA process is expected to be completed in approximately 12 months following publishing of the Notice of Intent.

IONEER IS NOW LISTED ON THE NASDAQ EXCHANGE UNDER SYMBOL “IONR”

On July 1 we were pleased to announce the commencement of trading on NASDAQ under the ticker symbol IONR through an American Depositary Receipt (ADR) program which complements Ioneer’s existing primary listing on the Australian Securities Exchange (ASX). The ADRs began trading on NASDAQ on June 30, 2022.

Ioneer has undertaken significant work in recent years to further establish its presence and bolster its team in the US, including the appointment of two additional U.S. based Board members and several senior hires in Nevada. Today, a majority of the Ioneer workforce is located in Nevada, with most working out of the corporate offices in Reno.



On Wednesday, August 3rd, members of the Ioneer team were present for the closing bell ceremony in New York City.

Ioneer Managing Director Bernard Rowe said:

“We believe this secondary listing will be greatly beneficial to the Company and its shareholders. There is a growing desire among North American investors to take part in the clean energy supply chain. We are pleased Ioneer will gain greater visibility through a leading North American capital market trading platform that is suited for future-forward companies like ours.”

For more information regarding this secondary listing, including information on how you can convert ordinary shares into ADRs, please visit the ADR Program FAQs page on our website at <https://www.ioneer.com/investors/adr-program-faqs>.

PROTECTING AND UPLIFTING TIEHM’S BUCKWHEAT

Ioneer has been, and remains, committed to pursuing conservation efforts for Tiehm’s buckwheat that address current scientific knowledge gaps about the specie - above and beyond our avoidance measures to eliminate any direct impacts during mining operations.

In furtherance of this commitment, Ioneer has budgeted \$1M over the next several years to conduct research and implement conservation measures to address existing risks to Tiehm’s buckwheat, and to uplift and expand the species.

Earlier this summer, Ioneer began the process to construct a dedicated greenhouse in Nevada to grow Tiehm’s buckwheat from seeds collected at Rhyolite Ridge. We were also proud to hire a full-time botanist who will oversee the greenhouse and growing of the plant. The knowledge gained through our greenhouse activities will also help to guide future propagation and transplant studies as we seek to expand the Tiehm’s buckwheat population.

Our efforts to protect the specie go beyond our greenhouse activities: We have been and will continue to monitor the existing populations of Tiehm’s buckwheat, search for new populations, and conduct ongoing climate and herbivory monitoring near the plant’s locations at Rhyolite Ridge.



Additionally, we intend to conduct detailed genetic analysis of the plant and oversee ongoing pollinator studies to further help fill the missing scientific gaps related to the overall ecology of the species.

With these efforts, coupled with our existing scientific understanding of the plant, we remain highly confident that Tiehm’s buckwheat and the Rhyolite Ridge Project - a critical asset to ensure a sustainable planet for ALL species - can successfully co-exist.

LET'S NOT FORGET ABOUT BORON

Lithium has been a hot topic as of late, owing to its importance in electric vehicle transportation and renewable energy applications. However, the Rhyolite Ridge Project will also produce a considerable amount of boric acid (~174 thousand tons per year) owing to the high concentrations of boron that occurs within the mineral “searlesite” present at the Project. Searlesite (a sodium borosilicate mineral - $\text{NaBSi}_2\text{O}_5(\text{OH})_2$) was discovered by, and named in honor of, famed pioneer John Wemple Searles in 1862 at what is now “Searles Lake” near Trona, CA in the Mojave Desert (about 120 miles southeast of Dyer, NV).

History of Boron

The name “Boron” is ultimately derived from the Arabic word “buraq”, which means white, and the Persian word “burah” which means borate. While not isolated and recognized as an element until 1808 by French chemists Joseph-Louis Gay-Lussac and Louis-Jacques Thenard, and independently in 1809 by renowned British chemist Sir Humphrey Davy, boron has been utilized by humans as early as 300 AD as a glaze on Chinese ceramics. The first recorded use of “borax” (which is naturally occurring sodium borate - chemical formula $\text{B}_4\text{H}_2\text{O}\text{Na}_2\text{O}_{17}$) was by Arabian goldsmiths in the 8th century to purify gold and silver.

A New Type of Glass

Some 30 years after Searles’ discovery of borax in California, the German glassmaker Otto Schott developed the world’s first thermally stable borosilicate glass halfway around the world in Jena, Germany. This new type of glass could withstand temperatures of about 300 °F without cracking - a game-changer for laboratory and medical supplies.

At the turn of the 20th century Eugene Sullivan, who was a director at Corning Glass Works in Corning, NY, developed another type of borosilicate glass called “Nonex” to reduce breakage in lantern globes and battery jars. However, it was a fellow Corning Glass employee, Jessie Littleton, and his wife Bessie Littleton, who transformed the cooking world forever after they used a cut-down battery jar as a casserole dish. Corning removed the lead from Nonex and developed it into a consumer product that has been a staple in kitchens worldwide ever since - Pyrex. In the United States today, approximately 70% of boric acid supply is used in the production of glass and ceramics.

A Vital Ingredient in Agriculture

Boron is an element vital for plant growth and development and is essential for agricultural soil - as such it is present in nearly all fertilizers. If older leaves on plants begin turning yellow between leaf veins, that is an indication of boron deficiency. Boron is ultimately

a micronutrient that is required for healthy growth by improving root systems thereby increasing their ability to absorb nutrients and water from the soil and increasing crop yield. Boron deficiency in plants can also lead to serious fungus infections (Ergot) on various grains and grasses including wheat, rye, barley, and oats.

Your Phone, Computer, and Television

Boric acid is a key material for a thin-film-transistor liquid-crystal display (TFT LCD) that is used in TV, laptops, and mobile phone screens. Boron nitride film is vital to creating touchscreens for smart devices as it’s conductive but not slippery. Boron carbide nanotubes are harder than diamonds so they are incredibly durable and flexible. They provide an effective barrier between human skin and any contaminants on a touch screen surface that may be pathogenic or toxic.

A Steel Strengthener

Across the aerospace and automotive industries boron is used as additive to strengthen steel. In particular, boron steels are used in vehicles to strengthen components around door frames and in reclining seats. Due to its relatively lightweight, boron has been utilized by both Ford and Volvo to increase the safety of their vehicles without diminishing fuel efficiency. The agriculture industry has also utilized boron due to its resistance to mechanical stress, moisture, and the influence of aqueous solutions of most acids.

Magnets

Boric acid is a necessary component of neodymium magnets (among the strongest type of permanent magnets) which are used in a variety of everyday electromechanical and electronic devices including MRI machines, computer hard drives, wind turbines, and in the speakers in your smartphone.

Other Uses

The range of products that utilize boron and boron compounds is incredibly wide - it is estimated that there are nearly 300 different end-applications of the element. Beyond those discussed above, it is also present in semiconductors, detergents, bleaches, eye wash, cosmetics, jet turbines, ant baits, and in welding fluxes. Note that these applications are for both technical and high-purity grade boric acid products.

For more information on the many uses of boron:

- britannica.com/science/boron-chemical-element
- thekitchn.com/the-history-of-pyrex-the-100-year-old-glassware-company-223352
- ford.com.au/technology/boron-steel/
- borates.today/volvo-cars-boron/

PREVIOUS COMMUNITY EVENTS

Jim Butler Days



Ioneer continues to be a proud sponsor of the annual Jim Butler Days Celebration and the Nevada State Mining Championships. This year Ioneer provided the prize money for the winners of the women's and men's individual mucking events, along with sponsoring the Jim Butler Stampede.

Goldfield Days



We were excited to sponsor and participate in this year's Goldfield Days, which took place over the first weekend in August in Goldfield, Nevada. Hosted by the Goldfield Historical Society and Goldfield Chamber of Commerce, this three-day event showcases the rich history of Goldfield - the preeminent Nevada mining town at the turn of the 20th century.

Fish Lake Valley 4th of July Celebration



Ioneer was again honored to participate in and contribute to the Fish Lake Valley 4th of July Celebration as a sponsor for the Fish Lake Valley Rodeo. We thank all the many volunteers that make this event possible each year and look forward to supporting the event for many years to come.

UPCOMING EVENTS

September 10 - Fish Lake Valley Annual Poker Run

We are looking forward to participating in the Fish Lake Valley Off-Road Poker Run on Saturday, September 10. Now in its tenth year, the proceeds from this annual race go to the Fish Lake Volunteer Ambulance and Fire Department. Be sure to stop by the Ioneer pit-stop near the halfway mark to grab some shade, water, and refreshments!

Common Grounds with Ioneer

Our monthly Common Grounds with Ioneer events will continue to be held the last Thursday of each month beginning at 8:30AM at the Fish Lake Valley Community Center. All are welcome to join Ioneer employees to learn about the latest happenings with the Rhyolite Ridge Project and ask questions while enjoying a hot cup of coffee.

Our schedule for the next few months is below:

- August 25
- September 29
- October 30

All held at Fish Lake Valley Community Center,
8:30AM - 10:00AM





**CREATING A BETTER NEVADA
AND A BETTER WORLD.**

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