

Quarterly Activities Report for the period ending 30 September 2019

Highlights

- Rhyolite Ridge Pilot Plant achieved key objectives and provided opportunities to enhance the process flowsheet
- Samples of high-quality lithium and boron end-products produced at the Pilot Plant have been sent to thirty potential off-take partners
- Strategic and off-take partner discussions are progressing well with twenty potential partners having toured the Pilot Plant as part of their due diligence
- The Definitive Feasibility Study (DFS) will be completed in Q1 2020 following incorporation of enhancements into the engineering design of the processing plant
- Annual General Meeting to be held Friday 8 November

Monday, 28 October 2019 – Emerging lithium-boron supplier, ioneer Ltd (ioneer or the Company) (ASX: INR) provides an update on its activities for the quarter ending 30 September 2019, which were focussed on the 100%-owned Rhyolite Ridge Lithium-Boron Project (Rhyolite Ridge or the Project) in Nevada, USA.

Commenting on progress made during the September quarter, ioneer's Managing Director Bernard Rowe said:

"ioneer made significant progress during the period and particularly benefited from the learnings of operating our Pilot Plant. In testing the Rhyolite Ridge process flowsheet at pilot scale, we collected detailed data that has identified areas of further optimisation ahead of detailed design engineering for the DFS.

"Importantly, the Pilot Plant has demonstrated Rhyolite Ridge's ability to produce high-quality lithium and boron end-products at our Project in Nevada. Samples have now been sent to many potential customers as part of off-take discussions. Given the strong customer interest and the quality of our products, we are confident they will be well received and lead to partnerships that are vital to the Project's funding and development.

"Revenue from boric acid is projected to cover most of our Project's operating costs and help ensure that Rhyolite Ridge becomes a structurally low-cost producer of lithium carbonate."

Strategic Partner and Offtake Discussions

ioneer and its financial advisor are in active negotiations with multiple strategic financial and offtake partners regarding the project's development funding.

The Pilot Plant has supported numerous strategic partner and finance discussions with approximately twenty potential strategic partners and financiers having toured the plant. The tours provide potential partners with an opportunity to extensively interact with key

members of ioneer's technical and commercial teams and gain a deeper understanding of ioneer's commitment to technical excellence.

Product samples from the Pilot Plant have been sent to over 30 potential customers around the world for evaluation as part of multiple off-take negotiations which are currently ongoing.

Pilot Plant Operations

During the quarter, an initial 30 tonnes of Rhyolite Ridge lithium-boron (searlesite) ore was processed through the Pilot Plant.

The Pilot Plant achieved its core objectives:

1. Simulation of the process flowsheet in a continuous cycle to:
 - o optimise and finalise the flowsheet for the DFS; and
 - o collect the data required for detailed design and engineering of the process plant;
2. Production of high-quality boric acid and lithium carbonate to support our global off-take marketing activities; and
3. Demonstration of the process plant to potential strategic and financing partners.

Kemetco Research Inc is operating the Pilot Plant and is one of Canada's largest privately-owned contract research and development laboratories, specialising in extractive metallurgy, chemical processing and specialty chemical analysis.

Rhyolite Ridge Pilot Plant at Kemetco in Vancouver, Canada



Boron and Lithium Samples from Rhyolite Ridge Pilot Plant



Premium quality (>99.9%) boric acid samples ready for shipping.



Premium quality technical-grade (>98.5%) lithium carbonate samples ready for shipping.

The key insights from the Pilot Plant operation have allowed for specific areas to be further refined and optimised:

- acid and lime consumption;
- materials of construction including metal alloys; and
- washing and dewatering of impurity crystals and related equipment selection.

A video of the Rhyolite Ridge Pilot Plant is available at www.ioneer.com/investors/videos.

Definitive Feasibility Study Progress and Completion

Most components of the DFS are near complete with only the lithium-boron processing areas to be optimised following completion of further Pilot Plant testwork.

Key parameters of the DFS are in-line with the Rhyolite Ridge PFS:

- Open-pit mine plan based on the June 2019 Mineral Resource with improved boron grades;
- Ore crush and vat sizing to provide high recoveries of lithium and boron into a pregnant leach solution; and
- Ore processing rate averaging 2.7 million tonnes per annum predicated on the on-site acid plant producing 3,500 tonnes per day.

The DFS has provided greater confidence in capital expenditure estimates, such as the sulphuric acid plant where firm bids have since been received.

The successful main run of ore through the Pilot Plant provided an opportunity for ioneer to optimise and simplify the Pre-Feasibility Study (PFS) process flowsheet, prior to completion of detailed engineering design of the process plant for the DFS.

Further testwork is expected to result in important but straightforward modifications to the flowsheet which will enhance and further optimise the commercial process. Optimising the process flowsheet and finalising equipment selection during the DFS is a prudent approach to development designed to minimise operational risks at commercial start-up and enhance Project economics.

As result of the additional Pilot Plant testwork and the ensuing engineering adjustments, the DFS will be completed in Q1 2020. This work on process modifications will not impede the off-take and strategic partner/financing discussions that are currently underway.

Upcoming Work Program

The work program over the coming months includes:

- Progressing discussions with potential off-take, financial and strategic partners with the assistance of a global investment bank. The range of partners includes companies involved in the lithium, boron, electricity and acid plant sectors;
- Completing further Pilot Plant testwork by the end of November;
- Making final adjustments to engineering design and delivering a robust DFS in Q1 2020; and
- Completing updated mine plan and Ore Reserve estimate;
- Completion of environment baseline studies and submittal of plan of operation.

Corporate Activities

Annual General Meeting

The Company's 2019 Annual General Meeting would be held on Friday 8 November 2019 at 10:00 am at the Boardroom registry offices at Level 12, 225 George Street, Sydney NSW 2000. A copy of the Notice of Meeting and proxy form can be found on the Company website www.ioneer.com.

The Company's Annual Report, Corporate Governance guide 2019 and Appendix 4G were released on 17 September 2019.

Expenditure

Expenditure during the September quarter totalled:

- \$13.4 million on exploration and evaluation; and
- \$1.5 million on corporate/administration/salaries (net of interest received).

Cash on hand at 30 September 2019 was \$34.7 million.

Capital Structure

At the end of the quarter, ioneer had on issue:

- 1.47 billion ordinary shares;
- 47.4 million options; and
- 1.5 million performance rights.

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About ioneer

The Company's 100%-owned Rhyolite Ridge Lithium-Boron Project in Nevada, USA provides a substantial foundation for ioneer to become a responsible and profitable producer of the materials necessary for a sustainable future.

The Rhyolite Ridge PFS demonstrated the Project's scale, long life and potential to become the lowest cost lithium producer in the world as well as the largest lithium producer in the United States.

With forecast annual production of 20,200 tonnes lithium carbonate and 173,000 tonnes boric acid, Rhyolite Ridge will be a globally significant producer of both lithium and boron.

Lithium and boron are both used in a diverse range of everyday items and innovative technologies that are essential to modern life and emerging clean technologies such as electric vehicles.

Recent Announcements

The table below lists announcements made by the Company during the quarter.

Date Released	Title
1 July 2019	Change of Director's Interest Notice - Davies
4 July 2019	Rhyolite Ridge Pilot Plant – First High-Purity Boric Acid
6 August 2019	Presentation at Diggers & Dealers Mining Forum
27 August 2019	Pilot Plant Video
12 September 2019	Date of 2019 Annual General Meeting
17 September 2019	Annual Report to Shareholders
17 September 2019	Corporate Governance Statement - 2019
17 September 2019	Appendix 4G

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Bernard Rowe, a Competent Person who is a Member of the Australian Institute of Geoscientists. Bernard Rowe is a shareholder, employee and Managing Director of Ioneer Ltd. Mr Rowe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012). Bernard Rowe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

In respect of Mineral Resources referred to in this report and previously reported by the Company in accordance with JORC Code 2012, the Company confirms that it is not aware of any new information or data that materially affects the information included in the public report titled "Rhyolite Ridge Mineral Resource Upgrade" dated 26 June 2019. Further information regarding the Mineral Resource estimate can be found in that report. All material assumptions and technical parameters underpinning the estimates in the report continue to apply and have not materially changed.

In respect of production targets referred to in this report and previously disclosed, the Company confirms that it is not aware of any new information or data that materially affects the information included in the public report titled "Outstanding Results from Rhyolite Ridge Pre-Feasibility" dated 23 October 2018. Further information regarding the production estimates can be found in that report. All material assumptions and technical parameters underpinning the estimates in the report continue to apply and have not materially changed.

Appendix 1 - Schedule of Tenements

Country	Project	Tenement ID	Tenement Name	Area (km ²)	Interest at beginning of quarter	Interest at end of quarter	Note
USA	Rhyolite Ridge	NMC1118666	NLB claims (160)	13	100%	100%	No change
USA	Rhyolite Ridge	NMC1117360	SLB claims (199)	16.5	100%	100%	No change
USA	Rhyolite Ridge	NMC1171536	SLM claims (122)	9.7	100%	100%	No change
USA	Rhyolite Ridge	NMC 1179516	RR claims (65)	5.4	100%	100%	No change
USA	Rhyolite Ridge	NMC 1129523	BH claims (81)	7	0%	0%, option to purchase 100%	No change
USA	SM	NMC1166813	SM claims (96)	7.7	100%	100%	No change
USA	GD	NMC1166909	GD claims (13)	1.1	100%	100%	No change
USA	CLD	NMC1167799	CLD claims (65)	5.2	100%	100%	No change
USA	New Morenci	AMC393550	MP claims (2)	0.12	100%	100%	No change
USA	Tokop	NMC883619	TK claims (73)	4.82	100%	100%	No change
USA	Tokop	NMC285234	Path Patents (11)	0.74	0%, option to purchase 100%	0%, option to purchase 100%	No change
USA	Tokop	NMC814692	Path Unpatented (5)	0.40	0%, option to purchase 100%	0%, option to purchase 100%	No change
USA	Bartlett	NMC938020	PEARL claims (8)	0.67	0%, option to purchase 100%	0%	Relinquished
USA	Lone Mt	NMC913404	NAMMCO claims (71)	5.43	0%, earning 100%	0%, earning 100%	No change
USA	Lone Mt	NMC1071591	LMG claims (37)	2.80	100%	0%	Relinquished
USA	Lone Mt	NMC1094601	SW claims (24)	2.0	100%	0%	Relinquished
USA	Towers Mt	AMC426407	CK claims (32)	2.54	100%	0%	Relinquished