ioneer Delivers Definitive Feasibility Study that Confirms Rhyolite Ridge as a World-Class Lithium and Boron Project

HIGHLIGHTS

- Compelling Project economics with an after-tax NPV of US$1.265 billion, and an unlevered, after tax internal rate of return (IRR) of 20.8%
- DFS confirms plans for a large, long-life, low-cost operation, producing lithium carbonate, boric acid and then battery-grade lithium hydroxide
- All-in sustaining cash cost of US$2,510 per metric tonne[1][2] lithium carbonate equivalent (LCE) places the Rhyolite Ridge Project at the bottom of the global lithium cost curve
- Stable boric acid revenue helps ensure EBITDA margin of 68.1% based on average production over Life of Mine (LOM)
- Average LOM production 20,600 tonnes per annum (tpa) of lithium carbonate, converting in year four to 22,000 tpa of battery-grade lithium hydroxide, and 174,400 tpa of boric acid
- ioneer has developed a clear path to Project completion and is in discussions with strategic funding and offtake partners
- CAPEX of US$785 million includes an increase in scope to reduce operating expenses, increase recovery and improve overall Project economics

CONFERENCE CALL

ioneer will host a conference call for analysts, investors, and media today at 10:30am Sydney time (GMT+10). The webcast details are below. The investor presentation, an executive summary of the 5,000-page DFS, and a summary DFS Video can be found on the Company's website www.ioneer.com prior to the Webcast.

Conference Call Pre Registration: https://s1.c-conf.com/DiamondPass/10006293-invite.html
Webcast Link: https://webcast.openbriefing.com/6058/

Thursday, 30 April 2020 – ioneer Ltd (ioneer or the Company) (ASX: INR), an emerging lithium–boron supplier, is pleased to announce the outcomes of the Definitive Feasibility Study (DFS) for the Rhyolite Ridge Lithium-Boron Project in Nevada, US (Project). The DFS was undertaken by

[1] All-in sustaining cash costs of US$2,510 is the average cost per tonne to produce battery grade lithium hydroxide. It includes the cost to produce technical grade lithium carbonate and its conversion into lithium hydroxide after the first three years.
[2] All tonnes in this announcement are metric tonnes.

independent and globally recognised engineering firm Fluor Enterprises (Fluor) along with a world class team of associated engineering and equipment suppliers.

SUMMARY

The DFS validates Rhyolite Ridge as a world-class resource with significant value creation potential due to its very low-cost, large-scale operation and long mine life. The Project is located in Nevada, United States, a stable, mining-friendly jurisdiction with a large pool of skilled labor and well-established infrastructure. The DFS places Rhyolite Ridge as the single most attractive Project for the economic production of lithium carbonate, lithium hydroxide and boric acid globally. The DFS analysis summarised here, positions ioneer, on an LCE basis, as the lowest cost lithium producer globally with an estimated all-in sustaining cash cost to produce battery grade lithium hydroxide of US$2,510 per tonne net of boric acid revenue.

The DFS confirms that the Project not only has the lowest all-in sustaining cash cost of lithium projects globally, but also the most stable overall operating cost structure for the production of lithium carbonate and battery grade lithium hydroxide due to the scale and reliability of its boric acid credit. The extensive bench and pilot scale testwork conducted by Fluor, Kemetco Research and Kappes Cassiday, with support from Veolia and FLSmidth, has proven highly successful with excellent recoveries, the innovative use of proven processing technologies, and the production of high purity lithium and boric acid products.

During the extensive DFS process, Project plans were further developed and refined, and now include an Association for the Advancement of Cost Engineering (AACE) Class 3 operating cost and capital cost estimate with 30% of all engineering complete. The refinement of the DFS as compared to the PFS is substantial, and helps ensure predictable, sustainable and very low operating costs over the life of the Project. An important addition to the prior scope is the upfront inclusion of a steam turbine for power generation, which will provide the entire operation with enough energy to be fully self-sufficient.

The DFS estimates that the total capital expenditure to complete the Project will be US$785 million, including an 8% contingency. This represents an increase of US$186 million from the PFS, with nearly half of the increase in scope being driven by the inclusion of an on-site steam turbine, the purchase versus lease of the mining fleet, and the purchase of sulphur tankers to materially lower sulphur transportation costs. All of these decisions were made following detailed analysis of the options (trade-off studies) and have positive impacts to the overall Project economics. State sales taxes and commissioning costs also impacted the increase with the remainder relating to more precise cost estimates and cost inflation from the detailed DFS process including the level of engineering completion.

The lithium and boron Mineral Resource[3] is estimated at 146.5 million tonnes, including an Ore Reserve[3] of 60.0 million tonnes, an increase in the Reserve from the previous estimate of 280%. The Company expects to mine and process 63.8 million tonnes over the 26-year mine life at an average annual rate of 2.5 million tonnes per year. The 63.8 million tonnes to be mined represents 44% of the total Mineral Resource of 146.5 million tonnes.

The current 26-year mine plan is made up almost entirely of Reserve material (94%), and of that nearly 50% is Proved Ore Reserve. The resource remains open in three directions allowing for a potential extension to the life of the mine or expansion opportunities in the future. Specifically, drilling shows that Rhyolite Ridge lithium-boron zone is increasing in grade and shallowing to the

[3] For Mineral Resources and Ore Reserve referred to in this release, see Company announcement titled “Rhyolite Ridge Ore Reserve Increased 280% to 60 million tonnes” dated 30 April 2020, for further information. Mineral Resource estimates include Ore Reserves.

south, meaning the delineation of additional ore to the south, outside of the current Mineral Resource, is likely to have a significant positive impact on the mine plan and DFS Project economics. Access to the southern extension of the deposit for drilling is expected once the necessary EIS related permits are in place, which is expected by the second quarter 2021.

Managing Director of ioneer, Mr. Bernard Rowe, commented:

"The DFS confirms our long-standing belief that Rhyolite Ridge is a world-class asset that will be transformational for ioneer and its shareholders. Rhyolite Ridge will be the single most attractive resource to economically produce lithium carbonate, lithium hydroxide, and boric acid globally. The co-production of boric acid enables us to produce lithium, net of boric acid credits, at the lowest possible cost. Rhyolite Ridge's projected position at the very bottom of the global lithium industry cost curve will enable us to achieve industry-leading EBITDA margins, an excellent return on investment, and a quick payback across a range of commodity price environments. Additionally, we are located in Nevada, a mining-friendly jurisdiction in the US, where lithium is recognised as a strategically important mineral, critical to a sustainable future. These benefits make Rhyolite Ridge an attractive project to strategic partners, which we have witnessed in discussions to date.

On top of strong fundamentals, we expect the long-term demand for lithium to continue to increase when the Rhyolite Ridge production comes fully on-stream. I am proud of the ioneer team and our partners for their hard work over the last eighteen months, which has enabled us to successfully complete a robust and comprehensive DFS. We are now one important step closer to becoming a leading low-cost, long-life producer of lithium."

Compelling Project Economics Confirmed by DFS

- After-tax NPV (8% real) of US$1.265 billion, with unlevered IRR of 20.8%
- Average Annual LOM EBITDA of US$288 million
- Average Annual LOM after-tax cashflow of US$193 million
- Average Annual LOM revenue of US$422 million
- LOM EBITDA margin of 68.1% based on average production
- Rapid payback of capital: 5.2 years from first production

All-in Sustaining Cash Cost at the Bottom of the Global Cost Curve

- The lowest cost producer globally of lithium carbonate and lithium hydroxide, with an all-in sustaining cash cost at US$2,510 per tonne of LCE
- Boron credit ensures industry-leading margins

Well Defined and Reliable Operating Cost and Capital Cost Estimates

- Capital estimate of US$785 million- AACE Class 3 capital cost estimate with an accuracy range of ±15%, including an 8% cost contingency
- Capital to construct the lithium hydroxide unit in year three is US$74 million to be funded from free cash flow from operations and is included in the Company's sustaining capital plan
- Conventional processing using proven commercial technology
- Low operating costs – AACE Class 3 estimate supported by an extensive test program including pilot plant and 30% of engineering complete

Long-Life Resource with Verified Expansion Potential

- Production to commence by the middle of 2023 with a 26-year mine life and the opportunity to extend and expand in the future
- Producing ~20,600 tonnes of lithium carbonate or ~22,000 of lithium hydroxide[4] and 174,400 tonnes of boric acid per year, on average, for LOM
- Large resource, comprising a Mineral Resource of 146.5 million tonnes including an Ore Reserve of 60.0 million tonnes
- Highly prospective project area with further potential to increase total resource and reserves

US Advantage and Low-Risk, Mining-Friendly Jurisdiction

- Nevada is a first-rate, mining-friendly jurisdiction
- Project is strategically located proximal to Tesla Gigafactory and California export ports
- Limited alternative supply of both lithium and boric acid within North America, which enhances the Project's attractiveness to strategic partners
- Increasing electric vehicle manufacturing base in addition to Tesla in North America

Clear Path to Completion

- Detailed construction timeline developed in DFS
- Clearly defined permitting process
- Sustainable mining practices
- Current cash on hand sufficient to advance the Project through Final Investment Decision
- Robust, ongoing strategic partner and marketing discussions, as evidenced by recently executed long-term offtake agreement with a large boron customer

[4] Years one through three for lithium carbonate and in years four through 26 lithium carbonate will be processed into lithium hydroxide

KEY PARAMETERS

Figure 1 below summarises the key Project parameters over the LOM.

Figure 1. Key Parameters

		AVERAGE LOM
PHYSICALS		
Ore processing rate	Mtpa	2.5
Total tonnes processed	Mt	63.8
Lithium carbonate grade (equivalent)	%	0.96
Boric acid grade (equivalent)	%	8.77
Recoveries – Lithium Carbonate (years one through three)	%	85
Recoveries – Lithium Hydroxide (years four through 26)[5]	%	95
Recoveries – Boron	%	79
Lithium carbonate production – average LOM	tpa	~20,600
Lithium Hydroxide production – average LOM	tpa	~22,000
Boric acid production	tpa	~174,400
OPERATING AND CAPITAL COSTS		
Battery Grade Lithium Hydroxide all in sustaining cash cost (net of boric acid credit)	US$/t LCE	2,510
Initial capital expenditure (including contingencies and indirects)	US$M	785.4
LOM Capitalized Deferred Prestripping Costs	US$M	202.0
Sustaining capital expenditure over LOM[6]	US$M	274.1
FINANCIAL PERFORMANCE[7]		
Annual LOM average revenue	US$Mpa	422
Annual LOM average EBITDA	US$Mpa	288
Annual LOM average after-tax cash flow	US$Mpa	193
After-tax Net Present Value (NPV) @ 8% real discount rate	US$M	1,265
After-tax Internal Rate of Return (IRR)	%	20.8
Payback period (from start of operations)	years	5.2

[5] Net lithium recovery is 80% because lithium carbonate is produced at an 85% recovery and then converted to lithium hydroxide at 95% recovery.

[6] Battery grade lithium hydroxide circuit and heat recovery system totalling US$99 million funded via operating capital to be operational in year four.

[7] All annual figures are on an average year basis over 25.24 years.

Economic Analysis

The DFS economic analysis is based on the annual mining of 2.53 million tonnes of ore that produced 20,600 tonnes of lithium carbonate or, in year four onward, were further processed into 22,000 tonnes of battery-grade lithium hydroxide, and 174,400 tonnes of boric acid. Boric acid price averages US$710 per tonne and was calculated as a credit against operating cost for the LOM in the analysis. The prices in the model reflect the sale of technical-grade lithium carbonate in years one through three, and then the sale of battery-grade lithium hydroxide from year four and beyond. The prices used in the financial model are the average sale prices of forecasts provided to the Company by Roskill and Benchmark Mineral Intelligence for lithium carbonate and battery grade lithium hydroxide. The models average LCE value is approximately US$13,200 per tonne for the LOM.

The results produced in the financial modeling are based on a total initial capital expenditure estimate of US$785 million and sustaining capital of US$274 million, which includes US$74 million of additional capital for the construction of an on-site lithium hydroxide facility in year three, and US$25 million for a heat recovery system to increase electricity generation.

The financial modeling delivered compelling economics with an NPV of US$1.265 billion, and unlevered after-tax IRR of 20.8%. Average LOM EBITDA of US$288 million, and after-tax LOM free cash flow of US$193 million.

Figure 2 below summarises the key financial outcomes of the unlevered Base Case.

Figure 2. Unlevered Base Case Outcomes

Unlevered Base Case Outcomes		LOM
PROJECT ECONOMICS		
Revenue	US$M	422
EBITDA	US$M	288
EBITDA Margin	%	68.1
Mine Life	years	25.24
CASH FLOW AFTER-TAX		
Undiscounted cumulative cash flow	US$M	4,900
NPV @ 8% Real	US$M	1,265
Payback period (from start of operations)	years	5.2
Unlevered IRR	%	20.8

ALL-IN SUSTAINING CASH COST AT THE BOTTOM OF THE GLOBAL COST CURVE[8]

The Project's all-in sustaining operating cost (net of boric acid credit of US$710 per tonne) is forecasted to average US$2,510, which is the average cost per tonne to produce battery grade lithium hydroxide. It includes the cost to produce technical grade lithium carbonate and its conversion into lithium hydroxide after the first three years, which places Rhyolite Ridge at the very bottom of the global lithium industry cost curve.

In order to compare with industry producers, the cost is expressed as a lithium carbonate equivalent (LCE)[9] cost (whereby lithium hydroxide is expressed as an equivalent amount of lithium carbonate).

Lithium hydroxide is the second largest chemical produced by the lithium industry and has recently had the highest growth rate of all lithium products. This trend is expected to continue due to the growth in higher-nickel chemistry cathode materials for automotive and energy storage markets. Demand for battery grade lithium hydroxide is expected to overtake that of battery grade lithium carbonate in 2021.

The largest incremental cost in the conversion of lithium carbonate to lithium hydroxide is typically energy, including both power and heat. ioneer's cost to produce battery grade lithium hydroxide from lithium carbonate will be materially lower than industry norms because of several Project specific factors:

- Ideal quality, technical-grade lithium carbonate produced in the main plant;
- Excess steam and power generated by the sulphuric acid plant;
- High lithium recoveries due to recycle stream back into main plant; and
- A reduction in reagent costs achieved through the recycling of calcium carbonate back into the main plant.

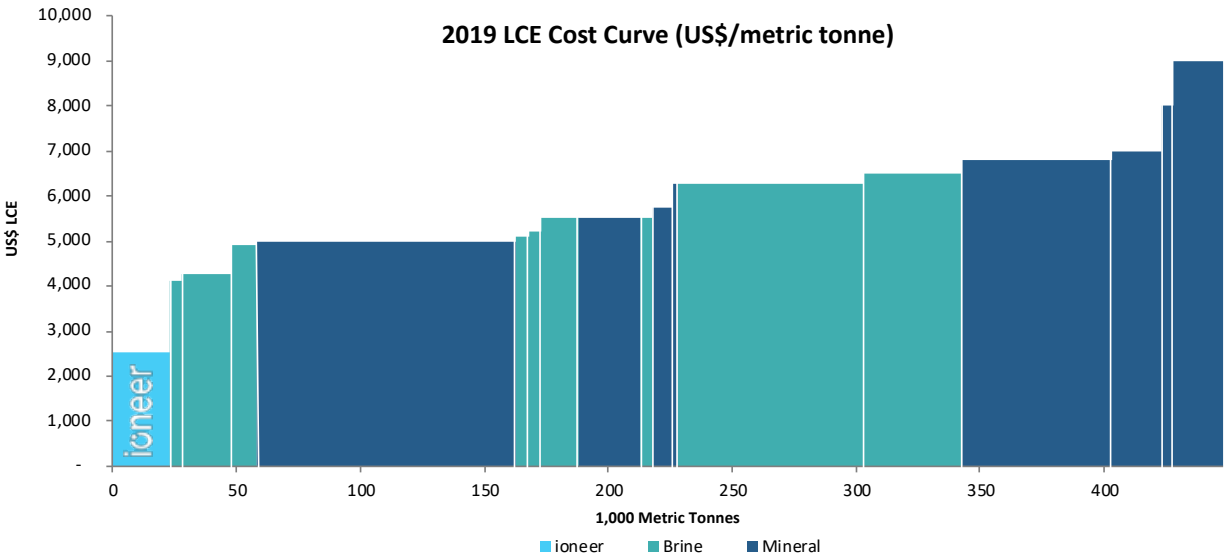
Figure 3 depicts the all-in sustaining operating cost curve for all lithium producers during 2019 globally, as estimated by independent industry consulting firm Roskill.

Rhyolite Ridge's industry leading all in sustaining cash cost of US$2,510 per tonne (average cost forecast over life-of-mine) places it approximately US$1,500 per tonne below that of the lowest cost brine-based producers currently operating in South America.

[8] All-in sustaining cash cost includes all direct and indirect operating costs related directly to the physical activity of producing lithium compounds, including mining/extraction, processing, refining and on-site general and administrative costs, royalties, production/export taxes, the cost of transporting the material to a terminal market, selling expenses, sustaining capital, community costs, site reclamation and closure cost obligation.

[9] For LCE calculation see page 20.

Figure 3. Lithium Carbonate Equivalent (LCE) Cost Curve



Source: Roskill for all producing lithium brine and mineral operations shown on this cost curve, except for ioneer estimate sourced from the Rhyolite Ridge DFS. Costs as shown are all-in sustaining costs. The Rhyolite Ridge all-in sustaining costs were based on the same methodology as the Roskill cost estimates.

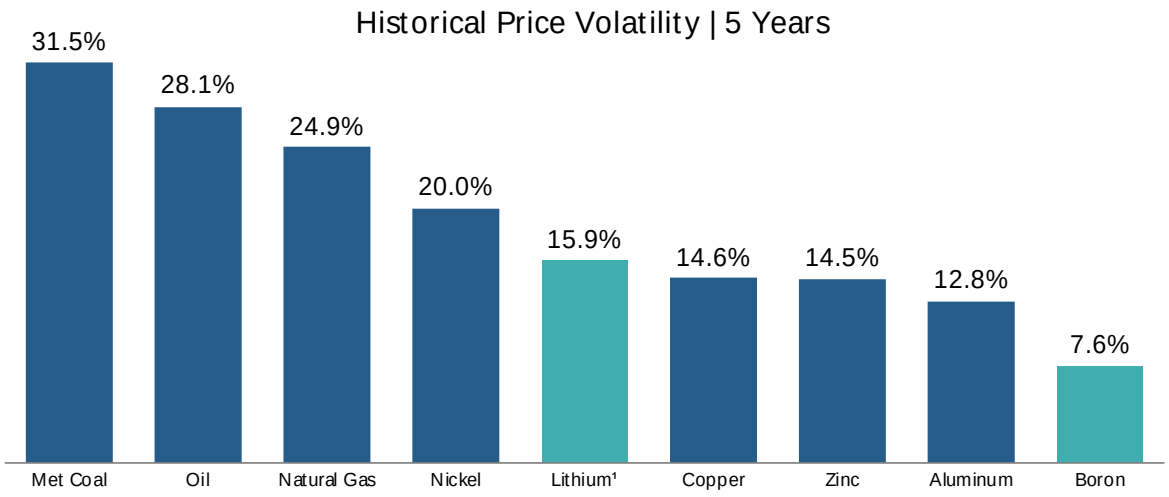
While lithium carbonate and lithium hydroxide are expected to see exceptional growth, the recent price volatility may continue in the future. The Company is able to counter lithium volatility through its boric acid credit, which has low price volatility and slightly above GDP demand growth. Together the two products help ensure financial resilience and the ability to maintain profitability through the price cycles.

Given that boric acid has traded in a range between US$600-US$900[10] during the past century, the 26-year average assumption of US$710 per tonne is appropriate. Even in a scenario with boric acid prices at US$500 per tonne LOM, which is a price that approaches the marginal cost of the boric acid industry, Rhyolite Ridge's all-in sustaining cash costs would be US$4,340 per tonne LCE, which would still put the Company at the bottom of the first quartile of global lithium producers.

As shown in Figure 4, boric acid prices have historically been significantly less volatile as compared to lithium and many other natural resource commodities.

[10] Ioneer market study conducted as part of DFS

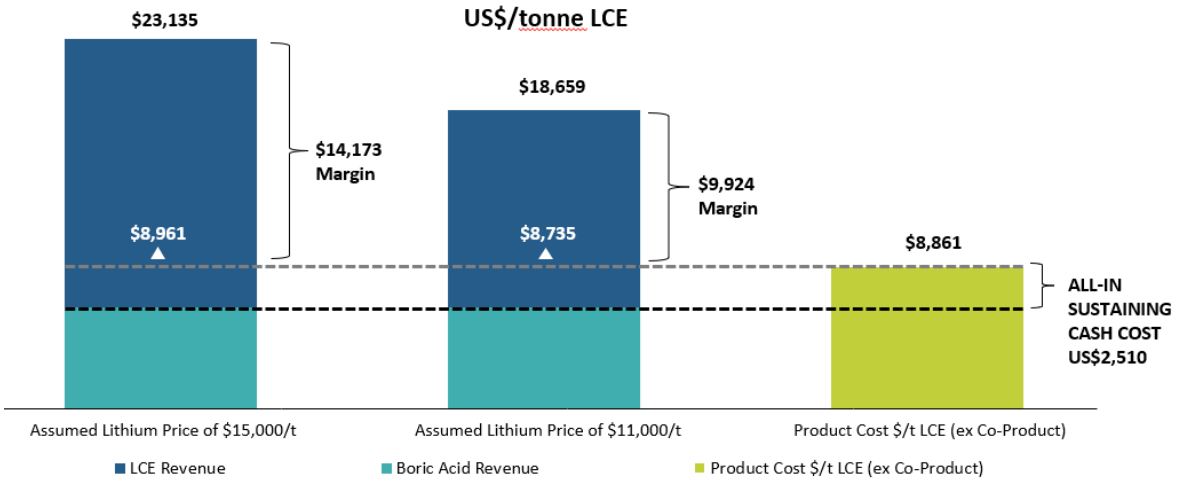
Figure 4. Historical Price Volatility



Source: Bloomberg L.P.

To better express what the combination of boron and lithium revenue means for the Company's revenue and operating margins, Figure 5 below shows boron in the bottom teal colored portion, lithium in the upper blue portion and the total cost of goods sold as a light green bar or white triangles at different lithium prices of US$11,000 and US$15,000. At US$710 per tonne for boric acid, the revenue generated from sales of this product pays for more than 70% of the total costs associated with producing lithium. The far-left column shows revenue and operating margin at US$15,000 per tonne of lithium, and US$710 per tonne of boric acid. In this scenario the Project will generate a margin of more than US$14,000 per tonne. The middle column shows lithium revenue at US$11,000 per tonne and US$710 per tonne of boric acid resulting in operating margins of 53%.

Figure 5. Revenue, Costs and Margins[11,12]



Source: Company Estimates

[11] LCE revenue is higher than the assumed lithium price due to conversion of lithium hydroxide to LCE by approximately 10%.

[12] The additional cost variance is due to state tax differentials at different lithium revenue levels.

WELL DEFINED AND RELIABLE OPERATING COST AND CAPITAL ESTIMATES

Operating Cost Estimates

The DFS's AACE Class 3 analysis of Project operating cost shows a total US$3,262 million over the course of the mine's 26-year life, implying per annum operating expenses of US$129 million on average. The current mine plan anticipates higher operating costs in years four through nine as a result of increased overburden removal.

Additionally, after year four, ioneer plans to leverage the calcium carbonate formed during the production of lithium hydroxide, which can be used in the carbonate impurity removal process, which materially lowers overall reagent costs. Figures 6 and 7 below show estimated annual costs as a total and per tonne of ore processed.

The lithium-boron zone is increasing in grade and shallowing to the south, meaning the delineation of additional ore to the south, outside of the current Mineral Resource is likely to flatten the mining costs in years four through seven, thus potentially having a significant positive impact on the mine plan and Project economics.

Figure 6. Project's Total Annual Costs

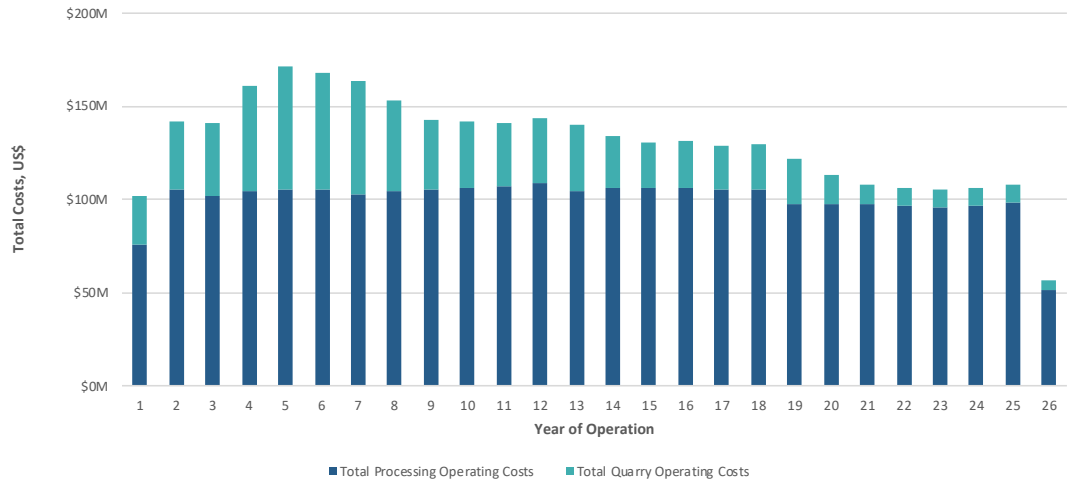
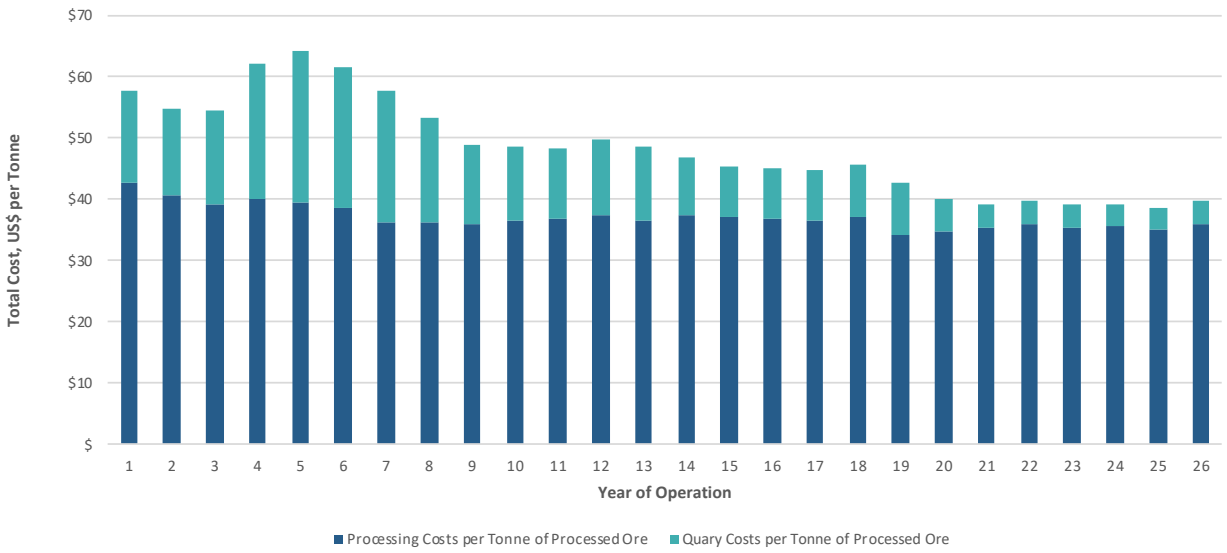


Figure 7. Project's Total Annual Costs per Tonne of Ore Processed



Capital Cost Estimates

The DFS process, which spanned more than 18 months, produced a 5,000 page study and an AACE Class 3 capital cost estimate with an accuracy range of ±15%. Figure 8 below summarises the total estimated cost to design and construct Rhyolite Ridge. The DFS resulted in a capital estimate increase of US$186 million, bringing the current total to US$785 million, as compared to the prior PFS estimate of US$599 million. This increase was largely driven by changes in scope, primarily related to onsite power generation (US$35 million), the relocation and larger size of the primary impurity removal circuit (US$16 million), as well as additional mine equipment and sulphur transportation trailers (US$17 million). In addition, there were sales tax and commissioning support expenses of US$28 million.

In addition to the initial capital of US$785 million, the Company will add in year three a lithium hydroxide circuit to convert the Project's technical grade lithium carbonate to battery-grade lithium hydroxide at a cost of US$74 million, which will be funded entirely via operating cash flow.

Figure 8. Summary of Capital Cost Estimates at Project

SUMMARY OF CAPITAL COST ESTIMATES AT PROJECT	
DESCRIPTION	**COST (US$)* MILLION**
Mine	13.6
Spent Ore Storage Facility	17.4
Processing Facilities	256.7
Sulphuric Acid Plant	101.6
Power Plant	21.9
Balance of Plant (Common)	60.8
SUBTOTAL – DIRECT COST	**472.3**
Owner's Cost	20.1
EPCM Services	62.6
Field Indirect Cost	55.7
Subcontractor's Indirects	45.5
Commissioning & Start-up	7.0
Capital & Operational Spares	5.0
Process Licenses	2.6
Sales Tax	21.7
Freight	17.9
Contingency at P50	57.6
SUBTOTAL – INDIRECT COST	**295.8**
TOTAL DIRECT & INDIRECT COST	**768.1**
Late Changes	17.3
GRAND TOTAL INCLUDING LATE CHANGES	**785.4**

*Figures rounded off

The maintenance and sustaining capital required for the 26-year period is estimated at US$274 million. Included in the operating capital is US$74million of capital additions in year three related to the construction of a battery grade lithium hydroxide circuit, and US$25 million for the addition of a heat recovery system at the acid plant to increase power generation capacity. Excluding these two one-time items, the average annual sustaining capital is US$6.9 million. Closure costs are incurred after the life of quarry and thus are not included in this estimate. Figure 9 below shows the specific segmentation of maintenance related costs.

Figure 9. Sustaining Capital Costs

SUSTAINING CAPITAL COSTS	
SUSTAINING AND CAPITAL PROJECTS	**TOTAL COST (US$ MILLION)**
Processing Mobile Equipment	9.1
Mining Mobile Equipment	47.4
Haul Road Expansion	1.3
Stormwater Controls Expansion	7.9
Spent Ore Storage Facility – Phase II	6.6
Spent Ore Storage Facility – Additional Capacity	73.9
LiOH Project Process Equipment*	40.0
LiOH Project Building and Improvements*	34.0
Acid Plant Heat Recovery System (HRS) Installation*	25.0
Catalyst Replacement	2.1
STG Refurbishment	1.5
Capital Updates/Building Replacements	20.0
Offsite Water Supply	5.0
Total	274.1

* Battery grade lithium hydroxide circuit and heat recovery system totaling US$99 million funded via operating cashflow to be operational in year four.

LONG-LIFE RESOURCE WITH EXPANSION POTENTIAL

Mineral Resources

The lithium and boron Mineral Resource is estimated at 146.5 million tonnes, including a Ore Reserve of 60.0 million tonnes. The company expects to mine and process 63.8 million tonnes over the 26-year mine life at an average annual rate of 2.53 million tonnes per year to produce, on average, 20,600 tonnes of lithium carbonate (99%) or 22,000 tonnes of lithium hydroxide and 174,400 tonnes of boric acid per annum.

From year four, the technical grade lithium carbonate produced will be converted to produce, on average, 21,951 tonnes of battery grade lithium hydroxide (99.5%) per annum. The Mineral Resource and Ore Reserve estimates are shown in figure 8 below. The 63.8 million tonnes to be mined represents 44% of the total Mineral Resource of 146.5 million tonnes. The current mine plan is made up almost entirely of Reserve material with 94% mined from the Reserve, of which nearly 50% is Proved Ore Reserve. The remaining 6% of material in the mine plan is from the Inferred Resource[13].

[13] There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The Resource remains open in three directions allowing for a potential extension to the life of the mine. The lithium-boron zone is increasing in grade and shallowing to the south, meaning the delineation of additional ore to the south, outside of the current Mineral Resource is likely to have a significant positive impact on the mine plan and Project economics. Access to the southern extension of the deposit for drilling is expected once the necessary EIS related permits are in place, which is expected by the second quarter 2021.

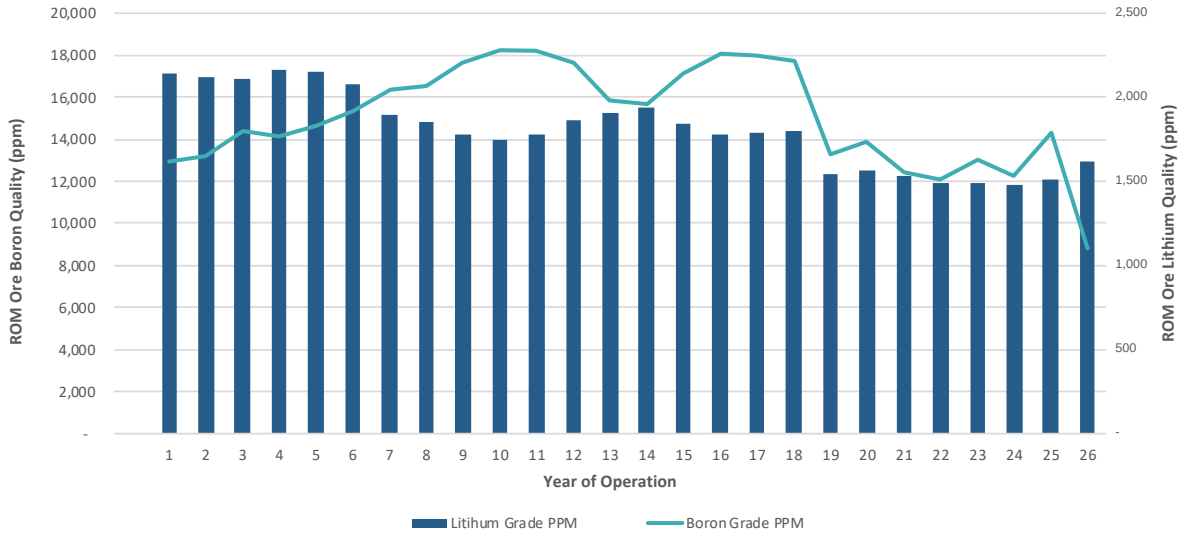
Figure 10. Mineral Resource and Ore Reserve Estimates

MINERAL RESOURCE AND ORE RESERVE ESTIMATES			
	TONNES (MILLION)	**LITHIUM (PPM)**	**BORON (PPM)**
Mineral Resource (Jan. 2020)			
Measured	39.0	1,700	14,550
Indicated	88.0	1,550	14,150
Inferred	19.5	1,600	13,800
Total	**146.5**	**1,600**	**14,200**
Ore Reserve (March 2020)			
Proved Ore Reserve	29.0	1,900	16,250
Probable Ore Reserve	31.5	1,700	14,650
Total Proved & Probable	**60.0**	**1,800**	**15,400**

ppm = parts per million
Totals may differ due to rounding. Mineral Resource includes Ore Reserves.

Figure 11 below illustrates the lithium and boron grades of the ore mined on an annual basis over the LOM. Lithium carbonate grade is slightly higher during the early part of the mining process and gradually decreases over the LOM as lithium content decreases during the mining of the lower phase of the deposit. Countering the higher than average grades in lithium, boron grades are expected to improve gradually for 10 to 15 years before declining slightly prior to its sunset period.

Figure 11. Lithium and Boron Grades



USA ADVANTAGE AND LOW-RISK MINING-FRIENDLY LOCATION

Rhyolite Ridge is located in Nevada and is easily accessible from Reno, Las Vegas and California ports. Nevada is considered a first-rate, mining-friendly jurisdiction, with a large pool of skilled labour, and well-established infrastructure. Additionally, the Project's location and proximity to the Pacific coast strategically positions ioneer for entrance into major US and Asian end markets.

As carbon emission regulations tighten across the globe and automotive OEMs look to produce a greater number of electric vehicles, demand for lithium is set to rise at a CAGR of 20.0%[14] through 2028.

Rhyolite Ridge will be well positioned to meet both North American and global demand for Lithium carbonate and battery grade lithium hydroxide. As the premier US Project, ioneer will be uniquely situated to supply the future US electric vehicle platforms of automotive OEMs. Benchmark Mineral Intelligence predicts that US demand for lithium carbonate and lithium hydroxide could exceed 344kt by 2025 with nearly no domestic supply. Additionally, Tesla's Gigafactory is located 203 miles northwest of the Project site.

CLEAR PATH TO COMPLETION

Construction Timeline

The Project schedule has a total duration of 41 months from commencement of the engineering, procurement and construction management (EPCM) phase to final completion. The schedule forecasts the earliest date for completion of the Project as 37 months from the start of the EPCM phase plus an additional 4 months for commissioning, start-up, and performance testing. From the second quarter of 2020 through the second quarter of 2021, all permitting, engineering, procurement and financing is expected to be complete. The construction phase of the schedule, which will commence early in the third quarter of 2021, is 25 months from site mobilisation to first production. Commissioning, preliminary operations, and performance testing will take place from

[14] Roskill

the third quarter of 2022 through the second quarter of 2023. The Company anticipates the first commercial product will be produced and shipped by 2023. The timeline is the current best estimate but there can be no assurances that the exact dates and timeframes will be met at exact intervals.

World Class Team

The DFS process took 18 months and produced more than 5,000 pages of analysis. It produced an AACE Class 3 capital cost estimate including Project deliverables from more than a dozen leading service providers across respective fields of specialty. The exhibit below lists several of our principal partners:

Sustainable Mining Practices

Environmental stewardship is core to ioneer's strategy and mission. The Company will produce lithium carbonate, lithium hydroxide and boric acid using an energy-neutral process with zero carbon dioxide (CO_2) emissions from heat and electricity generation, resulting in a process plant with low emissions of greenhouse gases and minimal hazardous air pollutants. The final processing design was derived after thousands of hours of bench and pilot plant tests with our partner Kemetco Research, and extensive work by the Project's engineering team, led by Fluor.

Water usage associated with the mineral extraction process is extremely low as compared to other lithium producers that utilise a more conventional brine extraction and solar evaporation methodology. The design is based on the recycling of the majority of water usage, which further reduces make-up water demand. Low-energy consumption, substantially reduced water usage, and a relatively small surface footprint make Rhyolite Ridge a sustainable, environmentally friendly operation. The plan is utilising well known and commercially proven technologies in the design of the processing facilities to enable safe and secure extraction of the unique Rhyolite Ridge ore. The process is expected to produce high quality products with low impurities at an overall recovery of 85% for lithium carbonate and 79% for boric acid.

In addition to an environmentally friendly mining operation, the Company is committed to protecting the local flora and fauna and community. Accordingly, ioneer is funding a five-year study at the University of Nevada, Reno (UNR) that is focused on the successful propagation and growth of

Tiehm's buckwheat in its natural habitat at Rhyolite Ridge. The Tiehm's buckwheat Protection Plan is a critical component of the Rhyolite Ridge environmental assessment and approval process.

Permitting and Approvals

The Project is expected to follow an Environmental Impact Statement (EIS) pathway under the National Environmental Policy Act (NEPA) process, which requires approval by the US Department of Interior's Bureau of Land Management (BLM). ioneer is actively preparing to meet these requirements. The NEPA requirements include baseline reports for 14 different resource areas of the Project, including air quality, biology, cultural resources, groundwater, recreation, socioeconomics, soils, and rangeland.

A Plan of Operations is also required by the BLM and includes measures to prevent unnecessary or undue degradation of public lands by operations authorised under the Mining Act (1872). In addition, the Project requires a number of other state and local permits, of which ioneer is in the process of obtaining.

The Project has been designed to be an environmentally sensitive operation with low water usage and water recycling and reuse where possible. There is sufficient water available to meet processing and dust control requirements.

Funding Options

To fund the Project the Company expects to utilise various sources of capital including, strategic partnering, debt and equity. With A$53.2 million of cash on hand at 31 March 2020, ioneer has the funding to progress the Project through to the final investment decision (FID), as well as enabling the Company to advance discussions with funding and offtake partners.

Key DFS outcomes are expected to assist in securing funding to develop the Project:

- Robust economics including strong cash flow, fast payback and high EBITDA margin
- All in sustaining cash cost at the bottom of the global cost curve
- Well defined and reliable operating cost and capital estimates
- 100% ownership and revenue from two products
- US advantage and low risk, mining-friendly jurisdiction
- Both products are critical to emerging clean-energy markets with limited long-term supply in USA - critical metals requiring secure, stable long-term supply.

The Project has the capacity to attract material debt financing and the Company is also exploring other opportunities for the funding required to build the Project, including potential offtake partners or other strategic investors at Project level.

The Company is positioned to deliver significant value and looks forward to the opportunity to partner with a wide range of strategic players.

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ABOUT IONEER

ioneer Ltd is the 100% owner of the Rhyolite Ridge Lithium-Boron Project located in Nevada, USA, the only known lithium-boron deposit in North America and one of only two known such deposits in the world. Rhyolite Ridge is expected to become a globally significant, long-life, cost-effective source of lithium and boron vital to a sustainable future.

Rhyolite Ridge's unique mineralogy allow lithium and boron to be extracted in a low-cost and environmentally sustainable manner. The Project's commercial viability is made possible by having both lithium and boron revenue streams.

Lithium is vital to enable technologies that combat climate change and reduce carbon emissions. It is a critical component for batteries essential to electric vehicles, and the conversion of intermittent green energy to base load power. The US Department of Interior listed lithium as a critical mineral in Executive Order 13817 (Federal Register, 83 FR 7065). There is only one producing lithium mine in the USA and no new projects are under construction. Rhyolite Ridge will help address the over-reliance on South American and Chinese supply to the lithium-ion battery industry.

Boric Acid is also a very important material for clean technologies and sustainability and is only produced in a few locations globally. It is used in over 130 applications, including permanent magnets for electric cars and wind turbines, advanced glass for televisions, computers, handheld devices and solar panels. Over 70% of global boron reserves are located in Turkey with Rhyolite Ridge well positioned to geographically rebalance supply in the USA.

COMPLIANCE STATEMENT

The information in this report that relates to Production Targets and 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'. 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 and Ore Reserves 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 Ore Reserve Increased 280% to 60 million tonnes" dated 30 April 2020 and released on ASX. Further information regarding the Mineral Resource and Ore Reserve 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.

FORWARD LOOKING STATEMENTS

Various statements in this report constitute statements relating to intentions, future acts and events which are generally classified as "forward looking statements". These forward looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other important factors (many of which are beyond the Company's control) that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed in this presentation. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements.

ioneer cautions security holders and prospective security holders to not place undue reliance on these forward-looking statements, which reflect the view of ioneer only as of the date of this report. The forward-looking statements made in this report relate only to events as of the date on which the statements are made. Except as required by applicable regulations or by law, ioneer does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events. Past performance cannot be relied on as a guide to future performance.

LITHIUM AND BORON CONVERSION FACTORS

Lithium and boron grades are fundamentally presented in parts per million (ppm) or percentages of each element in a given sample or estimate.

Lithium and boron grades are also expressed as various compounds in percentages in order to facilitate comparisons between different types of deposits and/or various products. The conversion factors presented below are calculated on the atomic weights and number of atoms of each element in the various compounds.

The standard lithium conversion factors are set out in the table below:

CONVERT FROM		CONVERT TO Li (LITHIUM)	CONVERT TO Li_2O (LITHIUM OXIDE)	CONVERT TO Li_2CO_3 (LITHIUM CARBONATE)
Lithium	Li	1.000	2.152	5.322
Lithium Oxide	Li_2O	0.465	1.000	2.473
Lithium Carbonate	Li_2CO_3	0.188	0.404	1.000
Lithium Hydroxide Monohydrate	LiOH H_2O	0.169	0.356	0.880

Lithium (chemical symbol: Li) is the lightest of all metals and the third element in the periodic table. The element lithium does not exist by itself in nature but is contained within mineral deposits or salts including brine lakes and sea water.

The use of Lithium Carbonate Equivalent (LCE) is to provide data comparable with various lithium industry reports. LCE is often used to present the amount of contained lithium in a standard manner, i.e. – to convert lithium oxide or hydroxide into lithium carbonate.

The formula used for the LCE values quoted in this report is:

LCE = (lithium carbonate tonnes produced + lithium hydroxide tonnes produced) * 0.880

The Rhyolite Ridge DFS has demonstrated that the lithium included in the LCE calculation has reasonable potential to be recovered and sold.

The standard boron conversion factors are set out in the table below:

CONVERT FROM		CONVERT TO B (BORON)	CONVERT TO B_2O_3 (BORIC OXIDE)	CONVERT TO H_3BO_3 (BORIC ACID)
Boron	B	1.000	3.219	5.718
Boric Oxide	B_2O_3	0.311	1.000	1.776
Boric Acid	H_3BO_3	0.175	0.563	1.000

Boron (chemical symbol: B) is a rare light metal and the fifth element in the periodic table. The element boron does not exist by itself in nature. Rather, boron combines with oxygen and other elements to form boric acid, or inorganic salts called borates.

Borates are an important mineral group for modern society with demand expected to continue to grow at or above global GDP rates. There are few substitutes for borates especially in high-end applications and agriculture. These markets are expected to grow as global population grows and becomes more affluent.

APPENDIX A – KEY ASSUMPTIONS & INPUTS

Operating Cost Estimates

The Opex basis of estimate defines the assumptions, sources of information, and means of estimating the operating expenses for the project. An overview of the Opex and sustaining capital costs for the Rhyolite Ridge Project are shown below (by total 26-year cost and per-year cost), with Opex details provided below.

Operating and Sustaining Costs Summary	26-year Life of Mine	
	Total Cost (US$ million)	Average Cost/Year (US$ million)
Operating Expenditure (Opex)		
Process Plant Opex	2,466	97.7
Quarry Opex	796	31.5
Total Opex	**3,262**	**129.2**
Sustaining Capital		
Sustaining Capital Total	274	10.5
Capitalised Deferred Stripping	202	7.8
Total Sustaining Costs	**476**	**18.3**

The distribution of operating costs is shown below. Reagents such as sulphur, soda ash, and hydrated lime make up the majority of these costs; however, transport costs of these reagents exceed the material costs. The total personnel cost includes direct hire of ioneer staff, without corporate staff and outsourced services personnel.

Distribution of Opex Costs	Total Cost (US$ million)	As a % of Total
Total Freight (Reagents and Products)[15]	961	29.4%
Total Personnel Cost	832	25.5%
Total Reagents	778	23.9%
Total Fuels	259	7.9%
Total Maintenance Materials and Services	189	5.8%
Total Other Materials and Services	112	3.4%
Total Other Including Equipment Leases	333	10.2%
Less: Deferred Prestripping Transfer to Sustaining Capital	(202)	(6.2%)
Total Operating Costs	**3,262**	**100.0%**

Summary LOM Operating Costs	Total Cost (US$ million)	Cost/Tonne of Ore (US$ million)
Quarry	796	12.48
Processing	2,466	38.66
Total	**3,262**	**51.14**

[15] Total freight includes the cost of transporting reagents to the site and transporting finished product from the mine gate to the customer or their nearest port.

Key Assumptions

Assumption	Value
Mine Life: Life of Quarry	26 years
Lithium Carbonate Price (ex-plant)	US$11,740/tonne average LOM
Lithium Hydroxide Price (ex-plant)	US$13,423/tonne average LOM
Lithium Compounds Price (ex-plant)	US$13,206/tonne average LOM
Boric Acid Price (ex-plant)	US$710/tonne average LOM
Ore Feed	2.53 mtpa average LOM
Sulphur Supplies	11% of annual Opex
Sulphur Freight	15.5% of annual Opex
Quick Lime Supplies	7% of annual Opex
Lime Freight	3% of annual Opex
Soda Ash Price	6% of annual Opex
Soda Ash Freight	2% of annual Opex
Diesel	US$2.34 per gallon
Escalation	None
Discount rate	8% Real
Remediation expense	US$20 million
Federal Tax Rate	21%
Nevada Minerals Tax	5%
Nevada Property Tax	3.02%, applied to 35% of assessed Book Value
Nevada Modified Business Tax	2% applied to Taxable Wages
Nevada Sales Tax	6.85%
Nevada Commerce Tax	0.051% applied to Gross Revenue

Mine Plan: Annual Ore Feed to Process Plant

Description	Total/ Average	Production Year												
		-1	1	2	3	4	5	6	7	8	9	10	11	12
ROM OB/IB/UB and Non-Economic Material														
Total Tons (000s tons, dry basis)	447,730	1,814	19,668	19,582	19,599	34,554	34,470	34,410	34,311	27,264	27,217	27,241	27,235	27,261
ROM Ore														
Total ROM Ore Tons1 (000s tons, dry basis)	63,800	-	2,286	2,371	2,355	2,359	2,443	2,503	2,602	2,619	2,666	2,642	2,647	2,621
Average Specific Gravity (tons/BCY, dry basis	1.67	-	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
Boric Acid (H3BO3) (%)	9%	-	7.41%	7.56%	8.21%	8.07%	8.38%	8.77%	9.34%	9.46%	10.08%	10.41%	10.42%	10.09%
Lithium Carbonate (Li2CO3) (%)	1%	-	1.14%	1.13%	1.12%	1.15%	1.15%	1.11%	1.01%	0.99%	0.95%	0.93%	0.95%	0.99%
Boron (ppm)	15,326	-	12,960	13,210	14,357	14,108	14,644	15,332	16,325	16,532	17,632	18,206	18,212	17,636
Lithium (ppm)	1,809	-	2,140	2,121	2,106	2,158	2,152	2,077	1,891	1,858	1,780	1,749	1,781	1,859
Strip Ratio	7.02		8.60	8.26	8.32	14.65	14.11	13.75	13.19	10.41	10.21	10.31	10.29	10.40

Description	Total/ Average	Production Year													
		13	14	15	16	17	18	19	20	21	22	23	24	25	26
ROM OB/IB/UB and Non-Economic Material															
Total Tons (000s tons, dry basis)	447,730	27,289	12,361	12,319	12,303	12,334	12,369	11,313	3,209	2,133	1,679	1,499	1,944	2,095	255
ROM Ore															
Total ROM Ore Tons1 (000s tons, dry basis)	63,800	2,593	2,581	2,623	2,639	2,607	2,572	2,599	2,538	2,498	2,404	2,470	2,459	2,578	524
Average Specific Gravity (tons/BCY, dry basis	1.67	1.65	1.65	1.65	1.65	1.65	1.65	1.69	1.74	1.71	1.73	1.73	1.74	1.71	1.78
Boric Acid (H3BO3) (%)	9%	9.05%	8.95%	9.78%	10.33%	10.28%	10.13%	7.59%	7.95%	7.13%	6.90%	7.47%	7.02%	8.19%	5.04%
Lithium Carbonate (Li2CO3) (%)	1%	1.01%	1.03%	0.98%	0.95%	0.95%	0.96%	0.82%	0.83%	0.82%	0.80%	0.79%	0.79%	0.81%	0.86%
Boron (ppm)	15,326	15,817	15,654	17,091	18,067	17,967	17,706	13,274	13,902	12,471	12,072	13,069	12,281	14,324	8,809
Lithium (ppm)	1,809	1,904	1,938	1,845	1,783	1,786	1,795	1,539	1,563	1,531	1,494	1,493	1,482	1,515	1,617
Strip Ratio	7.02	10.52	4.79	4.70	4.66	4.73	4.81	4.35	1.26	0.85	0.70	0.61	0.79	0.81	0.49