

**UCORE RARE METALS INC.**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**FOR THE PERIOD ENDED JUNE 30, 2019**

*This Management's Discussion and Analysis of Ucore Rare Metals Inc. ("Ucore" or the "Company"), prepared as of August 29, 2019 provides analysis of the Company's financial results for the period ended June 30, 2019. The following information should be read in conjunction with the interim condensed consolidated financial statements and notes thereto for the period ended June 30, 2019 which are prepared in accordance with International Financial Reporting Standards. All amounts are expressed in Canadian dollars unless otherwise noted.*

*This discussion includes certain statements that may be deemed "forward-looking statements". All statements in this discussion document, other than statements of historical facts, that address anticipated and/or future activities, circumstances, operating costs, possible future resource property expenditures, reserve potential, exploration drilling, exploitation activities, the potential for molecular recognition technology to be used in the processing of rare earth elements, arbitration, mediation, negotiation, settlement, financing(s), business acquisition activities, and events or developments that the Company expects or envisages, are considered forward-looking because we have used what we know and expect today to make a statement about the possible future. Although the Company believes the expectations or circumstances expressed in such forward-looking statements are based on reasonable assumptions or expectations, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Forward-looking statements usually include words such as may, expect, plan, anticipate, budget, believe or similar words. Factors that could cause actual results to differ materially from those in forward-looking statements include: market prices and changes thereto; exploitation and exploration successes; continued availability of capital and financing; unexpected due diligence findings; counterparty risk; non-compliance by parties to their contracts; and general economic, market or business conditions. Additional details of the specific risks associated with the business and operations of the Company and such forward-looking statements are set out below under "Risks and Uncertainties". Investors are cautioned that any such statements are not guarantees of future performance and that actual results or developments may differ materially from those projected in the forward-looking statements.*

## **Overview**

### **Pre-2018 - Historical Information**

Ucore Rare Metals Inc. is a junior exploration and technology company listed on the TSX Venture Exchange (the "Exchange"). Ucore's corporate strategy is to build shareholder value through the exploration and development of economically viable rare earth element ("REE") mineral properties and the processing of third party concentrates or tailings using an intended joint-venture partner's molecular recognition separation technology ("MRT") that has been expected to be supplied to the joint-venture via a prospective license and supplier agreement by IBC Advanced Technologies, Inc. ("IBC", a research collaborator and the intended co-owner in the joint venture). During the past decade, Ucore has focused its exploration activities on its Bokan Mountain/Dotson Ridge mineral property in Alaska, while exploring various options for advancement of its other non-material mineral properties. In addition, from 2014 to 2018, Ucore purchased services from IBC that were intended to develop the MRT technology while pursuing potential customers for the joint-venture and this business line.

On November 28, 2012, the Company announced the results of a preliminary economic assessment (PEA), prepared by Tetra Tech on the Company's Bokan Dotson Ridge property located in Alaska, which estimated a net present value (NPV) of \$577 million at a 10% discount rate and an internal rate of return (IRR) of 43%. Further details of the assessment are disclosed below. A copy of this preliminary economic assessment (NI 43-101 technical report) was filed on SEDAR on March 14, 2013.

On February 18, 2014, Alaska Senator Bert Stedman (AK-R) presented an Amendment to Alaska Senate Bill No. 99 ("SB99" or "the Bill"), originated by Alaska State Senator Lesil McGuire (AK-R) in 2013. The amended Bill would

give the Alaska Industrial Development and Export Authority (“AIDEA”) the authority to issue long term bonds to finance the infrastructure and construction costs of the Bokan-Dotson Ridge rare earth project up to a Principal Amount of \$145,000,000 USD subject to its own board approval and due diligence. SB 99 passed through the Alaska State Senate in a unanimous vote, with all 20 senators voting in favor of the Bill. On April 28, 2014, SB 99 passed the Alaska State Legislature in a unanimous vote with all 38 representatives in attendance voting in favor of the bill. AIDEA will undertake its due diligence subsequent to the completion by the Company of a feasibility study on the Bokan-Dotson Ridge property.

On March 2, 2015, the Company announced that the Company had used MRT to successfully separate each of the rare earth elements at high purity utilizing a proprietary MRT circuit developed by IBC. The rare earth carbonates were produced from a pregnant leach solution (“PLS”) derived from Ucore’s Bokan Dotson-Ridge feedstock. Each rare earth element was separated to a purity level exceeding 99%. The separation procedure, employing a customized hydrometallurgical process, was accomplished across the entire lanthanide suite, from lanthanum (La) to lutetium (Lu), inclusive, plus yttrium (Y) and scandium (Sc).

On March 3, 2015, the Company announced that it had entered into an agreement with IBC Advanced Technologies, Inc. to acquire the exclusive rights to IBC’s MRT for rare earth separation and recycling applications, in addition to tailings processing applications. Under the terms of the agreement, the Company has agreed to pay a one-time licensing fee to IBC in the amount of \$2.9 million USD. The Company has made payments of approximately \$1.9 million up to June 30, 2019 towards this licensing fee. The payment is subject to the delivery by IBC of a fully operational rare earth pilot plant and due diligence review by the Company. Upon satisfactory completion of the foregoing terms and conditions, at the Company’s discretion, the parties agree to create a joint venture corporation to be co-owned by IBC and Ucore for the purpose of marketing and purveying IBC’s MRT products and services. The joint venture will utilize IBC’s proprietary technology on a royalty free basis for rare earth processing, recycling application, and tailings processing. When launched, the Company will have up to a 60% controlling interest in the joint venture and IBC will own a 40% equity interest as well as act as a supplier of MRT products and services to the joint venture. The payments discussed above, as well as a commitment to provide a minimum of \$1,000,000 USD in start-up capital will form the basis for the Company’s contribution to the joint venture.

On May 11, 2015, the Company announced that it had upgraded the Bokan Dotson Ridge resource using the data from the 2014 drilling program. The details of this upgrade are discussed in more detail in the Resource Property Interests section.

On May 20, 2015, the Company entered into an agreement in which \$4,000,000 USD was raised through the sale of a royalty on the future sale of products and services related to the processing of rare earth elements and other specialty metals and critical materials utilizing the MRT process. This royalty was convertible into common shares under certain conditions and has been converted at a rate of \$0.25 per share, resulting in the issuance of 22,996,800 common shares.

On August 6, 2015, the Company entered into a second royalty based financing in which \$1,000,000 USD was raised through an arrangement similar to the May 20, 2015 financing, and was also converted a rate of \$0.25 per share resulting in the issuance of 5,749,200 common shares.

On October 10, 2015, the Company entered into a third royalty based financing in which \$383,310 (\$300,000 USD) of short term debt was forgiven in exchange for a royalty on production from future MRT installations. This royalty was convertible to common shares under the same terms as the two royalty based financings outlined above and has also been converted at a rate of \$0.25 per share resulting in the issuance of 1,724,761 common shares.

On December 8, 2015, the Company entered into a fourth royalty based financing for \$5,000,000 USD. The royalty was to be on production from future MRT installations and was to be comprised of a gross royalty of 5% of sales payable until the recapture of the investment; and a net smelter royalty on the Company's first MRT installation. On March 4, 2016, the investor exercised their right to convert their royalty investment into common shares of the Company. The investor initially paid \$2.5 million USD (approximately \$3.3 million CAD) for the royalty which was converted at a rate of \$0.26625 per share. At the conversion date, the liabilities were converted into 12,676,050 common shares of the Company. On May 30, 2016 the Company announced it had amended the terms to the USD \$2.5M balance outstanding on the royalty agreement. Under the revised terms of the amended agreement, the Investor was obligated to increase its remaining investment from USD \$2.5M to USD \$6M and elected to convert the royalty into shares in the Company. This resulted in the issuance of 25,344,821 units upon receipt of USD \$5.7 million in proceeds. A second closing of this financing took place on July 22, 2016 in which USD \$300,000 (\$450,002) was raised through the issuance of 1,500,007 shares at \$0.30 per share representing the remainder of the conversion. This second closing brought the total shares issued pursuant to the conversion to 26,844,828.

On January 15, 2016, these investors exercised their right to convert their royalty investment into common shares of the Company. The investors initially paid \$5.3 million USD for the royalties which were converted at a rate of \$0.25 per share. At the conversion date, the liabilities were converted into 30,470,760 common shares of the Company.

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On March 7, 2016, the Company announced the completed construction of the Company's MRT pilot plant built by IBC Advanced Technologies. Commissioning and acceptance of feed-stock for the plant were both announced on April 5, 2016.

On June 7, 2016, the Company announced that it had completed the first steps in processing the Bokan-Dotson Ridge feedstock through its pilot plant. This involved the PLS being separated into two classes of REE: heavy REE, comprised of samarium to lutetium ("HREE") and light REE, comprised of lanthanum to neodymium plus yttrium ("LREE"). The class separations have been achieved at 99%+ purity and 99%+ recovery.

On August 15, 2016, the Company announced that it had produced 99.99% dysprosium from the Bokan-Dotson Ridge feedstock using the MRT pilot plant. The pure Dy was recovered from the samarium dysprosium sub group of the heavy rare earth element class consisting of samarium through to lutetium.

On September 26, 2016, the Company announced that an independent third party had reviewed and confirmed all results previously disclosed regarding the operation of the pilot plant.

On November 15, 2016, the Company announced the initiation of the development of a US-based Strategic Metals Complex (the "SMC") that is intended to be designed to capitalize on the technology platform advanced via the Company's recently completed pilot plant. The SMC will be comprised of a multi-metals production plant designed to receive and separate feedstock containing critical materials such as REEs and Platinum Group Metals ("PGM") (rhodium, palladium and platinum).

On February 8, 2017, to Company announced that it had completed the Phase One (the PGM Phase) engineering of the SMC discussed above. The PGM refinery is expected to be part of the business of the prospective MRT joint venture with IBC and the SMC is being specifically designed to receive, process and separate recycled catalytic converter material which has been concentrated to a metal alloy via a plasma arc smelter. The refinery design consists of three distinct processing areas: (i) Pre-MRT post-smelter metal alloy dissolution; (ii) MRT PGM metal separations; and (iii) Post-MRT PGM sponge and specialty salt making. The final PGM refinery design allows for an ultimate annual production capacity of 750,000 troy ounces (all Stages complete) comprised of 99.95%

Rhodium, 99.98% Palladium and 99.98% Platinum pure sponge material and or specialty salts. The spatial design of the PGM refinery will utilize a 25,600 square foot facility situated on a 3-acre complex.

On March 13, 2017, the Company announced that it had made payments totalling \$650,000 USD in non refundable payments in respect of a purchase option from IBC and holders of many of its shares. This call option allows the Company to purchase the outstanding shares of IBC in exchange for cash considerations totalling \$10,000,000 USD and an issuance of 4,000,000 units. These units consist of one common share of the Company plus one half of a common share purchase warrant. Each full warrant shall entitle the holder to acquire one additional Common Share of Ucore at a strike price equal to the market price of the common shares of Ucore as of the date on which the option is exercised. Upon the exercise of the option, IBC key personnel shall be entitled to receive performance incentives and payments totaling 7% of annual EBITDA for each of the first 5 years of IBC's operations subsequent to the execution of the option. This option had an expiry date of March 14, 2019. On February 14, 2019 the Company issued the Notice of Commencement ("NOC") to purchase IBC. Further details regarding the NOC and purchase of IBC are outlined below. Shareholders representing the majority of the outstanding and fully diluted shares of IBC are parties to, and signatories to, the option agreement. In the event that any shareholder that is not a party to the option agreement elects not to sell their shares to the Company, consideration to be paid would be adjusted to reflect the percentage of the Company that is not acquired.

On March 28, 2017, the Company extended the term and amended the exercise price of certain share purchase warrants of the Company. A total of 20,731,912 share purchase warrants were originally issued by the Company pursuant to the closing of equity offerings as originally announced on April 11, 2014. Each share purchase warrant entitled the holder to purchase one common share of the company at a price of \$0.50 per common share for a period of 36 months. A total of 20,731,912 of these Warrants remained outstanding at December 31, 2016. As a result of market conditions during the term of the Warrants and the capital raising opportunity represented by the Warrants, subsequent to December 31, 2016, the Board of Directors of the Company approved an amendment to the term of the original Warrant so that the term will be extended from between April 11-17, 2017 to between April 11-17, 2019. In addition, the exercise price of the warrants will be amended to \$0.305. In accordance with the policies of the TSX Venture Exchange, in the event that the market price of the Company's common shares exceeds \$0.38125 for ten consecutive days, the remaining term of the warrants will be reduced to 30 days. As of the date of this report these warrants have expired and have not been extended.

On June 5, 2017, the Company entered into a Memorandum of Understanding ("MOU") with Commerce Resources Corp. ("Commerce") for the purpose of integrating feedstock from Commerce's Ashram Project in Quebec (the "Ashram Project") with Ucore's recently announced rare earth separation facility and SMC. The MOU will enable the Company to receive quantities of mixed rare earth carbonate concentrate, using material from the Ashram Deposit (the "Ashram Concentrate"), sufficient to perform bench and pilot scale testing of the metallurgy and metals separation metrics of the prospective feedstock.

On July 26, 2017, the Company announced the initial testing of three samples at the Activation Labs facility in Ancaster, Ontario facility ("Act Labs"). The testing achieved a near-quantitative removal of deleterious carbon content and in combination further advancing the quality of competing oil sands PLS samples. The Company plans on using one (or more) of the competing PLS samples for submission to advance metals separation using MRT at IBC Advanced Technologies' facility in American Fork, Utah.

On August 10, 2017, the Company completed a non-dilutive financing of \$2,000,000 USD ("the Purchase Price") through a sale leaseback of it's MRT pilot plant to Orca Holdings, LLC ("Orca"). Orca will lease the MRT pilot plant to Ucore over a 3-year term at an annual lease rate of 15% (the "Term"). The Company is required to make monthly interest only payments to the lessor of \$25,000 USD. At the option of the either party, the lease may be terminated upon the payout by Ucore of the Purchase Price at any time commencing the second year of the Term. At the end of the Term the Company will purchase the MRT pilot plant from Orca for the purchase price. On March 30, 2019, the Company repurchased the MRT Pilot Plant from Orca as noted below. Orca is a related party to the Company and further details of the related party relationship are discussed in the Related Party Transactions section below.

On October 26, 2017, the Company announced the completion of analytical characterization of a pregnant leach solution derived from the Alberta oil sands (the “Beta PLS”) by IBC. IBC completed a detailed analysis of the Beta PLS using Inductively Coupled Plasma Spectrometry (“ICP”), an analytical instrument used for determining the presence and level of chemical elements in a solution. Based on the ICP results, IBC concluded that the Company’s proprietary leach circuit (the “Bentzen Process”) has generated a solution in which the carbon content, base metals and other deleterious constituents have been contained to levels conducive to MRT, and there are no technical barriers which would indicate an inability to recover high purity REE from PLS.

## **2018 Information**

On January 30, 2018, the Company announced its intention to eventually create a US Strategic Metals Complex (the “SMC”) in Alaska. The prospective SMC would target the separation of rare earth containing concentrates to coincide with the increasing demand for electric vehicles and the need to provide a domestic supply of individual REE oxides for US commercial and military technologies. Feedstock from locations in the continental US, South America, Africa, Asia, and Australia are under consideration. The SMC could also potentially serve as the separation plant for REEs mined from the Bokan project into individual saleable rare earth oxides. Ucore envisions one or two additional SMCs strategically located within the U.S. to provide domestic supply of REE oxides and other critical metals required to support North American manufacturing and security.

On February 12, 2018, the Company announced that Michael Schrider had been appointed to the position of Chief Operating Officer. This position had been vacant at the Company since the sudden passing of Ken Collison in August 2016. prior to this appointment, Mr. Schrider was retained by the Company pursuant to a consulting agreement where he fulfilled the role of V.P. Operations and Engineering. Mr. Schrider holds a B.Sc. degree in engineering from the University of New Orleans and is a Registered Professional Engineer in the State of Louisiana.

On March 5, 2018, the Company announced that it is entering its second phase of Alaska SMC due diligence, including: (i) specific site selection within the Ketchikan Gateway Borough, (ii) design engineering, (iii) construction costing (CAPEX), (iv) finalization of input feedstocks from the short - list of competing alternatives, and (v) operational costing (OPEX). As noted above, AIDEA announced a possible investment of up to USD \$145 Million in the Bokan-Dotson Ridge rare earth element project at the discretion of AIDEA. Included in that investment proposal was an allocation for the design and construction of a REE separation facility. The Company intends to submit engineering, business and construction plans for the Alaska SMC under this authorization for consideration, due diligence, review and approval.

On March 7, 2018, the Company entered into a memorandum of understanding (“KRP MOU”) to form a strategic joint venture (“KRP JV”) with Kentucky River Properties LLC (“KRP”). The Company entered into the KRP MOU for the purposes of accessing and processing REE’s and strategic metals from the Appalachian Coal Region (“ACR”). Under the KRP JV, the Company and KRP have plans to create and co-own a US-based Limited Liability Company (LLC). KRP will make available its properties containing REE and strategic metals feedstock to the KRP JV, consultative services, and data management regarding the resource. The Company, through its anticipated joint-venture affiliate involving IBC, will provide REE and strategic metals processing and refining technologies, plant engineering, design, construction and maintenance services, in addition to downstream offtake relationships for the purchase of high purity output products.

On May 7, 2018, the Company announced it has engaged IBC to commence advanced engineering and design procedures for the SMC to be constructed in Alaska as noted above. The advanced engineering and design (E&D) process is intended to culminate in a technical and economical document which will form the basis of financing discussions with the AIDEA.

On June 28, 2018, the Company announced it had completed a non-brokered private placement of 6,899,629 units at \$0.18 per unit, for total proceeds of \$1.24 million. Each unit consists of one common share and one common share purchase warrant. Each warrant gives the holder the right to purchase one common share at an exercise price of \$0.25 for a period of 36 months. Certain insiders of the Company purchased a total of 2,416,667

units for gross proceeds to the Company of approximately \$435,000, which is considered a related party transaction within the meaning of Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions. The net proceeds from the financing are being used for general corporate purposes.

On September 24, 2018, the Company announced it has entered into an agreement to purchase a 6-acre land package in Ketchikan, Alaska for the planned SMC. The Company has terminated the agreement based on preliminary engineering and the property configuration.

On November 6, 2018, IBC Advanced Technologies, Inc. issued a press release announcing the resignation of Mr. Steven R. Izatt, IBC's President and CEO, and Dr. Reed M. Izatt from the Advisory Board of the Company. "IBC has assessed that its goals are no longer aligned with those of Ucore," stated Mr. Izatt. "Although we have enjoyed our association with the Ucore team over the past several years, it has become increasingly apparent that Ucore and IBC are on divergent paths and our continuation in an advisory role would no longer be beneficial." This announcement effectively curtailed the efforts between Ucore and IBC to collaborate with certain research and development projects and with co-developing a joint venture enterprise in accordance with a research agreement between the parties dated April 29, 2014 (as amended). Accordingly, the Company turned its immediate attention to the Company's option to acquire control of IBC. Ucore holds this option pursuant to an agreement dated March 14, 2015 (as amended).

On November 7, 2018, the Company announced its intention to exercise its option to purchase IBC in accordance with the terms previously agreed to by Ucore, IBC, and majority shareholders of IBC, and embodied in the Option to Purchase Agreement dated March 14, 2015, as amended on June 1, 2016 (the "OTP Agreement"). Pursuant to the terms of the OTP Agreement, the Company must deliver a Notice of Commencement ("NOC") to IBC by March 14, 2019 in order to initiate proceedings to complete the acquisition of IBC. The Company delivered the NOC to IBC on February 14, 2019. Consideration paid for the OTP Agreement totaled USD\$650,000, comprised of USD\$300,000 pursuant to the OTP Agreement dated March 14, 2015, plus an additional USD\$350,000 pursuant to an agreement to extend the term of the OTP Agreement dated June 1, 2016. In total, the consideration equates to approximately CAD\$850,000. The Company has retained the services of the international law firm of Dorsey & Whitney LLP as Ucore's U.S. legal counsel (with offices in Utah and Alaska) to facilitate the intended exercise of the Company's option to purchase IBC. Ucore believes that during the years in which IBC and Ucore have been working together, the business potential of IBC in the metals extraction and purification industry has increased immensely, thereby making decisions about short-term business objectives, day-to-day control and determining the priority of the prospective joint venture's projects a challenge to agree upon in regard to the joint venture's still pending implementation and launch. In addition, the financial opportunities and business potential that have emerged in the metals extraction and purification industry generally (especially in regard to technology metals such as lithium, cobalt, tungsten, and many more) have made it compelling for the Company to intend to exercise its option to acquire IBC. Ucore and IBC have exchanged detailed listings about concerns and sensitivities regarding the agreements between them, including concerns related to potential breaches of the understandings therein, the mechanics and deliverables of the due diligence process inherent in the acquisition, as well as expectations regarding the transfer of the ownership of IBC. IBC has stated that it believes that the parties are on divergent paths and has demanded that the Company waive its rights under the Agreements or otherwise terminate the agreements. The Company does not intend to do so. Subsequent to this, IBC attempted to assert that the Agreements had already been terminated. The Company indicated that there are no written or verbal agreements to terminate either of the Agreements, and reiterated that it will not be swayed in its intention to exercise the mutually binding and fully executed OTP Agreement. Certain agreements between the Company and IBC have arbitration clauses that may provide and allow for an orderly and structured forum to resolve these differences. The Company is hopeful that a structured approach to good-faith negotiations, whether that being formal mediation, arbitration or otherwise, will expedite a satisfactory resolution between the parties that will allow for development of the opportunities that both parties envisioned at the onset of engaging in the various agreements amongst these parties.

On December 11, 2018, the Company announced it had completed a non-brokered private placement of 3,333,333 units at \$0.15 per unit, for total proceeds of \$500,000. Each unit consists of one common share and one-half common share purchase warrant. Each warrant gives the holder the right to purchase one common

share at an exercise price of \$0.20 for a period of 36 months. Certain insiders of the Company purchased a total of 2,833,333 units for gross proceeds to the Company of approximately \$425,000, which is considered a related party transaction within the meaning of Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions. The net proceeds from the financing are being used for general corporate purposes.

## 2019 Information

On January 2, 2019, the Company announced the closing of a shares for debt transaction. The Company issued 2,702,702 common shares at a price of \$0.15 cents per common share to settle an aggregate of \$300,000 USD or \$405,405.41 in fees payable to Orca Holdings, LLC for consulting services rendered under a consulting agreement between the parties. Orca Holdings, LLC is an insider of the Company and the issuance of common shares pursuant to the settlement arrangement constituted a related party transaction, as this term is defined in Multilateral Instrument 61-101 – Protection of Minority Security Holders in Special Transactions.

Later in January 2019, Ucore was served with a complaint, filed by IBC in the Third District Court of the State of Utah, against Ucore, Jim McKenzie, Mark MacDonald, Randy McGillivray, and John Does I and II, seeking damages of no less than USD\$20 million based on violation of common law and statutory claims, including misappropriation of IBC's trade secrets and confidential information, infringement of IBC's trademarks, unfair competition, misrepresentation of IBC's intellectual property as its own; defamation of IBC and Steven Izatt, CEO of IBC, painting IBC and Steven Izatt in a false light, tortious interference with IBC's economic relations, and unjust enrichment. Ucore denies these complaints and considers the amounts claimed by IBC to be fanciful.

On February 14, 2019, the Company issued and announced the Notice of Commencement (“NOC”) to purchase IBC. The delivery of the NOC initiates a 60-day period review during which the Company has the right to conduct a detailed due diligence review of IBC’s operations and financial records (the “Due Diligence”). At any time during this review the Company has the right to issue to IBC a Notice of Positive Due Diligence (“NOP”), which triggers the closing process designed to transfer ownership of the controlling stake in IBC to the Company (the “Closing Process”).

The Closing Process comprises a 60-day period in which the parties are required to complete a purchase agreement (the “Purchase Agreement”) to affect the transfer of ownership of IBC to Ucore (the “Purchase Transaction”).

If for any reason the Parties cannot agree on the terms of a Purchase Agreement; Ucore shall have the right in its sole discretion to:

- i. Arbitration – Require the Parties to submit to binding arbitration proceedings where the arbitrator will resolve any disputes and/or, if requested by Ucore, will select the most reasonable terms for the Purchase Agreement and support documents based upon the intent of the OTP Agreement;
- ii. Continuance – Continue the OTP Agreement until such time as a mutually agreeable Purchase Agreement and support documents can be arrived at between the Parties; or
- iii. Termination – Terminate the OTP Agreement immediately with no further obligations by Ucore.

The Company does not intend to terminate the OTP Agreement. The Company further intends to enforce arbitration proceedings if deemed necessary in its discretion. Subsequent to the Company’s initiation of a court application in Nova Scotia per Ucore press release dated December 11, 2018, IBC filed a complaint in the State of Utah concerning Ucore’s representations and claims against IBC intellectual properties, and the parties are in the process of reviewing and pursuing these respective actions. As previously reported, IBC has officially requested that the Company waive its rights under the OTP Agreement. The Company has already responded that it does not intend to do so, and has the full intention of completing the terms of the OTP Agreement.

The relevant terms of the OTP Agreement and the relationship of the parties are as follows:

**Purchase Price:** USD\$10 million for 100% of IBC shares, to be paid in either cash or shares of Ucore, at the discretion of each IBC shareholder. The IBC shareholder base is diverse and comprised of multiple individuals and entities. The actual cash requirement may be less than the foregoing amount, depending on the number and proportion of shareholders who elect to obtain shares in Ucore in lieu of cash. No single IBC shareholder will acquire a control position in Ucore pursuant to this transaction.

**Key Person Incentive Units:** 4 million units of Ucore, to be paid to current IBC Key Persons. Each unit to consist of one common share of the Company plus ½ Common Share Purchase Warrant. Each Common Share Purchase Warrant shall have a strike price equal to the market price of the Company's shares as of the date on which the Purchase Agreement is signed and shall have a term of three years from the date of issue.

**Ongoing Performance Incentives:** Following the execution of the Purchase Agreement, current IBC employees shall receive performance incentives totaling 7% of IBC's annual EBITDA for each of the first 5 years of operations.

**Payments Under Previous Agreements:** Payments totaling USD\$2.9 million pursuant to previous agreements between Ucore and IBC must be completed prior to the closing of the Purchase Transaction. To date, Ucore has made advance payments totaling USD\$1.9 million against this amount.

**IBC Shareholder Support:** Shareholders representing the majority of the outstanding shares of IBC were solicited by IBC to become a party to and sign the OTP Agreement as well as the Extension Agreement, indicating their support for the Purchase Transaction, with a sufficient percentage of the voting shares of IBC for Ucore to issue the NOC and pursue the completion of the transaction. Ucore will take active measures to ensure that all IBC shareholders are given the opportunity to participate in the final Purchase Transaction.

On February 19, 2019, IBC delivered to Ucore a "Notice of Termination of the Option Agreement". IBC alleges that it has the right to terminate the agreement because Ucore has breached the terms of the Option Agreement. The Company does not believe that it has breached the terms of the Option Agreement and does not consider it to be terminated.

On February 25, 2019 the Company filed a request for emergency motion for an interim injunction to the Supreme Court of Nova Scotia (the "Court") in response to IBC's February 19, 2019, notice of termination of the OTP. The Court heard the request on February 27, 2019 and the Court granted an interim injunction ("the "Injunction") pending the hearing of an interlocutory injunction on March 20, 2019. Subsequent to granting the Injunction the motion was adjourned from March 20, 2019, at IBC's request. The Court has confirmed the motion will proceed on April 30, 2019 (amended as noted below). Until this hearing the Court has ordered that:

1) IBC is prohibited from:

- a) taking any further steps to issue additional notices to terminate the Option Agreement or taking steps in reliance upon (or further to) the Notice of Termination;
- b) taking any steps, or conducting any business, or transacting with any third parties in such a manner as to prevent or preclude (or effectively prevent or preclude) Ucore from fully or effectively exercising its asserted and disputed rights under the Option Agreement.

2) IBC is permitted to:

- a) carry on and market its business in the ordinary course of business, so long as such is in compliance with the terms of the Option Agreement.

Under the terms of the Injunction, Ucore shall refrain from enforcing its asserted and disputed rights under the Option Agreement, and any such rights shall be suspended on the understanding that the Company's rights under the Option Agreement shall be preserved during such time as this Injunction remains in place.

In February 2019, IBC filed a second complaint with the Third District Court of the State of Utah, against Ucore, Jim McKenzie and Peter Manuel, seeking relief in excess of USD\$40 million based on contractual, common law and statutory claims, including breach of contract, breach of implied covenant of good faith and fair dealing, negligent misrepresentation, fraudulent concealment or fraudulent nondisclosure, breach of fiduciary duty, promissory estoppel, unjust enrichment and fraudulent inducement. Ucore denies these complaints and considers IBC's claimed amounts to be fanciful.

On March 25, 2019, the Court in Nova Scotia confirmed amendments to the Company's pleadings. The amendments expressly seek injunctive relief against IBC, as well as explicitly seeking redress for IBC's alleged breach of the OTP between the parties and unlawful interference with the Company's economic relations, as well as a declaratory relief entitling the Company to proceed with the purchase of IBC as laid out in the OTP. The Company has further moved to convert the proceedings in Nova Scotia to an action, requesting that a judge of the Court closely manage the proceedings to advance them as efficiently and expeditiously as possible. Known as "Case Management", the Court has granted the Company's request.

On April 29, 2019 the Company announced that during a hearing on April 23, 2019, the Court dismissed a motion submitted by IBC and Steven R. Izatt asking the Court to dismiss or permanently stay proceedings before the Court on the basis that:

- i) the Supreme Court of Nova Scotia does not have jurisdiction to hear the amended Application submitted by the Company; or
- ii) in the alternative, on the basis that the Supreme Court of Nova Scotia is a *forum non conveniens*.

The Court confirmed that IBC had, i) by its actions, submitted to having the dispute heard in Nova Scotia, and ii) that there is no other, more appropriate, forum for the parties' litigation.

Additionally, the Company was also awarded court costs to be paid by IBC, and IBC was instructed to file its defence by May 17, 2019.

A corresponding written Order from the Court was issued on April 24, 2019, and a written decision from the Court followed on April 26, 2019. IBC has appealed this Order to the Nova Scotia Court of Appeal; the appeal was heard on an expedited basis on June 19, 2019 and a decision is pending.

Due to the appeal, the following has occurred:

1. With the interim injunction the Company secured on February 27, 2019, the Company has agreed to adjourn the hearing of an interlocutory injunction from April 30, 2019, until after the appeal is determined; and
2. The Company has also agreed to permit IBC an extension on its deadline to file a defence until ten days after the appeal is determined.

In summary, as of August 2019, there are three separate ongoing civil litigation matters between IBC and Ucore. The litigation in Utah also involves several officers and a director of Ucore as parties to the claims. These matters are:

1. A matter initiated in December 2018 pursuant to an application by Ucore in Halifax, Nova Scotia, Canada. This matter is expected to convert to an action. Ucore's lead legal counsel for this matter is Cox & Palmer in Halifax, NS.

2. A matter initiated in January 2019 pursuant to a complaint by IBC in Salt Lake City, Utah, USA. Ucore's lead legal counsel for this matter is Dorsey & Whitney LLP in Salt Lake City, Utah.
3. A second matter initiated in February 2019 pursuant to a complaint by IBC in Salt Lake City, Utah, USA. Ucore's lead legal counsel for this matter is Dorsey & Whitney LLP in Salt Lake City, Utah.

Ucore plans on pursuing its claims against IBC, including the specific performance of various contractual obligations and/or recovering damages, while at the same time vigorously defending the Company against IBC's claims.

On April 2, 2019, the Company announced that it has entered into a secure loan agreement with Orca Holdings, LLC. The loan is in the amount of \$3.6 million and the proceeds will be used for general working capital purposes, and to set-off or dismiss any short-term amounts owing to Orca Holdings, LLC. The short-term obligations include payments on the sale leaseback, and subsequent repurchase of the Company's Pilot Plant. The loan will terminate on March 31, 2021. Payments which would have otherwise come due under the lease agreement between April 1, 2019 and June 30, 2019 will be added to the principal amount of the loan. The loan will bear interest at a rate of 12.5% annually for the first 9 months commencing July 1, 2019 and then at a rate of 15% annually for the 12 months commencing April 1, 2020.

On August 23, 2019 the Company secured a bridge loan in the amount of USD \$300,000 from Orca Holdings, LLC. The bridge loan will bear interest at a rate of 12.5% and is repayable on October 31, 2020 or on such a date as the Company is able to repay the loan and continue to meet certain minimum cash levels.

The loans from Orca Holdings, LLC are secured by a first charge on the Company's assets. The transactions are considered related party transactions within the meaning of Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions.

Until a decision is made to proceed with the commercial development of one of its mineral properties and such a project becomes operational and revenue generating, or revenue is generated and earned directly or indirectly through the Company's prospective acquisition of IBC, the annual level of exploration and development expenditures of the Company is fully dependent on the Company's ability to either raise additional capital through the sale of shares, securities or a form or alternative financing in order to continue to fund the Company's business activities including its mineral exploration programs and metallurgy technology development efforts.

## **Rare Earth Processing**

The Company has an agreement to allow it to create a joint venture corporation along with IBC. The prospective joint venture company would acquire through a supplier agreement with IBC the exclusive rights to IBC's MRT process for rare earth separation among other applications. This technology has been used by the Company to separate the entire suite of rare earth elements ("REE"), except promethium, from Bokan ore with minimum purities of 99% (see press releases on March 2, 2015 and April 28, 2015). MRT is a proven technology that is used extensively around the world in non-REE mining applications; IBC and Ucore have adapted this technology for use in the rare earth industry. This has the potential to provide a clean and cost-effective alternative to traditional solvent extraction technology for not only Ucore, but also for other companies developing a primary rare earth mine or with the potential to produce rare earths as a secondary revenue stream in an already established operation.

Ucore contracted IBC to design and construct an MRT pilot plant. The completion of this pilot plant was announced on March 7, 2016. The total cost of the pilot plant was approximately \$2.9 million. Since the announcement of the completion of construction of the pilot plant a number of milestones regarding Bokan Ore have been achieved, as detailed below:

Rare Earth Class Separation from Gangue Metals - The REE, as a group, have been separated from the impurity metals in the pregnant leach solution ("PLS") ("Gangue Metals"). The Gangue Metals are non-REE constituents

such as iron, thorium, uranium, zinc, copper, nickel, titanium, zirconium, and other trace base metals. This early-stage separation of REE from Gangue Metals distinguishes the pilot plant from other, less selective technologies such as solvent extraction and ion exchange (“Legacy Separation Technologies”). In the case of Legacy Separation Technologies, Gangue Metals are co-extracted with the REE, necessitating the use of excessive separation stages downstream in order to achieve the same purity levels obtained by MRT.

Rare Earth Element Recovery – The REE, as a group, have been recovered at the > 99% level, leaving essentially no REE in the tailings. This accomplishment replicates prior lab-scale work, permitting practically all of the REE originally present in the PLS to be available for commercial utilization. Legacy Separation Technologies result in appreciable quantities of REE remaining in the tailings.

Separation of Scandium - Scandium has been separated at the >99% level from the other REE, leaving essentially no Sc in the PLS. This separation replicates prior lab-scale work. The purified group of REE originally present in the PLS, absent the Sc, is now available for further separations.

Separation of HREE and LREE Classes - The PLS has now been separated into two classes of REE: heavy REE, comprised of samarium to lutetium (“HREE”) and light REE, comprised of lanthanum to neodymium plus yttrium (“LREE”). The class separations have been achieved at 99%+ purity and 99%+ recovery.

Separation of Dy and Ho Sub-Groups from HREE Class - The separation of the two Sub-Groups was achieved at 99%+ purity and 99%+ recovery.

Production of 99.99% Dysprosium from Dy Sub-Group - 99.99% Dysprosium has been produced from the PLS. The pure Dy was recovered from the Dy Sub-group of the HREE class consisting of samarium-lutetium.

Although Steven R. Izatt, President and CEO of IBC, did not review this Q2 2019 MD&A document during its preparation or prior to its filing, the scientific and technical content of this section of the MD&A was written by the Company’s management based upon information provided to the Company by IBC Advanced Technologies, Inc. and prepared under the supervision of Mr. Izatt. Mr. Izatt was previously a member of the Company’s Advisory Committee until he resigned from that role on November 6, 2018. Mr. Izatt is a Registered Member of the Society for Mining, Metallurgy, and Exploration, holds a B.A. degree in Chemistry from Brigham Young University (“BYU”), as well as an M.S. in Chemical Engineering Practice and an M.S. in Technology and Policy, both from the Massachusetts Institute of Technology (“MIT”).

In addition, as discussed in the Overview section above, the Company has started preliminary work around the creation of a Strategic Metals Complex in Alaska that is intended to capitalize on MRT for the benefit of the Company’s prospective joint-venture enterprise with IBC. As of June 30, 2019, the Company has incurred approximately \$641,484 (\$492,800 USD) in costs associated with the SMC in association with the PGM facility.

## **Resource Property Interests**

Aside from fostering and supporting MRT and developments for the benefit of the Company’s prospective joint-venture enterprise with IBC, Ucore’s primary focus during the period and recent years has been the Bokan-Dotson Ridge REE property in Alaska, where the Company has incurred the majority of its mineral exploration expenditures for the past several years. Ucore’s strategy continues to be, to the extent possible, to progress its properties, to seek strategic opportunities for the advancement of its properties or to release the properties. A detailed schedule of the Company’s deferred exploration costs for the period ended June 30, 2019 is included in Schedule “A”.

## ***Bokan-Dotson Ridge, Alaska***

In 2006, the Company acquired the right to the Bokan Mountain property through five separate option agreements to acquire a 100% interest in a parcel of unpatented mineral claims from underlying owners and through staking a 100% interest in an additional parcel of prospective ground. The option agreements provide for the Company to acquire a 100% interest in the optioned claims in exchange for total remaining payments of US\$90,000. The five vendors will retain Net Smelter Royalties ("NSR") ranging from 2% to 4% on their specific claims. The Company has the right to purchase between 33% and 100% of the NSR for cash payments of US\$500,000 to US\$1,000,000 per vendor.

On November 28, 2012, the Company reported the results of the Preliminary Economic Assessment ("PEA") completed by Tetra Tech of Vancouver, BC, regarding the Dotson Ridge Zone of the Company's Bokan Mountain heavy rare earth property in Southeast Alaska. A copy of this PEA (a NI 43-101 technical report) was filed on SEDAR on March 14, 2013.

### **Highlights of the PEA Include:**

- **Net Present Value (NPV):** \$577M at a 10% discount rate, pre-tax.
- **Internal Rate of Return (IRR):** 43%.
- **Payback Period:** 2.3 years.
- **Capital Cost:** \$221M, including a complete on-site rare earth oxide ("REO") separation plant, and a contingency provision in the amount of \$25M. Among the lowest capital outlays in the rare earth mining sector.
- **Mining Rate:** 1,500 tonnes per day ("TPD"), 75% of mill feed is eliminated via the use of Dual Energy X-Ray Transmission ("DEXRT") sorting and magnetic separation, netting approximately 375 TPD to feed the leach circuit.
- **Average Total Rare Earth Recoveries:** 81.6%
- **Production of REOs at site:** Deployment of Solid Phase Extraction ("SPE") technology to generate high purity individual rare earth oxides at the site.
- **REO Production:** Averaging 2,250 tonnes per year ("TPY") during the first five years at full production, including 95 tonnes of dysprosium oxide, 14 tonnes of terbium oxide, and 515 tonnes of yttrium oxide.
- **Mine Life:** 11 years, based on existing Inferred Mineral Resource Estimate (April 21, 2011), excluding highly prospective expansion at depth, along strike, and other exploration targets at the I&L Zone and beyond.
- **Direct Employment:** 170 employees.
- **Ease of Shipping Access:** Only rare earth project with immediate deep water shipping facilities, resulting in prospective mine-mouth shipping rates among the lowest in the industry.
- **Elimination of Tailings on Surface at Closure:** All tailings will be placed underground via cemented paste backfill. The processing plant will generate approximately 735 TPD of tailings, significantly less than the mine requirement of approximately 1,030 TPD backfill.
- **Recycling of Nitric Acid:** Nitric acid that is not consumed in the leach circuit will be recycled through the use of diffusion dialysis, greatly reducing acid consumption by more than 75%, resulting in significant financial and environmental benefits.
- **Near Term, High Value Production:** Relative high percentage of rare earth metals strategically critical to the US defense, clean energy, aerospace, supercomputing and transportation sectors: including Tb, Dy and Y.
- **Excellent Geopolitical Support:** Offset of completion risk through strong legislative and financial support at state and federal levels.

## Overview of Bokan Project and PEA

Ucore's Bokan Mountain project is located on Prince of Wales Island, Alaska, approximately 60 km southwest of Ketchikan, Alaska and 140 km northwest of Prince Rupert, British Columbia, with direct ocean access to the western seaboard and the Pacific Rim. The project is situated in the Tongass National Forest, within an area set aside for natural resource development.

The PEA has been completed based on the Inferred Resource Estimate Technical Report filed on April 21<sup>st</sup>, 2011 by Ucore, with the exclusion of the I&L Zone. The resource was estimated by R. J. Robinson of Aurora Geosciences. The resource incorporated into the current mine plan totals 5.3 million tonnes, with an average grade of 0.65% total rare earth oxides ("TREO"), at a cut-off grade of 0.4% TREO. Of the TREO, approximately 40% are comprised of heavy rare earth oxides. A summary of the operating assumptions and financial model for the project is as follows:

Item	Units	Year 1	Year 2	Annual for balance of mine life
Tonnes Mined	Mt	198,000	470,900	540,000
Tonnes Processed	Mt	198,000	470,900	540,000
Mined Grade TREO		0.416%	0.511%	0.473%
Recovery		81.6%	81.6%	81.6%

	(million \$US)
Total Revenue	\$2,546
Initial Capital Expenditure	\$221
Sustaining Capital	\$145
Total Before-Tax Cash Flow (undiscounted)	\$1,516
Before-tax NPV @ 8%	\$697
Before-tax NPV @ 10%	\$577
Before-tax NPV @ 12%	\$478
Before tax IRR (%)	43%

## Capital Cost Estimate

Initial capital cost estimates for the project are as follows:

Item	Total Cost (million \$US)
<b>Direct Capital Cost</b>	
Site development	6.1
Mine underground	18.9
Mine surface facilities	23.8
Process	62.9
Tailings and waste rock management	10.1
Utilities	3.4
Buildings	3.0
Temporary facilities	5.2
Plant mobile equipment & misc.	1.4
Subtotal	134.7
<b>Indirect Capital Cost</b>	
Indirect construction costs	51.1
Owner's costs	10.9
Contingency	24.5
Subtotal	86.5
<b>Total Capital Cost</b>	<b>221.3</b>

Initial capital costs include all costs required to bring the facility to production. The ongoing sustaining capital costs are estimated to be \$145M over the 11-year mine life.

## Operating Cost Estimate

Item	Average Unit Cost (\$US/t mined)
Mining	41.69
Processing	54.83
G&A	13.56
Power	11.78
Misc.	0.93
<b>Total Operating Cost</b>	<b>122.78</b>

## REE Pricing Considerations

In developing rare earth pricing assumptions, a number of sources were considered by both Ucore and Tetra Tech. Price forecasts generated by analysts and Ucore's rare earth peer group vary widely. In selecting pricing assumptions, efforts were made to incorporate assumptions that were independent, supportable, and conservative. As a result, Tetra Tech has used a three-year trailing average of China FOB prices from October, 2009 to October, 2012 to establish prices for the rare earth oxides, except Ho, Lu, Yb & Er oxides, where two-year trailing averages were used due to limited Chinese market data. These prices are displayed in "Scenario 1" below. The Company also considered the impact of pricing REO's based on a 6-month trailing average and a 3-month trailing average. These results are displayed in "Scenario 2" and "Scenario 3" below, respectively.

	<b>Pricing Scenario 1 3-Year trailing average</b>	<b>Pricing Scenario 2 6-Month trailing average</b>	<b>Pricing Scenario 3 3-Month trailing average</b>
<b>REO</b>	<b>\$US/kg</b>	<b>\$US/kg</b>	<b>\$US/kg</b>
La <sub>2</sub> O <sub>3</sub>	48.69	20.85	18.42
Ce <sub>2</sub> O <sub>3</sub>	47.21	21.38	19.23
Pr <sub>2</sub> O <sub>3</sub>	113.10	110.00	103.08
Nd <sub>2</sub> O <sub>3</sub>	126.70	108.96	101.58
Sm <sub>2</sub> O <sub>3</sub>	57.74	71.79	61.42
Eu <sub>2</sub> O <sub>3</sub>	1,834.94	2,185.00	2010.00
Gd <sub>2</sub> O <sub>3</sub>	81.70	99.42	96.35
Tb <sub>2</sub> O <sub>3</sub>	1,520.83	1,907.12	1,840.38
Dy <sub>2</sub> O <sub>3</sub>	845.80	1,009.42	948.08
Ho <sub>2</sub> O <sub>3</sub>	211.39	107.25	107.05
Er <sub>2</sub> O <sub>3</sub>	88.20	153.61	140.08
Tm <sub>2</sub> O <sub>3</sub>	N/A	N/A	N/A
Yb <sub>2</sub> O <sub>3</sub>	102.79	124.07	110.51
Lu <sub>2</sub> O <sub>3</sub>	1,036.40	1,420.79	1,427.56
Y <sub>2</sub> O <sub>3</sub>	80.41	100.75	85.12
<b>NPV @ 10% Discount</b>	<b>\$577M</b>	<b>\$620M</b>	<b>\$513M</b>

## Economic Analysis and Sensitivity Analysis

The economic analysis was based on the mineral resource estimate filed by Ucore in April of 2011, totalling 5.3 million tonnes at an average grade of 0.65% TREO in the Inferred category. This resource is adequate to allow for an 11-year mine life, based on current mining assumptions including a mining rate of 1,500 TPD. TREO recoveries are expected to average 81.6%.

These assumptions, together with capital cost and operating cost estimates noted above, result in a before tax NPV, at a 10% discount rate, of \$577 million. The payback period for the project is 2.3 years from the start of production. The project generates a pre-tax IRR of 43%.

A sensitivity analysis was performed, to test the impact of changes to several key assumptions included in the economic model, with the following results:

Changes to selling price of REOs	NPV at 10%, \$US million	IRR, %
Increase of 20%	802	52%
Increase of 10%	690	47%
Base Case	577	43%
Decrease of 10%	464	38%
Decrease of 20%	352	33%

Changes in operating costs	NPV at 10%, \$ US million	IRR, %
Increase of 20%	519	40%
Increase of 10%	548	42%
Base Case	577	43%
Decrease of 10%	606	44%
Decrease of 20%	635	45%

Change in initial capital expenditure	NPV at 10%, \$ US million	IRR, %
Increase of 20%	526	37%
Increase of 10%		40%
	552	
Base Case	577	43%
Decrease of 10%	602	46%
Decrease of 20%	627	51%

### Environmental Assessment

Ucore is currently conducting environmental baseline studies to prepare for the forthcoming permitting process at the Dotson Ridge Project. The project plan is being developed in consultation with local stakeholders as well as state and federal regulators. A Plan of Operations, which will be based upon engineered facility designs advanced from the concepts presented in the PEA, will be submitted to the US Forest Service to initiate a National Environmental Policy Act review. Permitting advantages for the project include the elimination of a permanent surface tailings storage facility, due to the use of x-ray sorting technology, which will allow for 100% of the mill tailings to be placed in mined out areas underground as cemented paste backfill. The study includes cost estimates for site water management and treatment.

### Qualified Persons

The technical disclosures in this section of this MD&A were written by the Company's management based upon information provided to the Company and approved by James Robinson, P. Geo., an independent geologist with Aurora Geosciences.

## Cautionary Notes

Please note that the PEA is preliminary in nature, that it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

## Overview of the May 2015 Bokan Resource Upgrade

On May 11, 2015, the Company announced an upgraded resource estimate for the Bokan property, which was prepared by Aurora Geosciences (Alaska) Ltd.

An additional 1.043 million tonnes of newly estimated Inferred mineralization grading 0.604% TREO at a cut-off grade of 0.40% TREO has now been added to the total Resource at Bokan, as a result of deeper exploratory drilling during the 2014 field season. Further, more than 98% of the previously established Resource has now been upgraded to the fully Indicated category under NI 43-101 standards by way of supplemental infill drilling. The previously announced Resource, consisting of 2.936 million tonnes in the Indicated category and 1.995 million tonnes in the Inferred category under NI 43-101 standards at the same cut-off grade, was announced by Ucore in a press release dated Oct. 21, 2013.

A summary of the upgraded mineral resource is as follows:

### *Indicated Mineral Resource Estimate*

TREO CUT-OFF	TONNES	LREO (%)	HREO (%)	TREO (%)	Contained TREO (lbs)
.20	5,786,500	0.331	0.221	0.552	70,418,800
.30	5,411,900	0.345	0.228	0.573	68,365,700
<b>.40</b>	<b>4,787,900</b>	<b>0.363</b>	<b>0.239</b>	<b>0.602</b>	<b>63,544,100</b>
.50	3,532,900	0.395	0.258	0.653	50,860,200
.60	2,110,100	0.440	0.285	0.725	33,726,800

### *Inferred Mineral Resource Estimate*

TREO CUT-OFF	TONNES	LREO (%)	HREO (%)	TREO (%)	Contained TREO (lbs)
.20	1,201,100	0.343	0.224	0.567	14,934,500
.30	1,136,400	0.355	0.230	0.584	14,631,100
<b>.40</b>	<b>1,050,000</b>	<b>0.365</b>	<b>0.237</b>	<b>0.603</b>	<b>13,958,600</b>
.50	820,400	0.389	0.255	0.645	11,665,900
.60	507,300	0.421	0.286	0.707	7,907,100

Notes:

1. Total Rare Earth Oxides (TREO) includes: La<sub>2</sub>O<sub>3</sub>, Ce<sub>2</sub>O<sub>3</sub>, Pr<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>
2. Heavy Rare Earth Oxides (HREO) includes: Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>
3. The mineral resource estimate was completed by Mr. Jim Robinson, a Senior Consulting Geologist at Aurora. Mr. Robinson is an independent qualified person for the purposes of NI 43-101 standards of disclosure for mineral projects of the Canadian Securities Administrators and has verified the data.
4. The resource estimate is based on:
  - A database of 97 diamond drill holes totaling 20,000 m and 56 surface channels totaling 200 m. This diamond drilling and channel sampling was completed by Ucore in 2008, 2009, 2010, 2011 and 2014 on the Dotson Ridge zone
  - All geochemical analyses were performed by ALS Chemex, Eco-tech Laboratories Ltd., Bureau Veritas (ACME Analytical) and Activation Laboratories.
  - The specific gravity (SG) used is the overall mean of 2.77, determined from 141 SG readings.
  - Block model was estimated by the Inverse Distance Squared interpolation method on blocks of maximum 4 m x 4 m and minimum 1 m x 1 m dimensions.
  - All REE assays exceeding the 95% confidence level (CL) were cut to the 95% CL for each element.
  - All intercepts with a true width of less than 1.5 m were diluted to a potential mining width of 1.5m.

The drill-defined Mineral Resource at Bokan Dotson-Ridge commences at surface and is open both at depth and along strike. Additional information regarding significant drill results from the Company's prior exploration programs and maps and sections detailing the drill-hole locations and individual REE values are available at: [www.ucore.com](http://www.ucore.com).

#### **Expenditure on Bokan**

Expenditures on metallurgy for the period to date totalled approximately \$13,000. Approximately an additional \$102,000 was spent on environmental and permitting work during the period which includes the general carrying cost of the property.

In total, the Company incurred expenditures totalling approximately \$115,000 on the project during the period ended June 30, 2019.

## ***Seagull Tin, Yukon***

The Company holds an option on a 100% interest in the Seagull Tin property located in the Southwestern Yukon pursuant to an agreement dated September 23, 2014. The options can be exercised on the second anniversary of the agreement for the lesser of 500,000 shares of the Company or 2% of the outstanding shares of the Company at that date. The Company's optional interest is subject to a 1.5% NSR, on which a \$200,000 advance payment is due on the fourth anniversary of the option agreement. The Company was required to perform at least \$250,000 of exploration work before the second anniversary; this work was completed in 2014. Due to uncertain plans for future development, the Company recorded an impairment charge of \$251,994 in 2016, writing down the carrying value of the Seagull Tin property to \$nil. The Company does not consider the Seagull Tin property to be a material property to the Company and the Company does not have a NI 43-101 technical report for this property.

## **Selected Annual Information**

The following annual information is prepared in accordance with International Financial Reporting Standards. Amounts are reported in thousands of Canadian dollars, except for per share amounts.

	<b>For the year ended December 31, 2018 \$</b>	<b>For the year ended December 31, 2017 \$</b>	<b>For the year ended December 31, 2016 \$</b>
Net loss	4,766	4,883	5,396
Loss per share – basic and diluted	0.02	0.02	0.02
Total assets	46,051	45,776	48,577

## **Results of Operations**

The Company has no operating revenues and is dependent on equity or other financings to fund its exploration and evaluation operations and to fund the advancement of the Company's pursuit of MRT development by IBC for the benefit of the Company's prospective joint-venture to be co-owned along with IBC Advanced Technologies, Inc. As a result, the Company expects to incur operating losses until such time as either: (i) an economic mineral resource is identified, developed and put into profitable commercial production on one or more of the Company's mineral properties; (ii) the intended joint venture with IBC is launched and becomes commercially successful with profitable sales of IBC's MRT products and services for the REE, tailings and other target markets and target customers for the joint venture; or (iii) the Company completes the purchase of IBC and the resulting entity becomes commercially profitable.

During the period ended June 30, 2019, the Company incurred a net loss before income taxes of approximately \$1.51 million compared to a net loss before incomes tax of \$2.32 million for the period ended June 30, 2018 a decrease of approximately \$810,000. Operating expenses totalling approximately \$1.39 million were recognized during the six months ended June 30, 2019 compared to \$2.04 million in the comparable prior period. The decrease in operating expenses is a result of reduced expenditures for investor relations and marketing, salaries and consultants, share based payments, and travel. The reasons for each of these variances are discussed below. The difference between the operating expenses and the loss before incomes taxes is the result of foreign exchange fluctuations, a loss on disposal of a resource property asset, accretion expense and a loan discount attributable to the financing that occurred during the period.

The Company recorded salaries and consultant expenditures of approximately \$518,000 for the period ended June 30, 2019, which is a decrease of approximately \$302,000 from the comparable prior period. The reason for the decrease is that the Company's management has taken several initiatives to reduce the Company's salaries and consultant costs through a cost sharing agreement with an unrelated company.

Professional services for the Company increased by approximately \$227,000 from the comparable prior period. The increase is as a result of the ongoing legal claims as noted above and the consulting fees to Orca Holdings, LLC for general business and advisory services.

The Company recorded non-cash stock-based compensation expense of approximately \$26,000 attributable to the estimated value of stock options and deferred share units earned and vested during the period. The expense recorded is net of approximately \$21,000 as a result of forfeitures during the period. In the prior period the Company recorded an expense of approximately \$391,000 resulting in a difference of approximately \$366,000. The difference period over period is largely attributable to size and timing of the options granted in prior periods.

During the six months ended June 30, 2019 the Company recorded interest expense on lease liabilities of approximately \$12,000 and amortization of approximately \$41,000 as a result of a change in an accounting policy. Further details of the change are discussed in "Changes in Accounting Policies including Initial Adoption" below. The remaining interest expense of approximately \$199,000 is related to the previously existing pilot plant finance lease and the loan payable.

Expenditures on investor relations and marketing decreased by approximately \$85,000 from the comparable prior period. The decrease is a result of cost reduction initiatives made by the Company during the period.

Travel expenditures decreased by approximately \$64,000 between the two periods. The decrease is a result of less travel between Salt Lake City and the Company's head office in Halifax and general cost reduction initiatives taken by management during the current period.

During the period the Company recorded the remaining amortization related to a derivative asset, its option to purchase IBC, of approximately \$46,000.

During the period the Company disposed of a barge that was included in resource properties and recorded a loss on disposal of approximately \$111,000.

On March 30, 2019 the Company entered into a loan agreement with Orca Holdings, LLC with interest paid monthly and the principal repaid in full on March 31, 2021. The loan will bear interest at a rate of 12.5% annually for the first 9 months commencing July 1, 2019 and then at a rate of 15% annually for the 12 months commencing April 1, 2020. The Company used an effective interest rate of 15% which is similar to comparable borrowing arrangements in the marketplace and arrangements previously achieved by the Company. The financing benefits have been recorded as a loan discount of approximately \$195,000 and the Company recorded approximately \$131,000 in accretion expense during the period ended June 30, 2019.

The Company recorded a foreign exchange gain of approximately \$143,000 during the six months ending June 30, 2019 versus a loss of approximately \$90,000 during the comparable prior period in 2018. As the Company continues to deal in both the Canadian and United States currencies, the Company may continue to incur foreign exchange gains and losses arising from changes in the value of the United States dollar relative to the Canadian dollar.

## Summary of Quarterly Results

Expressed in thousands of dollars, except per share amounts	6/30/19 \$	3/31/19 \$	12/31/18 \$	9/30/18 \$	6/30/18 \$	3/31/18 \$	12/31/17 \$	9/30/17 \$
Net loss	553	826	1,293	1,153	1,080	1,240	1,877	1,066
Loss per share – basic and diluted	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Total Assets	44,886	45,604	46,051	44,807	46,046	45,204	45,776	46,961

During the second quarter of 2019 the Company incurred a net loss of approximately \$553,000 compared to a net loss of \$1.08 million for the comparable prior period. The decrease of approximately \$527,000 in net loss during the second quarter of 2019 is largely attributable to in a decrease in share-based payments as a result of the timing and quantity of options granted in the prior period and a decrease in salaries and consultants expense as the Company's management has taken several initiatives to reduce the Company's salaries and consultant costs through a cost sharing agreement with an unrelated company . Further details of the variances between the second quarter of 2019 and 2018 are discussed above in Results of Operations.

In the first quarter of 2019 the Company incurred a net loss of approximately \$826,000 compared to a net loss of \$1.24 million for the comparable prior period. The decrease of approximately \$413,000 is largely attributable to reduction in share-based payments as a result of the timing and amount of prior period stock option grants. In addition, the Company has taken several cost reduction initiatives which has resulted in a general reduction in various operating expenses.

During the fourth quarter of 2018 the Company incurred a net loss of approximately \$1.29 million compared to a net loss of \$1.88 million for the comparable prior period. The decrease in the net loss is largely attributable to the reduction in salaries and consultant expense of approximately \$335,000 as the Company did not declare any performance-based compensation to officers or management during Q4 of 2018. Due to the timing of and size of the option grants in 2018 compared to 2017 share based payments for Q4 2018 decreased by approximately \$178,000 compared to comparable prior quarter. The Company's finance lease obligation is payable in United States dollars which resulted in a foreign exchange loss of approximately \$237,000 in Q4 which is an increase of approximately \$169,000 over the comparable prior quarter.

During the third quarter of 2018 the Company incurred a net loss of approximately \$1.15 million compared to a net loss of \$1.07 million for the comparable prior period. The increase in net loss is mainly attributable to the increase in professional services of approximately \$374,000 associated with the SMC in Alaska. The increase in the net loss was partially offset by a decrease in salaries and consultant expenditures of approximately \$183,000 due to the reversal of an accrued liability that is no longer an obligation to the Company. Interest expense in the current period increased by approximately \$51,000 due to the timing of the establishment of the finance lease obligation. There was a decrease in share-based payments of approximately \$83,000 as result of the timing and quantity of options granted in the prior period. The Company's foreign exchange expense relates largely to the finance lease obligation which is adjusted for effects of foreign exchange and therefore the Company realized a

reduction in foreign exchange expense of approximately \$68,000 due to changes in the value of the United States dollar relative to the Canadian dollar.

## **Liquidity and Capital Resources**

At June 30, 2019, the Company had working capital of approximately \$58,000, with a cash balance of approximately \$155,000. In addition, the Company has approximately \$58,000 of restricted cash which is not accessible without government approval.

The Company's operations used approximately \$697,000 of cash for the period ended June 30, 2019. Net cash expenditures on resource properties and related deferred costs totalled approximately \$42,000 during the period, largely driven by expenditures on metallurgy and general carrying costs of the property. This was primarily funded from working capital.

On August 10, 2017, the Company completed a sale leaseback agreement with Orca Holdings LLC (a corporation wholly-owned by Randy Johnson). The terms of the agreement resulted in the Company selling its MRT pilot plant for USD\$2 million (approximately CAD\$2.5 million) in accordance with the terms outlined in the overview above. On March 30, 2019 the Company repurchased the MRT pilot plant from Orca for USD\$2 million. Further details are provided below.

On June 28, 2018, the Company completed a non-brokered private placement of 6,899,629 units at \$0.18 per unit, for total proceeds of \$1.24 million. Each unit consists of one common share and one common share purchase warrant. Each warrant gives the holder the right to purchase one common share at an exercise price of \$0.25 for a period of 36 months. The net proceeds from the financing are being used for general corporate purposes.

On December 11, 2018, the Company completed a non-brokered private placement of 3,333,333 units at \$0.15 per unit, for total proceeds of \$500,000. Each unit consists of one common share and one-half common share purchase warrant. Each warrant gives the holder the right to purchase one common share at an exercise price of \$0.20 for a period of 36 months. The net proceeds from the financing are being used for general corporate purposes.

On March 30, 2019, the Company entered into a secure loan agreement with Orca Holdings, LLC. The loan is in the amount of USD\$2.7 million (approximately CAD\$3.6 million) and the proceeds will be used for general working capital purposes, and to set-off or dismiss any short-term amounts owing to Orca Holdings, LLC over the next six months. The short-term obligations include payments on the sale leaseback, and subsequent repurchase of the Company's Pilot Plant. The loan will terminate on March 31, 2021. Payments which would have otherwise come due under the lease agreement between April 1, 2019 and June 30, 2019 will be added to the principal amount of the loan. The loan will bear interest at a rate of 12.5% annually for the first 9 months commencing July 1, 2019 and then at a rate of 15% annually for the 12 months commencing April 1, 2020. On August 23, 2019 the Company secured a bridge loan in the amount of USD\$300,000 from Orca Holdings, LLC. The bridge loan will bear interest at a rate of 12.5% and is repayable on October 31, 2020 or on such a date as the Company is able to repay the loan and continue to meet certain minimum cash levels. The loans are secured by a first charge on the Company's assets.

The Company is reliant on equity or other types of financing for its current short term and long-term working capital requirements and to fund its exploration programs and business development activities. During the period ended June 30, 2019, the Company received approximately \$245,000 from the issuance of common shares on the exercise of options and warrants. Without additional financing or other satisfactory arrangement by no later than the end of the fourth quarter of 2019, the Company's financial resources will not be sufficient to develop its projects, its intended joint venture business or the acquisition of IBC. The Company's current liquidity and capital resources raise significant doubt about the Company's ability to continue as a going concern for the next twelve months without an inflow of new funds during the fourth quarter of 2019. The Company's ability to continue as a going concern is dependent upon the ability of the Company to obtain necessary financing or other satisfactory arrangements to fund its operating expenses and interest expense until development financing is obtained to

allow the Company to be self-sufficient. The Company's ability to continue its development activities is dependent on management's ability to secure additional financing in the future, which may be completed by way of traditional equity financings or in a number of alternative ways including, but not limited to, a combination of: a rights offering; new strategic partnerships; joint venture arrangements; project-level or subsidiary-level third-party financings; royalty or streaming financing; the sale of non-core assets; and other capital market alternatives. Management is pursuing additional financial sources, and while the Company's management has been successful in obtaining financing for the Company in the past, there can be no assurance it will be able to do so in the future or that these sources of funding or initiatives will be available for the Company or that they will be available on terms which are acceptable to the Company.

## **Off-Balance Sheet Arrangements**

At June 30, 2019, the Company had no material off-balance sheet arrangements such as guarantee contracts, contingent interest in assets transferred to an entity, derivative instruments obligations or any obligations that trigger financing, liquidity, market or credit risk to the Company.

## **Critical Accounting Estimates**

The preparation of financial statements in conformity with International Financial Reporting Standards requires management to make estimates and assumptions that affect the amounts reported in the financial statements and notes. Critical accounting estimates used in the preparation of the consolidated financial statements include the Company's estimate of recoverable value of its mineral properties and related deferred expenditures, derivative financial instruments, non-cash stock-based compensation and deferred income tax assets and liabilities.

The Company's recoverability of the recorded value of its resource properties and associated deferred expenses is based on market conditions for minerals, underlying mineral resources associated with the properties and future costs that may be required for ultimate realization through mining operations or by sale. The Company operates in an industry that is subject to a number of risk factors, including legal and political risks, the existence of economically recoverable reserves, and the ability of the Company to obtain necessary financing to complete the development and future profitable production or the proceeds of disposition thereof.

The factors affecting non-cash stock-based compensation include estimates of when stock options might be exercised and the stock price volatility. The timing for exercise of options is out of the Company's control and will depend on a variety of factors including the market value of the Company's shares and the financial objectives of the stock-based instrument holders.

Deferred income tax assets and liabilities are computed based on differences between the carrying amounts of assets and liabilities on the balance sheet and their corresponding tax values. Deferred income tax assets also result from unused losses carried forward and other deductions. The valuation of deferred income tax assets is adjusted, if necessary, by use of a valuation allowance to reflect the estimated realizable amount.

## **Changes in Accounting Policies including Initial Adoption**

There were no changes to the Company's accounting policies during the six month period ended June 30, 2019 except for the following:

On June 7, 2017, the IASB issued IFRIC Interpretation 23 Uncertainty over Income Tax Treatments. The Interpretation is applicable for annual periods beginning on or after January 1, 2019. Early application is permitted. The interpretation clarifies the accounting for income tax treatments (current and deferred tax) that have yet to be accepted by the tax authorities. This Interpretation had no impact on the Company's interim condensed consolidated financial statements.

On January 1, 2019 the Company adopted IFRS 16 – Leases (“IFRS 16”) which replaced IAS 17 – Leases and IFRIC 4 – Determining Whether and Arrangement Contains a Lease. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. The standard is effective for annual periods beginning on or after January 1, 2019. IFRS 16 eliminates the classification of leases as either operating leases or finance leases for a lessee. Instead, all leases are treated in a similar way to finance leases applied in IAS 17. IFRS 16 does not require a lessee to recognize assets and liabilities for short-term leases (i.e. leases of 12 months or less) and leases of low-value assets.

The Company applied IFRS 16 using the modified retrospective method. Under this method, financial information will not be restated and will continue to be reported under the accounting standards in effect for those periods. The Company will recognize lease liabilities related to its lease commitments for its office lease. This lease liability will be measured at the present value of the remaining lease payments, discounted using the Company’s incremental borrowing rate as at January 1, 2019, the date of initial application, resulting in no adjustment to the opening balance of deficit. The associated right-of-use assets will be measured at the lease liabilities amount, plus prepaid lease payments made by the Company. The Company has implemented the following accounting policies permitted under the new standard:

- leases of low dollar value will continue to be expensed as incurred; and
- the Company will not apply any grandfathering practical expedients.

As at January 1, 2019, the Company recognized \$150,209 in right-of-use assets and \$150,209 in lease liabilities as summarized below:

	\$
Minimum lease payments under operating leases as of December 31, 2018	172,853
Effect from discounting at the incremental borrowing rate as of January 1, 2019	(22,644)
Lease liabilities recognized as of January 1, 2019	<u>150,209</u>
Right-of-use asset recognized as of January 1, 2019	<u>150,209</u>

The lease liability was discounted at a discount rate of 15% as at January 1, 2019.

b) New accounting policy for leases under IFRS 16

The following is the accounting policy for leases as of January 1, 2019 upon adoption of IFRS 16:

At inception of a contract, the Company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company assess whether the contract involves the use of an identified asset, whether the right to obtain substantially all of the economic benefits from use of the asset during the term of the arrangement exists, and if the Company has the right to direct the use of the asset. At inception or on reassessment of a contract that contains a lease component, the Company allocates the consideration in the contract to each lease component on the basis of their relative standalone prices.

As a lessee, the Company recognizes a right-of-use asset and a lease liability at the commencement date of a lease. The right-to-use asset is initially measured at cost, which is comprised of the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any decommissioning and restoration costs, less any lease incentives received.

The right-of-use asset is subsequently depreciated from the commencement date to the earlier of the end of the lease term or the end of the useful life of the asset. In addition, the right-of-use asset may be reduced due to impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

A lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by the interest rate implicit in the lease, or if that rate cannot be readily

determined, the incremental borrowing rate. Lease payments included in the measurement of the lease liability are comprised of:

- fixed payments, including in-substance fixed payments, less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee;
- exercise prices of purchase options if the Company is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is change in future lease payments arising from a change in an index or rate, or if there is a change in the estimate or assessment of the expected amount payable under a residual value guarantee, purchase, extension or termination option. Variable lease payments not included in the initial measurement of the lease liability are charged directly to profit or loss.

The Company has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets. The lease payments associated with these leases are charged directly to profit or loss on a straight-line basis over the lease term.

## **Related Party Transactions**

As at June 30, 2019 the Company has recorded an advance, for corporate expenses, to officers of the Company in the amount of \$20,942 (December 31, 2018 - \$20,942), which is non-interest bearing.

During the period ending June 30, 2019, the Company incurred \$46,123 (2018 - \$31,241) in fees to a law firm of which a director of the Company is a partner. Additionally, travel expenditures in the amount of \$Nil (2018 - \$1,233) were reimbursed to directors of the Company.

During the year ended December 31, 2018, the Company completed two non-brokered private placements in which the CEO and CFO of the Company purchased a total of 750,000 units for gross proceeds to the Company of \$135,000. In addition, shareholders holding greater than 10% of the outstanding common shares of the Company purchased a total of 4,500,000 units for gross proceeds to the Company of \$725,000.

During the year ended December 31, 2018, the Company was charged USD\$300,000 for ongoing general business and consulting services rendered by Orca Holdings, LLC. The Company settled the amount payable by issuing 2,702,702 shares of the Company on December 18, 2018.

On March 30, 2019, the Company entered into a secured loan agreement with Orca Holdings, LLC. The loan is in the principal amount of USD\$2.7 million (approximately CAD\$3.6 million) and the proceeds will be used for general working capital purposes, and to set-off or dismiss any short-term amounts owing to Orca Holdings, LLC over the next six months. The short-term obligations include payments on the sale leaseback, and subsequent repurchase of the Company's Pilot Plant for USD\$2 million (which is the same price as the Company sold the Pilot Plant to Orca for in 2017). The price at which the Company repurchased the Pilot Plant from Orca on March 30, 2019 was a pre-determined price in accordance with the terms of the August 2017 sale leaseback agreement. This new secured loan will terminate on March 31, 2021. Payments which would have otherwise come due to Orca between April 1, 2019 and June 30, 2019 pursuant to the 2017 Pilot Plant lease agreement were included in the principal amount of the new secured loan. This loan will bear interest at a rate of 12.5% annually for the first 9 months commencing July 1, 2019 and then at a rate of 15% annually for the 12 months commencing April 1, 2020. On August 23, 2019 the Company secured a bridge loan in the amount of USD\$300,000 from Orca Holdings, LLC. The bridge loan will bear interest at a rate of 12.5% and is repayable on October 31, 2020 or on such a date as the Company is able to repay the loan and continue to meet certain minimum cash levels.

The loans are secured by a first charge on the Company's assets. The transactions are considered related party transactions within the meaning of Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions ("MI 61-101").

The secured loan transactions between Ucore and Orca are exempt from the formal valuation and minority shareholder approval requirements of MI 61-101 since neither the fair market value of the subject matter of the transaction, nor the considered received or payable, exceed 25% of the Company's market capitalization. No new insiders and no control persons were created in connection with the closing of the transactions. The Company's board of directors (the "Board") believes that the secured loans have reasonable commercial terms that are not less advantageous to the Company as compared to if the loan were obtained from a person dealing at arm's length with the Company. The effect of the transactions on the Company's business and affairs was that the Company reacquired its Pilot Plant, gained immediate access to cash of USD\$250,000 and USD\$300,000 respectively and was able to transition a number of short term liabilities into long term liabilities with very low transaction costs. No commission fees, referral fees or bonuses were payable in regard to these transactions. In addition, no specific restrictive operating or financial ratio covenants exist in regard to the secured loans that could trigger a default or would otherwise affect the operations of the Company. The Board considered alternative sources of financing for the Company and determined that, in the short term, the agreed upon secured loans with Orca were in the best interests of the Company and was obtainable on terms that were superior as compared to the other feasible alternatives at that moment. No member of the Board had a dissenting or materially contrary view or objected to the Company entering into the secured loan agreements. No special committee of the Board was created to separately review and consider the proposed transactions since Mr. Johnson is not a member of the Board and he did not participate in any Board meetings regarding these transactions.

All related party transactions were valued and recorded by the Company at the stated amount agreed to between the parties.

## Outstanding Share Data

The following is the Company's issued and outstanding share data as of the date of this report.

Securities	Number	Weighted average exercise price \$	Weighted average remaining life (years)
Common shares	284,129,859	n/a	n/a
Warrants	7,745,798	0.24	1.87
Stock options under plans approved by shareholders	14,583,333	0.28	2.42
Deferred share units under plans approved by shareholders	557,100	n/a	n/a

## Risks and Uncertainties

In conducting its business, the principal risks and uncertainties faced by the Company relate to:

- exploration and development success of the Company's mineral properties;
- the successful acquisition of IBC pursuant to the OTP Agreement and the ability of IBC to thereafter generate positive cashflow from its business operations;

- the outcome of the Company's current civil litigation matters involving IBC Advanced technologies, Inc.;
- commodity prices and the demand for REEs and other critical materials that underlay the business objectives of the Company;
- capital adequacy, liquidity and cash management along with the ability to obtain additional financing in both the short and long terms;
- counter-party risk and issues related to any significant non-compliance by the parties to the Company's material contracts; and
- general economic, business and capital market sentiment and conditions.

The Company's PEA (discussed in the overview section of this MD&A) is preliminary in nature. The PEA includes indicated and inferred mineral resources only, which are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Most mineral exploration projects do not result in the discovery or development of commercially or profitably mineable ore deposits. No assurance can be given that any particular level of recovery of ore reserves or resources will be realized or produced from the Company's Bokan Project. Estimates of reserves and resources, mineral deposits and production costs can also be affected by such factors as: property title and tenement defects; environmental permitting; mining regulations and regulatory requirements; first nations rights or entitlements; wildlife concerns; weather and environmental factors; unforeseen technical difficulties; unusual or unexpected geological formations; work interruptions, strikes and/or protests. Material changes in ore reserves and resources, grades, stripping ratios, recovery rates or expected vs. realized selling prices of the underlying commodities may also significantly affect the economic viability of any project. Certain of the Company's mineral properties may be subject to defects in title not yet known to the Company resulting the risk of loss of ownership. The Company may incur significant costs related to defending the title to the Company's properties.

The Company's future viability may depend, in part, on its ability to identify and acquire new or additional mineral rights and/or business opportunities, and on the ability to finance and develop those opportunities. Mineral exploration and development is highly speculative in nature, expensive and is frequently non-productive or profitable. Substantial expenditures are required to:

- locate and establish ore reserves and resources through drilling and metallurgical and other testing techniques;
- determine metal content and metallurgical recovery processes to extract metal from the ore; and
- permit, construct, renovate and/or expand mining and processing facilities.

In addition, the prices of metals fluctuate widely and are affected by many factors outside of the Company's control. The relative prices of metals and future expectations for such prices have a significant impact on the market sentiment for investment in mining and mineral exploration companies.

The Company will be reliant on equity or other types of financing for its current, short-term and long-term working capital requirements and to fund its exploration programs. The Company does not generate any revenue and does not have sufficient funds to put any of its resources interests into production from its own financial resources. The Company also does not currently have sufficient funds to acquire IBC pursuant to the option agreement. There is no assurance that a future significant financing will be available to the Company, or that it will be available on acceptable terms. If an equity or convertible securities financing is undertaken and completed by the Company, the Company's current stockholders will suffer immediate dilution to their equity and voting interests as a result of such a financing. If additional capital is not available in sufficient amounts or on a timely basis, the Company will experience liquidity problems, and the Company could face the need to significantly curtail current operations, change our planned business strategies and pursue other remedial measures. Any curtailment of business operations would have a material negative effect on operating results, the value of the Company's outstanding common shares and the Company's ability to continue as a going concern.

The Company has no history of paying dividends on its common shares, and the Company does not anticipate paying any dividends in the foreseeable future.

Although an MRT Pilot Plant for REEs has been produced by IBC for Ucore, IBC's MRT for REEs is only at advanced testing stages and has yet to be proven at a commercial scale in a large REE purification and processing facility. The Company has not yet prepared or released an economic assessment or feasibility study that utilizes MRT for the separation and production of REEs from the Bokan Property and the Company's prospective MRT joint venture corporation to be co-owned with IBC does not yet have any customer contracts for the processing of REEs or other materials using MRT. The following risks are specific to MRT and the Company's prospective MRT joint venture corporation to be co-owned with IBC:

- The Company has not yet completed the required payments and finalized the related implementation and launch agreements that will result in the creation of a joint venture between the Company and IBC (60%/40% respectively) holding the exclusive rights to MRT as outlined previously. As of the date of this MD&A the Company does not have sufficient cash to make the payments required. Assuming completion of the payments and the creation of the joint venture corporation, the MRT process is still subject to a high level of uncertainty and risk, and may be affected by many factors, some of which are beyond the Company's control, including the emergence of newer, more competitive technologies and processes, the cost of building and operating MRT facilities, regulatory and environmental requirements, unknown profitability performance and financial metrics, the existence, knowledge and cooperation of key individuals of IBC, and the ability to attract customers and sources of feedstock.
- The Company's announcement on February 14, 2019 indicating that it has issued the Notice of Commencement to purchase IBC effectively removes (if completed) the formerly contemplated requirement that the Company complete the formation of a joint venture with IBC since, under such circumstances, IBC would be a wholly-owned subsidiary of Ucore. Notwithstanding the foregoing, there remains a USD \$1 million dollar payment to IBC ("the Legacy Payment") pursuant to the joint venture agreement, which must be paid concurrent with the funds required to complete the OTP Agreement, and there remains a risk that the Company will be unable to raise sufficient funds required to make the Legacy Payment.
- Although MRT is a previously commercialized technology in some fields, using MRT to separate REEs and certain other elements to be targeted by the Company will be new commercial applications. To date, the Company has hired IBC to complete lab bench and certain pilot scale testing of the MRT process in relation to REEs. There can be no assurance that MRT will be able to separate these elements at large commercial levels on a profitable basis. In addition, there is inherent variability and uncertainty related to the ability to procure similar-source feed-stocks so that substantial additional research and development and also re-tooling is not required between materials arriving at a commercial facility, such as the prospective SMC, from different mineral projects.
- The execution of a business plan for a commercially successful MRT separation joint venture business, once implemented, involves risks associated with the planning, engineering, cost, construction, integration, commissioning, and start-up of a new business and a new MRT facility. Risks include: failures in the specification, design or technology selection; building the project within a reasonable time and cost structure; operating costs, efficiency, recoveries, and maintenance costs. Many factors can affect key outcomes, including general economic, business and market conditions, the availability and cost of qualified personnel, the retention and cooperation of key individuals at both IBC and at the prospective joint-venture corporation, key materials and equipment, the complexity of managing multiple suppliers and contractors, the complexity of building in new and existing facilities, government regulations, and public expectations.
- The success of the OTP Agreement will depend upon, among other things, the ability to protect the key intellectual property including relevant patents, trade secrets, trademarks, and copyright materials and property. There is no assurance that these will remain protected. There is also no assurance that

alternate or competing technology will not get developed that will result in existing intellectual property becoming obsolete or less competitive.

- The specialized scientific nature of MRT means that the prospective acquisition's success depends in a large part on the ability to attract and retain key management, engineering, scientific, and operating personnel. Recruiting in these fields can be highly competitive and there is no assurance that key employees will be able to be retained.
- Steve Izatt and Reed Izatt of IBC both resigned from the Company's Advisory board on November 6, 2018. IBC stated in a press release on that date that IBC's goals are no longer aligned with those of Ucore and that it has become increasingly apparent to IBC that Ucore and IBC are on divergent paths. IBC and the Company have exchanged detailed listings about concerns and sensitivities regarding the agreements between them, including concerns related to possible contraventions of the understandings and terms therein, the mechanics and deliverables of the due diligence process inherent in the acquisition, as well as expectations regarding the transfer of the ownership of IBC. IBC has demanded that the Company waive its rights under the Agreements or otherwise terminate the agreements in order to begin with new negotiations related to new mutually acceptable terms. The Company does not intend to do so. Certain agreements between the Company and IBC have arbitration clauses that may provide and allow for an orderly and structured forum to resolve these differences. The Company is hopeful that a structured approach to good-faith negotiations, whether that being formal mediation, arbitration or otherwise, will expedite a satisfactory resolution between the parties that will allow for development of the opportunities that both parties envisioned at the onset of engaging in the various agreements amongst these parties. However, there is no assurance that a settlement will be reached between the parties. Significant risk and uncertainty exist in regard to: the performance of these agreements and compliance thereto by the parties of these agreements; the ability to enforce these agreements in a timely and cost-effective manner; arbitration or other legal proceedings with or involving IBC; and/or the ability to renegotiate these agreements on terms that would be acceptable to the parties, without the intervention of a duly appointed arbitrator or other applicable jurisdictional entity.

The Company is also involved in civil litigation with IBC. There is currently one matter underway in Nova Scotia and two additional matters underway in Salt Lake City, Utah. The duration and the outcome of these disputes are uncertain. The Company's liability insurance may cover some of the Company's costs of pursuing and defending these matters; however, such insurance may not cover all of these expenses and the coverage may not be sufficient to cover any damages amounts that the Company may be liable for.

The KRP MOU and Alaska SMC discussed in the overview section are preliminary in nature and are subject to the aforementioned risks above and are subject to and conditional upon the development of definitive agreements.

The Company's business activities are inherently risky and the Company is exposed to business and financial risks as well as liability. Many of these risks are non-insurable. For the insurable risks, if the Company is unable to maintain adequate insurance, or liabilities exceed the limits of the Company's insurance policies, the Company may be unable to continue operations. Because of the unique difficulties and uncertainties inherent in new mineral exploration ventures as well as new scientific and technological business ventures, the Company's activities face a high risk of business failure. Due to the Company's limited capital, this risk poses a significant threat as compared to larger companies in our business sector.

The Company's financial instruments consist of cash, restricted cash, short-term deposits, marketable securities, trade and other receivables, and accounts payable and accrued liabilities. Management does not believe these financial instruments expose the Company to any significant interest, currency or credit risks arising from these financial instruments. The fair market values of these financial instruments approximate their carrying values, unless otherwise noted.

## **Disclosure Controls and Procedures and Internal Controls over Financial Reporting**

Disclosure controls and procedures (“DC&P”) are intended to provide reasonable assurance that material information is gathered and reported to senior management to permit timely decisions regarding public disclosure. Internal controls over financial reporting (“ICFR”) are intended to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with Canadian generally accepted accounting principles.

TSX Venture exchange listed companies are not required to provide representations in their annual and interim filings relating to the establishment and maintenance of DC&P and ICFR, as defined in Multinational Instrument 52-109. In particular, the CEO and CFO certifying officers do not make any representations relating to the establishment and maintenance of (a) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation, and (b) processes to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with the issuer’s GAAP.

### **Other Information**

Additional information regarding the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company’s website at [www.ucore.com](http://www.ucore.com).

**UCORE RARE METALS INC.**  
**Schedule of Resource Properties**  
**For the six months ended June 30, 2019**

Schedule "A"

**Details of Resource Properties and Related Deferred Costs**

	<u>Bokan Mountain/ Dotson Ridge</u>
<b>Mineral Properties</b>	
Balance, beginning of period	\$ 4,926,169
Expenditures during the period	-
Change in foreign exchange rates	<u>(121,717)</u>
Balance, end of period	<u>4,804,452</u>
<b>Deferred Exploration expenditures:</b>	
Geology	-
Environmental & permitting	102,161
Disposal of resource property asset	(111,339)
Metallurgy	<u>12,656</u>
	3,478
Balance, beginning of period	<u>33,201,024</u>
	33,204,502
Change in foreign exchange rates	<u>(858,575)</u>
Balance, end of period	<u>32,345,927</u>
<b>Mineral properties and deferred exploration expenditures, end of period</b>	<b><u>\$ 37,150,379</u></b>

**UCORE RARE METALS INC.**  
**Schedule of Resource Properties**  
**For the three months ended June 30, 2019**

**Details of Resource Properties and Related Deferred Costs**

	<u>Bokan Mountain/ Dotson Ridge</u>
<b>Mineral Properties</b>	
Balance, beginning of period	\$ 4,861,836
Expenditures during period	-
Change in foreign exchange rates	<u>(57,384)</u>
Balance, end of period	<u>4,804,452</u>
<b>Deferred Exploration expenditures:</b>	
Geology	-
Environmental & permitting	41,658
Disposal of resource property asset	-
Metallurgy	<u>10,182</u>
	51,840
Balance, beginning of period	<u>32,698,867</u>
	32,750,707
Change in foreign exchange rates	<u>(404,780)</u>
Balance, end of period	<u>32,345,927</u>
<b>Mineral properties and deferred exploration expenditures, end of period</b>	<b><u>\$ 37,150,379</u></b>