



**Orbite Technologies Inc.**  
**(Formerly known as Orbite Aluminae Inc.)**

**MANAGEMENT'S DISCUSSION AND ANALYSIS** – For the quarter and nine months ended September 30, 2015

This Management's Discussion and Analysis ("MD&A") is current to November 12, 2015 and is management's assessment of the operations and the financial results together with the future prospects of Orbite Technologies Inc. ("Orbite" or the "Company"). This MD&A is intended to supplement and complement the Company's consolidated interim financial statements and accompanying notes for the quarter and nine months ended September 30, 2015. The Company's consolidated interim financial statements were approved and authorized for issuance by Orbite's Audit Committee and Board of Directors, and have been prepared in accordance with accounting policies consistent with the International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

This discussion contains forward-looking statements that are not historical in nature and involves risks and uncertainties. Forward-looking statements are not guarantees as to Orbite's future results as there are inherent difficulties in predicting future results. These forward-looking statements include, but are not limited to, statements regarding expectations of the Company as to the market price of alumina and other metals, strategic plans, future commercial production, production targets, timetables, mining operating expenses, capital expenditures, and mineral reserve and resource estimates. Forward-looking statements involve known and unknown risks and uncertainties and accordingly, actual results and future events could differ materially from those anticipated in such statements. Factors that could cause future results or events to differ materially from current expectations expressed or implied by the forward-looking statements include, but are not limited to, fluctuations in the market price of metals, mining industry risks, uncertainty as to calculation of mineral reserves and resources, risks related to hedging strategies, risks of delays in construction, operating cost risks, requirements of additional financing, increases in tax or royalty rates or adoption of new interpretations related thereto, and other risks described in this MD&A under "Risks and Uncertainties" and in the Company's other documents filed from time to time with Canadian securities regulatory authorities. Although the Company is of the opinion that these forward-looking statements are based on reasonable assumptions, those assumptions may prove to be incorrect. Accordingly, readers should not place undue reliance on forward-looking statements. The Company disclaims any obligation to update or revise these forward-looking statements, except as required by applicable law.

The use of "we", "us", "our", the "Company" or "Orbite", means Orbite Technologies Inc. The Company's continuous disclosure materials, including annual and quarterly MD&As, annual and quarterly financial statements, annual reports, AIFs, management proxy circulars, and various press releases issued by the Company are available on or through its website, or at [www.sedar.com](http://www.sedar.com). All figures are in Canadian dollars unless stated otherwise. Any references to tonnes are to metric tonnes. Additional information relevant to the Company's activities can be found on its website at [www.orbitetech.com](http://www.orbitetech.com).

#### *Scientific and Technical Information*

Unless otherwise indicated, scientific or technical information in this document relating to mineral reserves or mineral resources is based on information prepared by employees or consultants of Orbite, in each case

under the supervision of, or having been reviewed and approved by Marc Filion, Eng., Ph.D., MBA. As of the date of this MD&A, Mr. Filion owns 200,000 options to purchase Class A shares of the Company.

Mr. Filion is a “Qualified Person” (“QP”) as defined in National Instrument 43-101 – *Standards of Disclosure of Mineral Projects* (“NI 43-101”). A “Qualified Person” could be summarized as an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, has experience relevant to the subject matter of the mineral project, and is a member in good standing of a professional association.

## CORPORATE STRUCTURE

Orbite Technologies Inc. (the “**Company**” or “**Orbite**”) was incorporated on June 17, 1983 under the *Canada Business Corporations Act*. On June 12, 2015, the Company amended its articles to change its name to “Orbite Technologies Inc.” (*formerly known as Orbite Aluminae Inc.*). Its share capital is comprised of one Class of common shares, i.e. the Class A shares (the “**Common Shares**” or the “**Class A Shares**”), which are the only shares that are currently issued and outstanding. On June 17, 2015, the Company’s securities began trading under the “Industrial-Technology” listing category of the Toronto Stock Exchange instead of the “Mining” category. On October 5, 2015, the Company dissolved 8238375 CANADA INC., its wholly owned subsidiary, as the legal entity had no assets and was never utilized since its incorporation in 2012.

The Company’s head and registered office is located at 6505 Trans-Canada Highway, Suite 610, in Montréal, Québec, H4T 1S3. The Company also has a place of business in the industrial park of Cap-Chat, at 80 Louis Landry Street, Cap-Chat, Québec, G0J 1E0 where it owns a 5,900 m<sup>2</sup> high-purity alumina plant (the “**HPA plant**”). The Company also operates a Technology Development Center (the “**TDC**”) located in the City of Laval, Québec, at 500 Cartier Blvd West.

## GENERAL DESCRIPTION

Orbite Technologies Inc. is a Canadian clean technology based mineral-processing and resource development company. The Common Shares of the Company are traded on the Toronto Stock Exchange under the symbol “ORT” and on the OTCQX International over-the-counter exchange under the symbol “EORBF”. The Company also issued debentures convertible into Common Shares which are listed on the Toronto Stock Exchange under the symbols ORT.DB.A and ORT.DB.B.

The Company has developed proprietary processes and technologies, which are expected to enable the environmentally sustainable and cost-effective production of products such as high-purity alumina (“HPA”), silica, hematite, magnesium oxide, titanium oxide, smelter-grade alumina (“SGA”), as well as rare earth (“REO”) and rare metal (“RMO”) oxides, from a variety of potential feedstocks that could include red mud, fly-ash, aluminous clays, mine tailings, bauxite, and kaolin clay.

The Company believes its proprietary technology has certain significant advantages over existing technologies in terms of sustainability and cost-effectiveness. For detailed information on Orbite’s technology, we refer the reader to our comprehensive disclosure provided in our Annual Information Form for the year ended December 31, 2014.

The Company’s proprietary processes and technologies differ from the rest of the industry’s and are either internationally patented or patent pending. The Company’s intellectual property portfolio contains 15 intellectual property families, and the Company owns 100% of the intellectual property rights to 22 patents and 102 pending patent applications in 11 different countries and regions through the international Patent

Cooperation Treaty (PCT) process administered by the World Intellectual Property Organization (WIPO). The first intellectual property family is patented in Australia, Canada, China, Japan, Russia and in the United States.

## RECENT DEVELOPMENTS

The following is a description of the general developments of the Company for the quarter ended September 30, 2015.

- On July 2, 2015, Orbite announced that the National Research Council of Canada (NRC) would evaluate Orbite's High Purity Alumina (HPA) for use in lithium-ion battery separators in collaboration with Orbite's Technology Development Center.
- On July 10, 2015, the Company received \$2.7 million from the Government of Québec in consideration of investment tax credits on the equipment purchased for manufacturing and processing in the Gaspé region. The payment related to the 2012 and 2013 financial years. At the date of publication of the consolidated interim financial statements a total amount of \$25.1 million had been received (including interest) and was deposited in a segregated account to serve as security for the convertible debentures issued in December 2012.
- On July 23, 2015, Orbite announced the passing of Mr. Christian Van Houtte, a director of the Company.
- On September 17, 2015, the Company updated the market on the construction status of its HPA production facility, including the completion of the installation of refractory materials (bricks, mortar, and castable) in the calciner and decomposer.
- On September 28, 2015, the Company announced that it was advised by the Canadian Intellectual Property Office ("CIPO") that its patent application No. 2,862,307 titled "*Processes for Treating Fly Ash*" had been found allowable. The patent covers the selective extraction and recovery of valuable elements from fly ash, the residue from coal combustion, using Orbite's chloride-based technology.

The following is a description of the general developments of the Company subsequent to the financial quarter ended September 30, 2015:

- On October 6, 2015, the Company announced that it was advised by the United States Patent and Trademark Office ("USPTO") that its patent application No. 14/388,285 titled "*Processes for Treating Fly Ash*" had been found allowable. The patent covers the selective extraction and recovery of valuable elements such as scandium, gallium, rare earths and rare metals, alumina, magnesium oxide and titanium dioxide from fly ash, a residue from coal combustion, using Orbite's chloride-based technology. The company was also notified that patent application No. 2,885,255 titled "*Processes for Preparing Alumina and Magnesium Chloride by HCl Leaching of Various Materials*" had been found allowable by the Canadian Intellectual Property Office ("CIPO"). This patent covers the selective extraction of magnesium oxide and alumina from leaching an aluminum-containing material with hydrochloric acid. Furthermore, patent application No. 2,834,151 titled "*Processes for recovering rare earth elements from various ores*" had also been found allowable by CIPO.
- On October 6, 2015, the Company entered into a revised loan agreement with the government of Québec regarding its \$2 million non-interest bearing loan contracted on March 24, 2010, whereby the first principal payment date was deferred to January 2020 and the last principal payment date in January 2024.

- On October 16, 2015, the Company redeemed all outstanding 2012 debentures in the aggregate principal amount of \$25 million plus accrued interests. As per the terms of the Trust Indenture, for each \$1,000 principal amount of debentures redeemed, the Company issued 285.714 class A share purchase warrants exercisable until December 13, 2017 at a price of \$3.50. Accordingly, all of the security granted by the Company to secure the 2012 debentures were released and discharged.
- On October 20, 2015, the Company entered into amendments to its contribution agreements with Canada Economic Development for the \$800,000 and the \$4.0 million of non-interest bearing secured loans contracted on September 4, 2009 and February 5, 2014, respectively. The amendments provide that the \$4.0 million loan payable in 10 semi-annual installments which were to begin in April 2017, have now been deferred to January 2020. The loans were initially secured by a first ranking movable hypothec against the Company's equipment located at the Company's high purity alumina production facility in Cap-Chat, Quebec, which was replaced by a second ranking hypothec against the (i) Company's equipment located at its HPA production facility in Cap-Chat, Quebec and its Development Technology Center in Laval, and (ii) the immovable comprised of the Company's HPA production facility in Cap-Chat, Quebec.
- On November 5, 2015, the Company completed a secured debt financing totalling up to C\$22 million (or US\$16.95 million) in the aggregate (the "Facility"). The Facility is comprised of a US\$6.5 million (C\$8.5 million) revolving credit facility, term loan A (US\$0.45 million, or C\$0.6 million) and term loan B (US\$10.0 million, or C\$13.0 million). The credit facility and term loans will bear interest at the London Interbank Offered Rate (or Libor) rate, which shall be no less than 0.5% (currently 0.2%), plus 6.5%.

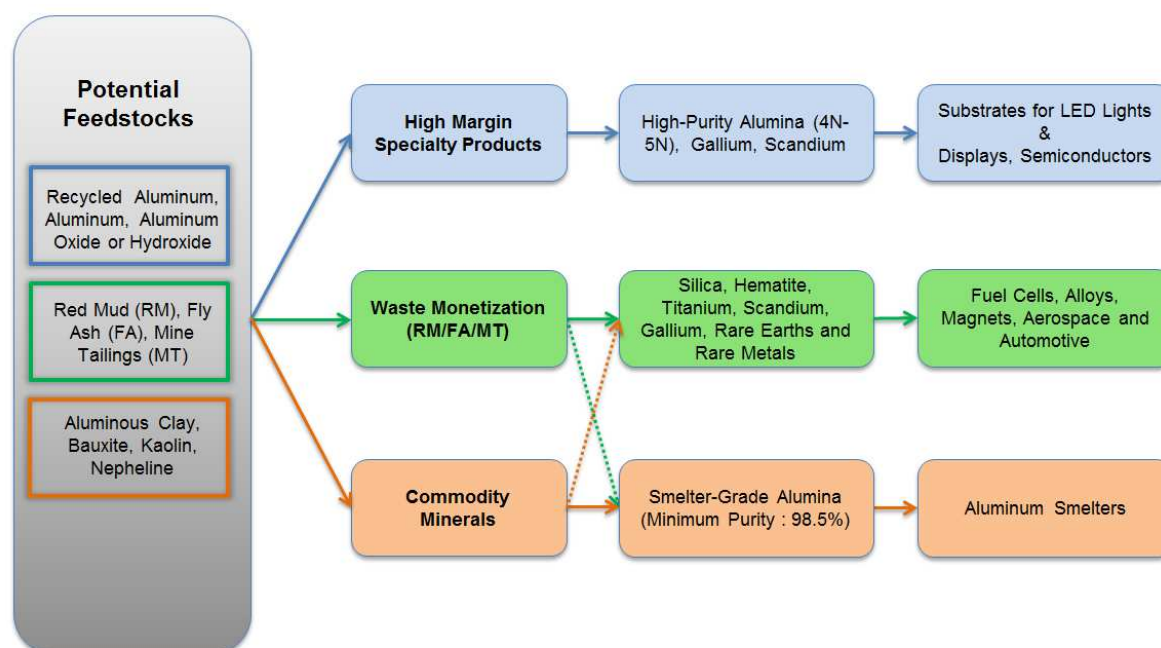
A portion of the revolving credit facility and term loan A will be repayable as the Investment Tax Credits ("ITC") payments for the 2014 financial year are received by the Company, while the term loan B principal is repayable in 36 equal monthly installments starting December 1, 2016. The balance of the revolving credit facility will be used to finance the Company's eligible receivables. The Facility is subject to certain reporting, financial and other customary conditions. The Facility is secured by a 1st ranking hypothec on the universality of the Company's present and future movable and immovable assets, excluding the ITC receivables for the 2015 financial year, which are currently being financed by Investissement Québec ("IQ"). The Facility shall expire no later than November 4, 2019.

- The Company announced on November 5, 2015 that Investissement Québec ("IQ") had agreed to increase the amount of its second secured bridge loan, initially granted in June 2015 in the amount of C\$5 million, to C\$7.6 million. This loan is collateralized against the Company's ITC receivables for the 2015 and subsequent financial years, and is repayable upon receipt by the Company of ITC payments for the 2015 financial year from tax authorities, but in no event later than June 30, 2017. Other terms for the loan with IQ remain unchanged, with interest payable at prime (presently 2.7%) plus 3.5%.

The Company also used a portion of proceeds of its November 5 financing, namely \$3,025,000, to repay in full the bridge loan contracted with IQ to finance the Company's 2014 ITCs. The security granted to IQ on the Company's 2014 ITC was subsequently discharged.

## BUSINESS DEVELOPMENT

Management is presently transforming Orbite from a technology development company into an operating entity commercializing its technologies. In order to achieve this transition, the Company has focussed its commercialization plan on three priorities: specialty products, waste monetization, and commodity minerals.



### Short Term — Specialty Products

The Company's short term priority, being the production of specialty products, is focused on completion of the Company's three tonnes per day ("tpd") high purity alumina plant (the "HPA plant"), scheduled to enter commercial production in the fourth quarter of the 2015 financial year.

High-purity alumina is used primarily to manufacture industrial sapphire substrates used in electronics. These sapphires are widely used in LED lighting applications, in LED displays, and in plasma display panels such as those found in handheld devices, cellular phones, laptops, and televisions. It is also used to manufacture Lithium Ion Batteries (LIB), which are in turn used in multiple applications including portable electronics, electric vehicles and high capacity energy storage.

Orbite is currently in the process of finalizing the construction of its HPA production facility located in Cap-Chat, on the Gaspé Peninsula in the Province of Québec. On March 8, 2012, the Company ceased operations of its alumina pilot plant and commenced the first phase of construction in June 2012, with the intention to convert the facility into a full-scale, 3 tpd, high-purity alumina production plant, designed to produce alumina at 99.99% ("4N") and greater purities. The second phase of construction commenced in August 2014 and commercial operations are expected to begin in Q4 2015. Even though the plant is not currently operational commercially, it is operated on an intermittent basis in order to produce samples for customer qualification programs.

### *Q3 2015 Operating and Construction Overview – HPA Plant*

The development plan for the HPA Plant is comprised of three phases, as follows:

- **Phase 1** – Construction of the purification section of the HPA plant to a capacity of three tonnes per day of HPA
- **Phase 2A** – Increase of HPA plant capacity to five tonnes per day of HPA
- **Phase 2B** – Conversion of the Alumina Extraction Unit to the Chloride-based Technology

**Phase 1** – Construction of HPA plant to a capacity of three tonnes per day of HPA

#### *Decomposer and Calciner, and other Major Mechanical*

- The refractory installation process (bricks, mortar and castable) and internal prepping of the decomposer and calciner ovens was completed on August 1, as planned, with CNC Mechanical (2002) Inc. ("CNC") and RHI Canada Inc. ("RHI"), with onsite technical oversight from Outotec and refractory suppliers. RHI and Les Services Mobiles Thermetco ("Thermetco") also successfully completed the four-week curing process of the refractory systems in both the decomposer and the calciner. Refractory installation and curing was also completed for the calcination system auxiliary equipment at both RHI and Thermetco facilities in Montréal.
- CNC continued with the integration of the calcination system into the plant through the installation of the calciner and decomposer internal heating elements (with Les entreprises d'électricité JMN Inc. - "JMN") JMN) and the main process piping and equipment attached to the decomposer and calciner, such as the seal pots, discharge devices and flue gas piping. This work is ongoing and proceeding as planned.
- CNC is also well advanced with the installation of other major mechanical equipment and vessels related to the digestion system, the crystallization system, the acid recovery system and the acid regeneration system.

#### *Steam Piping*

- Shop prefabrication of specialty alloy piping, required for the high-temperature steam supply to the decomposer and calciner continues to progress well at our external supplier's shop. Quality control confirms the high quality of fabrication work on this specialty piping assembly. Fabrication is materially complete but full completion has been pushed back by an additional delay in the supply of specialty high temperature valves. (see *Procurement* section below). Accordingly, steam piping installation has been moved to a later position in the completion schedule. No major impact is anticipated on the overall completion timeline.

#### *Lined Piping*

- Prefabrication of lined piping (acid duty) continues, and delivery to site for installation commenced in August, as planned. Prefabrication of the lined piping for the decomposer and calciner and the digestion and crystallization circuits is more than 80% complete. The remaining sections are expected to be delivered to the site in the next two weeks.

#### *Installation of all piping, including utilities*

- Piping installation with CNC, starting with piping support installation, commenced in August. Installation of field fabricated piping, including around the calcination system, commenced in September and is ongoing. Installation of prefabricated piping is ongoing.
- Construction crews will be going to two 10 hour shifts to accelerate prefabricated piping installation.

#### *Electrical and Instrumentation*

- Les entreprises d'électricité JMN Inc. ("JMN") continues to progress as planned. The main inlet transformer has been installed. Electrical cable tray installation is complete on all 3 floors, and electrical and instrumentation wire pulling commenced in September and is progressing as planned. The new electrical room to host the electrical supply system for the calcination system (32 transformers and controllers) is complete and installation of the transformers and controllers is now complete. The next major installation is the specialized power cables from the 32 transformers to the calcination system heating elements. Installation of instrumentation on equipment and piping is also underway.

#### *Structural, buildings and foundations*

- Les Entreprises Roy Duguay & Associés is winding down and only a few, very minor equipment foundations remain to be poured.
- Atelier de Soudure Gilles Roy Inc. ("ASGR") from Amqui (Québec) has completed the fabrication and installation of the heat exchanger building, the electrical transformer room and the calciner discharge device building extension.
- ASGR has also completed various internal modifications to the building structure and is winding down on the installation of the last equipment and personnel platforms.

#### *Ventilation and Insulation*

- The contract for the installation of the new ventilation system was awarded to Balvent Inc. from Québec city and site work commenced in September. Balvent removed all components of the previous ventilation system and will install the new system in December. The Company awarded the contract for supply and installation of insulation on the calcination equipment and high temperature piping and vessels to Isolation Morissette ltée. from Chicoutimi. Insulation work started in October.

#### *Operational Readiness*

- Commissioning and start-up procedures are being finalized by operations personnel for the various parts of the plant. Commissioning of certain sections commenced in Q3 as planned, and continue as follows;
  - Steam production system,
  - Process waste water treatment plant,
  - Plant process and instrumentation air system,
  - Caustic and acid storage and delivery systems,
  - Plant fuel distribution system,
  - Raw water distribution system,

- Cooling water distribution system,
  - Recycled process water system,
- In addition, most of these sections have been started up and operated successfully. Commissioning of other sections of the plant continues.
- Practical operations training commenced in late June and will continue through plant commissioning and start-up.
- Health and Safety and Emergency Response Plans for continuous operations have been completed and continue to be implemented.

#### *Procurement, Schedule and Budget*

- All critical long lead items have been received. However, the supplier that went through a labor dispute (now resolved) and whom had confirmed that it would not be able to respect its commitment of supplying high temperature steam valves within the initially contemplated timeframe, finally delivered components that did not meet specifications. Orbite was able to source replacement valves in Europe which have been delivered. Consequently, Orbite had to make additional modifications to its piping prefabrication schedule and to the order in which the various plant systems are completed. Management anticipates no major impact on the overall project schedule.
- Orbite commenced commissioning in Q3 2015, as planned, and the start of commercial production continues to be planned for Q4 2015.
- The project is tracking on budget. As at September 30, 2015, the Corporation had incurred external capital costs of approximately \$33.9 million of the estimated total of \$42.1 million, and therefore estimated costs left to be incurred at that date were approximately \$8.2 million.

#### **Phase 2A** – Increase of HPA plant capacity to five tonnes per day of HPA

The preliminary engineering and cost estimate for this phase are currently being reviewed and the decision to proceed with plant expansion is expected to be taken during the first half of 2016. Plant expansion is now expected to commence in the second half of 2016, with ramp up to 5 tpd to start at the end of 2016 into early 2017.

#### **Phase 2B** – Conversion of the Alumina Extraction Unit to the Chloride-based Technology

As the Orbite technical team is heavily focused on the HPA plant start-up, preliminary engineering for the conversion of the HPA Plant's alumina extraction unit to a demonstration facility for multi-feedstock utilization, including aluminous clays, red mud, fly-ash and mine tailings, using the Company's chlorine technology is now planned to be completed in the first half of 2016. Conversion to the chloride technology, along with the addition of a scandium and gallium extraction unit, is expected to commence in the second half of 2016, with completion tentatively expected for early 2017.

No independent assessment, preliminary economic evaluation, feasibility or pre-feasibility study has been completed in connection with the construction, design and operation of the HPA plant. The Company recognizes and understands the risks this entails and urges investors to consider the same. There can be no assurance that the HPA plant will operate successfully or economically, that the estimated capital costs will be sufficient to achieve the design capacity or the product purities and characteristics, or that the plant will provide a return on investment or become profitable.



## **Medium Term — Waste Monetization**

The Company's chloride-based extraction process is the technology platform for the treatment and monetization of industrial wastes, such as Red Mud, Fly Ash and Mine Tailings, the production of smelter grade alumina (SGA), and the production of other by-products, such as hematite, magnesium oxides and rare earth and rare metal products.

Once all phases of construction of the HPA plant are completed, the Company expects that its Cap-Chat facility will have the flexibility to use a variety of feed stocks, such as commercially available products (smelter-grade alumina, aluminum hydroxide or aluminum from recycled products), aluminous clay from the Company's Grande-Vallée deposit, and red mud residue or fly ash, to produce HPA or SGA (for customer testing) and other by-products, such as hematite, magnesium oxides, silica and rare earth and rare metal oxides. Thus, in addition to becoming a commercial HPA production facility, the Cap-Chat plant will also serve as a commercial scale demonstration facility for Orbite's Red Mud Monetization (RMM), Fly Ash Monetization (FAM), and commodity minerals.

As detailed above, conversion to the chloride technology, along with the addition of a scandium and gallium extraction unit, is planned to commence in the second half of 2016, with completion tentatively expected for late 2016, early 2017.

Based upon operating with multiple feedstocks in 2017, Orbite plans to use the operating data and knowledge thus obtained, to design and build its first industrial prototype (estimated to be in the range of 100k – 200k tpy of feedstock consumed) to be installed at a to be selected waste site (red mud, fly ash, or mine tailings ponds). The Company's goal would be to have a first prototype operational in 2018, followed by the commissioning of a full scale waste monetization plant (1M tpy feedstock) in 2020. The Company should then be in a position to begin licensing its technology on a global scale. Such plants would process third-party stockpiles of waste, including red mud and fly ash, producing alumina and other high-value products, returning only a small residue to the stockpile of less than 10% of the original volume.

### ***Red Mud***

Red mud is generated as a by-product of alumina production using the industry-standard Bayer process. Red mud contains alumina, silica, iron, rare metals and other valuable elements, but with no viable means to remediate or extract value from this waste. Red mud is typically stockpiled in open-air tailings ponds, although in some cases it has been disposed of in the ocean, and represents a long-term environmental liability for the entire aluminum industry. According to the International Aluminum Institute ("IAI"), there are over 100 existing alumina refineries in the world and approximately 30 closed sites totaling an estimated global stockpile of over 3 billion tonnes of red mud at sites in Europe, Asia, North and South America. Over 120 million additional tonnes are produced annually, with less than 5% being re-utilized.

### ***Memorandum of Agreement with Veolia Environmental Services***

On February 4, 2013, Orbite announced it had signed an exclusive worldwide collaborative agreement (the "MOA") with Veolia Environmental Services ("Veolia") for the remediation of red mud. Veolia is a global, integrated operator of waste management services that is active across all segments (solid, liquid, non-hazardous and hazardous waste) and intends to build red mud monetization ("RMM") plants around the world under a technology license from Orbite.

The Company and Veolia are presently in discussions to renegotiate the basis of the MOA.

The MOA and ongoing discussions with Veolia do not involve or have any impact on the HPA plant.

### ***Fly Ash***

According to the International Energy Agency, coal is used to generate 41% of the world's electricity, and is a significant source of thermal heat for industrial processes. Fly ash is one of the waste by-products generated from the burning of coal in coal-fired power plants. The largest producing regions of fly ash waste are China, India, USA, European Union, Africa, the Middle East and Russia.

According to the International Energy Association ("IEA") Clean Coal Centre, there are 7,000 coal-fired power units worldwide, spread over 2,300 sites, of which about 620 are located in China. It is estimated that 40-50% of the coal combustion by-products are re-used primarily in low-value applications, such as additives to concrete production - where such an industry exists nearby - and in embankments or other structural fills, with the remainder being sent to stockpiles. Fly ash contains alumina, silica, iron, rare metals and other valuable elements, but no viable remediation technology has previously existed.

### ***Agreements***

At this time, the Company is pursuing discussions but has not entered into any agreements related to fly ash remediation.

Orbite is constantly reviewing the timelines related to its projects. All material changes, once properly quantified using our best estimates, will be communicated to investors in a timely manner. It is important to remember that our estimates are forward looking statements and are based on information available at the time and/or the Company management's good-faith beliefs with respect to future events and are subject to known or unknown risks, uncertainties, assumptions and other unpredictable factors, many of which are beyond the Company's control. These and other risks are disclosed in the section entitled "*Risks and Uncertainties*" and otherwise referenced in all our public disclosures.

### **Longer Term — Commodity Minerals**

The Company proposes the building and operating of a smelter-grade alumina ("SGA") production plant (the "SGA Plant") processing aluminous clay mined from the Company's Grande-Vallée deposit, which is situated in the Gaspé Peninsula of the Province of Québec. The basic engineering design of the SGA Plant, based on the Company's proprietary processes, has been completed and the plant design follows the parameters of the Preliminary Economic Assessment ("PEA") Technical Report dated May 30, 2012, prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). The SGA Plant is expected to process 2.5 million tonnes of aluminous clay per year resulting in an estimated annual production of 540,000 tonnes of SGA, as well as by-products that include high-purity hematite, high-purity silica, magnesium oxide, and individually separated rare earth and rare metal oxides. The Company intends, subsequent to the completion of the HPA Plant and its conversion to Orbite's chloride technology in 2016, to undertake, in 2017, a feasibility study for the SGA Plant, including site selection and detailed engineering, subject to securing sufficient project funding and selection of a joint venture partner.

### ***Preliminary Economic Assessment (PEA)***

The PEA estimated that the Grande-Vallée deposit contains an Indicated Mineral Resource of 1.04 billion tonnes of aluminous clay grading 23.37%  $\text{Al}_2\text{O}_3$ , 52.62%  $\text{SiO}_2$ , 8.42%  $\text{Fe}_2\text{O}_3$ , 1.64%  $\text{MgO}$ , and 6.90% as

mixed oxides, as well as 563 ppm in REE+RM. The effective date of this mineral resource estimate is November 23, 2011. The PEA estimated that an SGA plant processing 2.5 million tonnes per year of aluminous clay from the Grande-Vallée deposit, could achieve an annual production of 540,000 tonnes of smelter-grade alumina and other by-products, including 189,298 tonnes of hematite, 1.2 million tonnes of silica, and approximately 48 tonnes scandium oxide, 76 tonnes gallium oxide, and 851 tonnes of heavy and light rare earth oxides. The alumina was determined to be the primary product whereas the production of silica, hematite, magnesium, mixed oxides, REE and RM should be considered as by-products. The capital costs were estimated at \$500 million and the annual operating costs at \$113 million. As per NI 43-101, a Preliminary Feasibility Study or a Feasibility Study is required to demonstrate the economic merit of Mineral Resources and their conversion to Mineral Reserves. At the time of this document, no such study has been completed and therefore the Grande-Vallée deposit currently has no Mineral Reserves.

The PEA economic conclusions were originally calculated using August 2011 market prices. Since then, the market prices of alumina, rare earth oxides and rare metal oxides have decreased significantly (in some cases, over 50%), and as such the conclusions of the PEA under Scenario 1 (alumina and hematite) and Scenario 2 (alumina and all by-products) are not representative of the current financial viability of the Company's SGA project. We urge readers to review the "Sensitivity Analysis" sections provided in the Preliminary Economic Assessment, including Tables 22-5 and 22-6, which provided adjusted financial conclusions for Scenario 2 reflecting different assumptions for market prices, including a "Low-Case" which reflected the market prices effective as at November 23, 2011 (see Sedar filing dated May 30, 2012). The following table provides a comparison of the estimated revenues and Net Present Value (NPV) between the Low-Case, High Case scenarios and the market prices in effect on October 21, 2015 for Scenario 2 using a 10% discount rate (pre-tax), in Canadian currency. As revenues, capital and operational expenditures in the PEA disclosure were provided in Canadian currency, and considering most sales and some equipment purchase and construction costs are likely to be in US currency, and in order to reflect more accurate market conditions, the NPV disclosure provided in Canadian currency was updated as to reflect the CAN/US average exchange rate of 1.3066 CA\$/USD which is the average rate from July 1, 2015 to September 30, 2015 (Source: Bank of Canada website: [www.bankofcanada.ca](http://www.bankofcanada.ca)).

Case	Alumina Price (CA\$/tonne)	Hematite Price (CA\$/tonne)	Silica Price (CA\$/tonne)	Magnesium Oxide Price (CA\$/tonne)	REO/RMO Average Basket Price (CA\$/kg)	Alumina Revenues (Million CA\$)	REO/RMO Revenues (Million CA\$) <sup>(2)</sup>	Total Annual Revenues (Million CA\$)	Annual Gross Margin (Million CA\$)	Capex (Million CA\$)	IRR	Payback (Years)	NPV @ 10% (Million CA\$)
High-Case	\$425	\$200	\$25	\$400	\$479	\$230	\$393	\$702	\$572	\$500	114%	0.9	\$4,782
Low-Case	\$325	\$125	\$10	\$292	\$168	\$176	\$138	\$358	\$237	\$500	48%	2.1	\$1,690
Oct. 21, 2015 <sup>(1)</sup>	\$382	\$83	\$42	\$550	\$159	\$206	\$130	\$419	\$263	\$654	40%	2.5	\$1,777

Notes:

(1) Prices (In USD) extracted from the following sources: Alumina: Q3 Platt's Alumina price index (PAX) was US\$292/tonne (used from now on to establish metallurgical grade alumina market prices as more accurate than linking metallurgical grade alumina to aluminum price). Hematite: The conservative price is based on selling the entire production for iron ore production (steel manufacturing) not taking into account any volume sold in the magnets or other special applications that do command much higher prices. The current iron ore price is US\$56.43-62% Fe (www.indexmundi.com-last available). Our Fe<sub>2</sub>O<sub>3</sub> is 99.5% pure and therefore does contain 69.55% of Fe. US\$56.43 X 69.55% / 62% = US\$63.3 that was used in the NPV calculation. Silica: The recent silica prices show an average of US\$32 per tonne (www.indmin.com) that was used in the NPV calculation. Magnesium and other oxides: Regarding "MgO and other oxides", the MgO prices used was US\$421.25/tonne and US\$5/tonne was used for the "other oxides". Current MgO price is found on (www.indmin.com). An average price of US\$421.25/tonne is showed for the latest transactions on calcined MgO-94% & 96% purity and therefore was used to update the results. Other oxide (Ca, K, Na) price estimate was left at US\$5/tonne. Rare earths and rare metals RE/RM: Current prices were extracted from the "Metal Page" website (www.metal-pages.com). Regarding Scandium oxide, the conservative price of US\$1,500/kg was used. The average exchange rate from July, 2015 to Sept 30, 2015 (1.3066 CAD\$/USD) was used to convert prices, annual revenues and estimated CAPEX in CAD\$.

(2) In the PEA base case (High-Case), the following rare earths and rare metals prices per kg were used for the NPV calculations: Ga (as metal)= US\$900, Sc<sub>2</sub>O<sub>3</sub>= US\$3,095, Y<sub>2</sub>O<sub>3</sub>= US\$180, La<sub>2</sub>O<sub>3</sub>= US\$143, CeO<sub>2</sub>= US\$150, Pr<sub>2</sub>O<sub>3</sub>= US\$275, Nd<sub>2</sub>O<sub>3</sub>= US\$400, Sm<sub>2</sub>O<sub>3</sub>= US\$129, Eu<sub>2</sub>O<sub>3</sub>= US\$650, Gd<sub>2</sub>O<sub>3</sub>= US\$203, Tb<sub>2</sub>O<sub>3</sub>= US\$4,332, Dy<sub>2</sub>O<sub>3</sub>= US\$600. For October 21, 2015, the following average prices (USD/kg - FOB China) were extracted from Metal Pages web site (www.metal-pages.com): Ga (as metal)= \$167.60, Y<sub>2</sub>O<sub>3</sub>= \$5.6, La<sub>2</sub>O<sub>3</sub>= \$2.26, CeO<sub>2</sub>= \$2.22, Pr<sub>2</sub>O<sub>3</sub>= \$58.15, Nd<sub>2</sub>O<sub>3</sub>= \$42.44, Sm<sub>2</sub>O<sub>3</sub>= \$2.64, Eu<sub>2</sub>O<sub>3</sub>= \$208.85, Gd<sub>2</sub>O<sub>3</sub>= \$46.50, Tb<sub>2</sub>O<sub>3</sub>= \$488.94, Dy<sub>2</sub>O<sub>3</sub>= \$233.56. A conservative price of \$1,500 per kg was used for the Sc<sub>2</sub>O<sub>3</sub>. The average exchange rate from July 1, 2015 to Sept 30, 2015 (1.3066 CAD\$/USD) was used to convert REO/RMO Revenues in CAD\$.

### Offtake Agreement with Glencore International AG

On June 17, 2013, Orbite concluded a binding offtake agreement with Glencore International AG, a subsidiary of Glencore Xstrata plc, for the purchase of 100% of the smelter-grade alumina from the Company's proposed SGA plant in Québec for an initial term of 10 years from the commencement of commercial production. The Agreement also foresees that Orbite and Glencore will undertake negotiations relating to Glencore's potential financial participation in the ownership and operation of the Company's proposed SGA plant in Québec. The Parties have not set any timetable for the commencement or conclusion of these negotiations. The offtake and ongoing discussions with Glencore do not involve or have any impact on the HPA plant.

### MINERAL EXPLORATION PROPERTIES



#### Québec

Orbite owns 100% of 74 mineral claims totaling approximately 41 km<sup>2</sup> as well as one mining lease of 98.5 ha at a site near Grande-Vallée, Québec. This is the site of the Grande-Vallée aluminous clay deposit with a 1.04 billion tonnes Indicated Mineral Resource.

As of September 30, 2015, Orbite also owns 100% of 100 mineral claims covering approximately 57 km<sup>2</sup> at sites near Rimouski and Cap-Chat, Québec. These claims cover a portion of the regional aluminous clay "Original Formation" which hosts the Grande-Vallée deposit. All titles are in the form of mining claims and all claims have been duly registered with the *Ministère de l'Énergie et des Ressources naturelles*. Orbite holds 100% of the rights in its mining claims.

For more information, see our Annual Information Form dated March 31, 2015 for the year ended December 31, 2014, specifically the section entitled "Description of the Grande-Vallée Mineral Property".

## *Nova Scotia*

On November 14, 2012, the Company announced it had entered into an agreement with a private company and its shareholders, pursuant to which the Company was granted an exclusive option for a period of three years (the "Option Agreement") to acquire a 100% undivided interest in the mineral claims and exploration rights of the Chaswood kaolin clay and sand property located in Halifax County, Nova Scotia, Canada (the "Chaswood Property").

The Chaswood Property consists of 163 claims encompassing 2,608 hectares (approximately 26.1 km<sup>2</sup>) in central Nova Scotia and is accessible by a network of paved highways and all-weather secondary roads. The property is strategically located near a natural gas pipeline and in proximity to the Port of Halifax, a major commercial port that could enable national and international shipments from a nearby potential SGA plant.

In order to acquire a 100% undivided interest in the Chaswood Property, Orbite made a payment of \$150,000 upon signing of the Option Agreement, and is required to: (1) incur aggregate exploration expenditures on the property of \$1 million by December 31, 2013 including costs related to NI 43-101 technical report, (2) deliver a NI 43-101 technical report by December 31, 2014, and if Orbite decides to exercise its option, (3) issue 2.4 million Class A Shares to the vendor, by January 1, 2016, released in tranches of 10% every nine months following the date of issuance. As of the date hereof, Orbite has not incurred the entirety of the exploration expenditures which were to be incurred in 2013 on the property (see (1) above), and has not delivered a NI 43-101 technical report by December 31, 2014 (see (2) above) and therefore, has not fulfilled two of the conditions required pursuant to the Option Agreement. Discussions with the owner of the claims to resolve the issue are ongoing.

### **DIVIDEND POLICY**

The Company's policy is to retain earnings, if any, for the financing of future growth and development of its business. As a result, the Company has not paid dividends in the past three (3) years and does not intend to pay dividends in the foreseeable future.

### **DISCLOSURE OF OUTSTANDING SECURITIES AS OF NOVEMBER 12, 2015**

The Company is authorized to issue an unlimited number of Class A Shares. The holders of Class A Shares are entitled to receive notice of and to attend all meetings of the shareholders of the Company. Each Class A Share carries one vote. The holders of Class A Shares have the right to receive dividends if, as and when declared by the Board of Directors of the Company. In the event of the liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, or any other distribution of its assets among its shareholders for the purpose of winding-up its affairs, the holders of Class A Shares of the Company are entitled to receive the remaining property and assets of the Company on a pro rata basis.

The Company has a common share purchase option plan (the "Option Plan") for its directors, officers, consultants and employees. The maximum number of shares available under the Option Plan is 10% of the outstanding Class A shares at the end of the period. Options granted under the Option Plan have a maximum ten-year term with vesting period at the discretion of the Board of Directors. Prior to October 2011, options had a five-year term. Options are granted at a minimum exercise price equal to the volume weighted average price of the Class A Shares on the TSX stock exchange for the five trading days prior to the grant of the options.

The Company recently implemented a Restricted Share Unit Plan ("RSU Plan") and a Deferred Share Unit Plan ("DSU Plan") which were approved by shareholders on June 18, 2015. The DSU and RSU Plan provides

that restricted and deferred share unit awards may be granted by the Board or the Corporate Governance & Human Resources committee (the "Committee") which administers the RSU Plan to full-time employees, officers and eligible contractors of the Company in a calendar year as compensation for services rendered to the Company. Each restricted and deferred share unit awards entitles the holder, subject to the terms of the DSU or RSU Plan, to receive a payment in fully-paid Common Shares issued from the treasury of the Company or a cash equivalent.

The aggregate number of Shares reserved for issuance upon the redemption of all share unit awards granted under the DSU and RSU Plan, or any other security-based compensation arrangement of the Company (including, without limitation, the Stock Option Plan), shall not exceed 10% of the issued and outstanding Shares.

As of November 12, 2015, the Company had 380,816,418 Class A Shares issued and outstanding. The Company also had 73,690,973 Share Purchase Warrants exercisable at a weighted average price of \$0.74 and expiring between December 2016 and April 2018. The Company also had 17,195,250 Common Share Purchase Options at a weighted average price of \$0.71. The Company could issue a further 913,750 Common Shares if the 2013 Debentures and 612,307 Common Shares if the April and May 2015 remaining Debentures were fully converted at the option of the holders.

Outstanding Class A Shares	380,816,418
Share purchase warrants	73,690,973
Share options	17,195,250
Convertible debentures (2013) <sup>(1)</sup>	913,750
Convertible debentures (April and May 2015) <sup>(2)</sup>	612,307
<b>Fully Diluted</b>	<b>473,228,698</b>

<sup>(1)</sup> Assuming a conversion price of \$0.40, not including the additional shares to be issued for the make-whole amount.

<sup>(2)</sup> Assuming a conversion price of \$0.325, not including the additional shares to be issued for the make-whole amount.

On October 16, 2015, the Company redeemed the entire outstanding 2012 debentures in the aggregate principal amount of \$25 million plus accrued interests. As per the terms of the Trust Indenture, for each \$1,000 principal amount of debentures redeemed, the Company issued 285.714 class A share purchase warrants at an exercise price of \$3.50 exercisable until December 13, 2017. Accordingly, the Trustee under the Trust Indenture released and discharged all security granted by the Company.

## FINANCIAL CONDITION

Condensed Consolidated Interim Statements of Financial Position (unaudited)			
(in thousands of dollars, unless otherwise indicated)		September 30, 2015	December 31, 2014
<b>Assets</b>			
Current assets:			
Cash and cash equivalents	\$	2,572	\$ 2,978
Short-term investments		871	376
Restricted cash		25,070	-
Sales taxes and other receivables		770	1,346
Current income and mining taxes recoverable		1,761	1,761
Investment tax credits and other governmental assistance receivable		11,184	5,198
Inventory		216	130
Prepaid expenses and others		417	845
Derivative financial instruments		-	354
Total current assets		42,861	12,988
Non-current assets:			
Restricted cash		-	16,354
Investment tax credits receivable		-	9,357
Property, plant and equipment		92,232	78,392
Patents and others		1,701	1,409
Exploration and evaluation assets		17,034	16,975
Total non-current assets		110,967	122,487
Total assets	\$	153,828	\$ 135,475
<b>Liabilities</b>			
Current liabilities:			
Accounts payable and accrued liabilities	\$	8,535	\$ 5,155
Convertible debentures liability		21,592	-
Short-term loan		8,025	-
Long-term debt		5	5
Derivative financial instrument		116	-
Total current liabilities		38,273	5,160
Non-current liabilities:			
Convertible debentures liability		1,132	21,372
Long-term debt		4,902	4,639
Deferred income and mining tax liabilities		2,372	2,372
Derivative financial instrument		31	70
Total non-current liabilities		8,437	28,453
<b>Equity</b>			
Share capital and warrants		180,774	169,153
Contributed surplus		17,175	14,981
Deficit		(90,831)	(82,272)
Total equity attributable to equity holders of the Company		107,118	101,862
Total liabilities and equity	\$	153,828	\$ 135,475

#### *Cash and short-term investments*

Cash and short-term investments increased by \$89,000 during the first nine months of 2015 compared to December 31, 2014. The increase is mainly due to the \$15.0 million received from issuance of the 2015 debentures and the \$8.025 million, in aggregate, short term loans received from Investissement Québec in January and June 2015, partially offset by the continued investment in the construction of the HPA plant, research and development, general administration and HPA plant operating expenses.

#### *Restricted cash*

Restricted cash (including short-term portion) increased by \$8.7 million during the first nine months of 2015, compared to December 31, 2014. These funds represent the refundable 2012 and 2013 investment tax credits, as well as the interest earned on such deposits, in a segregated account, which serves as security for the 2012 convertible debentures. On October 16, 2015, the Company redeemed the entire outstanding 2012 debentures in the aggregate principal amount of \$25 million plus accrued interests and these funds were released to the Company according to the terms of the trust indenture agreement.

#### *Sales taxes and other receivables*

Sales taxes and other receivables decreased by \$576,000 during the first nine months of 2015 compared to December 31, 2014. The decrease in sales taxes (GST, QST and HST) receivable from the Federal and Provincial governments is primarily due to the reimbursement of previously filed returns.

#### *Derivative financial instruments*

Derivative financial instruments decreased by \$354,000 for the first nine months of 2015 compared to December 31, 2014. The decrease is due to a change in fair value pertaining to the Series Y subscription rights.

#### *Investment tax credits and other government assistance receivable*

Investment tax credits and other government assistance receivable increased by \$6.0 million during the nine-month period compared to December 31, 2014. The increase is mainly due to the recognition of the 2015 investment tax credits receivable on the equipment purchased for manufacturing and processing in the Gaspé region in 2015.

#### *Investment tax credits (Non-current)*

Investment tax credits classified as non-current decreased by \$9.4 million during the first nine months of 2015, compared to December 31, 2014. The decrease is due to payments received from the tax authorities relating to the 2012 and 2013 fiscal years, which are pledged as security for the \$25 million convertible debentures issued in December 2012. The funds that the Company receives upon reimbursement of the 2012 and 2013 investment tax credits must be deposited in a segregated account and serve as security for the 2012 convertible debentures.

#### *Property, plant, and equipment*

Property, plant, and equipment ("PP&E") increased by \$13.8 million in the first 9 months of 2015 compared to December 31, 2014. The net increase results from \$20.8 million, before investment tax credits, in the



investment in PP&E, and is mainly attributable to the HPA plant (which includes capitalized interest of \$3.0 million), partially offset by \$6.7 million investment tax credits.

#### *Patents and others*

Patents increased by \$292,000 during the first nine months of 2015, compared to December 31, 2014. The increase is principally due to the costs resulting from 3 international patent applications, 18 national entry phases in various countries, 8 supplementary patent applications (divisional and continuation) filed as well as the patent application examination process cost in the respective national patent offices.

#### *Accounts payable, accrued liabilities*

Accounts payable and accrued liabilities increased by \$3.4 million during the first nine months of 2015, compared to December 31, 2014. This increase is mainly due to the ramp up in the construction of the HPA plant.

#### *Short-term loan*

Short term loan increased by \$8.0 million during 2015 compared to December 31, 2014 due to the receipt of a \$8.0 million loan from Investissement Québec.

#### *Derivative financial instruments*

The Company has current derivative financial instruments, recognized on the Statement of Financial Position (refer to note 7 and 13 of the consolidated interim financial statements for a description of the convertible debt), representing the estimated fair value of the convertible debentures holders' conversion option and the make-whole amount on the 2015 convertible debentures issued during the second quarter of 2015. During the first nine months of 2015, the derivative financial instrument liability increased by \$116,000 compared to December 31, 2014 mainly due the changes in the derivative's fair value and exercise of conversion option between the date of issuance and September 30, 2015.

#### *Long-term debt and convertible debentures liability*

Long-term debt (including short-term portion) and convertible debentures increased by \$263,000 and by \$1.4 million, respectively during the first nine months of 2015, as compared to December 31, 2014. The increase in long-term debt is due mainly to the accretion of interest during the period. The increase in convertible debentures liability is mainly due to the issuance of the 2015 convertible debentures, partially offset by the exercise of the conversion option of the 2013 and 2015 convertible debentures.

#### *Share capital and warrants*

Share capital and warrants increased by \$11.6 million during the nine-month period ended September 30, 2015 compared to December 31, 2014, mainly due to the issuance of common shares as a result of the conversion of the 2013 and 2015 debentures.

#### *Contributed surplus*

Contributed surplus increased by \$2.2 million during the first nine months of 2015, compared to December 31, 2014, due to the recognition of share-based payments and warrants issued.

## RESULTS OF OPERATIONS

Condensed Consolidated Interim Statements of Comprehensive Loss (unaudited)				
	Three months ended September 30,		Nine months ended September 30,	
(in thousands of dollars, unless otherwise indicated)	2015	2014	2015	2014
Expenses				
Research and development charges, net of investment tax credits and other governmental assistance	\$ 378	\$ 426	\$ 1,294	\$ 1,301
General and administrative charges	1,142	1,217	4,163	5,242
HPA plant operations	1,008	704	2,994	2,542
Other expense (income)	-	(2)	-	243
Loss before net finance income (expense) and income and mining taxes	(2,528)	(2,345)	(8,451)	(9,328)
Net finance income (expense)	395	2,116	(108)	403
Loss before income and mining taxes	(2,133)	(229)	(8,559)	(8,925)
Income and mining taxes				
Current	-	-	-	61
Deferred	-	-	-	(61)
	-	-	-	-
Net loss and comprehensive loss	\$ (2,133)	\$ (229)	\$ (8,559)	\$ (8,925)
Basic and diluted net loss per share	\$ (0.01)	\$ (0.00)	\$ (0.03)	\$ (0.03)
Weighted average number of shares outstanding	371,168,998	301,218,432	349,986,674	269,330,519

### *Revenues*

The Company is a development stage company and has no revenues.

### *Research and development charges*

Research and development charges are generally comprised of personnel related expenses (salaries and benefits), share-based payments, consultant expenses and material costs for Orbite's Technology Development Center in Laval. These charges are presented net of government research and development investment tax credits and other government assistance of \$53,000 and \$114,000 for the three and nine months ended September 30, 2015. Research and development charges decreased by \$48,000 and by \$7,000 during the three and nine months of 2015 respectively, compared to the same periods in 2014. The decrease during the quarter is due mainly to higher R&D tax credits recognized during the quarter, a decrease in lab consumables and shared-based payments partially offset by an increase in salaries, consulting fees, repairs and maintenance.

### *General and administrative charges*

General and administration charges consist mostly of personnel related costs (salaries and benefits), share-based payment expenses, consulting, accounting, business development, legal, and investor relation costs relating to head office activities. General and administrative costs decreased by 6.1% or \$75,000 during the quarter compared to the same period of 2014. General and administration charges decreased by 20.6% or \$1.1 million during the nine months ended September 30, 2015 compared to the same period in 2014. The decrease during the nine-month period is attributable mainly to a decrease in share-based payments, consulting and professional fees.

### *HPA plant operations*

HPA plant operations include administration, operating and maintenance costs for the HPA plant in Cap-Chat. Costs incurred at the HPA plant that directly relate to the installation of the equipment and the commissioning of the plant, and meet the IFRS criteria for capitalization, are capitalized in property, plant and equipment (PP&E). HPA plant operation expenses increased by \$304,000 during the quarter ended September 30, 2015, and increased by \$452,000, for the nine months ended September 30, 2015, as compared to the same periods in 2014. The increase during the three and nine-month periods are due mainly to salaries, consulting fees, insurance and shared based payments partially offset by environmental services and energy.

### *Other expense*

Other expense decreased by \$243,000 during the nine months ended September 30, 2015, as compared to the same periods in 2014, as no other expense was incurred during the period ended September 30, 2015.

### *Share-based payments*

The Company has a common share purchase option plan (the "Option Plan") for its directors, officers and employees. Share-based payments, which are non-cash in nature, decreased by \$80,000 and by \$735,000 during the three and nine months of 2015 respectively, compared to the same periods in 2014. The decrease is due mainly to the granting of less share purchase options as well as a lower weighted average fair value per share option granted during the first nine months of 2015 compared to the same period of 2014.

The following table details where the share-based payments have been recognized in the statements of comprehensive loss.

(in thousands of dollars, unless otherwise indicated)	Three months ended September 30,		Nine months ended September 30,	
	2015	2014	2015	2014
Research and development	\$ 27	\$ 29	\$ 66	\$ 112
General and administration	150	240	594	1,261
HPA plant operations	28	2	63	26
Recognized in comprehensive loss	205	271	723	1,399
Capitalized in property, plant and equipment	2	16	12	71
	\$ 207	\$ 287	\$ 735	\$ 1,470

### *Finance income*

Finance income, consisting primarily of interest income, increased by \$36,000 and \$251,000 during the quarter and the nine months ended September 30, 2015, as compared to the same periods in 2014, due mainly to interest received along with the investment tax credits received during the period as well as from cash on hand from the issuance of the 2015 convertible debentures.

### *Finance expense*

Finance expense, consisting of interest and transaction costs decreased by \$474,000 and increased by \$9,000 during the quarter and the nine months ended September 30, 2015, as compared to the same periods in 2014. The decrease during the third quarter is mainly due to transaction costs pertaining to the issuance of the series X convertible debentures issued during the third quarter in 2014.

### *Other financial gains (losses)*

The Corporation recognized a gain of \$239,000 and \$23,000 during the quarter and the nine months ended September 30, 2015, compared to a gain of \$2.5 million and \$776,000 for the same periods of 2014. These changes are mainly due to the mark to market adjustments relating to the 2013, series X and 2015 convertible debentures and the changes in fair value of derivative financial instruments.

## **CASH FLOWS**

Condensed Consolidated Interim Statements of Cash Flows (unaudited)				
	<u>Three months ended September 30,</u>		<u>Nine months ended September 30,</u>	
(in thousands of dollars, unless otherwise indicated)	2015	2014	2015	2014
Cash flows				
Operations	\$ (2,294)	\$ (1,936)	\$ (7,689)	\$ (7,846)
Non-cash working capital items	1,869	534	2,046	(1,707)
Interest received	171	154	437	191
Interest paid	(601)	(500)	(1,681)	(1,500)
Operating activities	(855)	(1,748)	(6,887)	(10,862)
Financing activities	4,999	9,854	21,457	24,345
Investing activities	(5,277)	(5,546)	(14,976)	(12,170)
Net change in cash and cash equivalents	(1,133)	2,560	(406)	1,313
Cash and cash equivalents, beginning of period	3,705	8,662	2,978	9,909
Cash and cash equivalents, end of period	\$ 2,572	\$ 11,222	\$ 2,572	\$ 11,222

### *Cash Flows from Operating Activities*

Cash flows used in operating activities decreased by \$893,000 and \$4.0 million during the quarter and nine months ended September 30, 2015 compared to the same periods of 2014. Cash flows used for operations, which is cash flows used in operating activities, adjusted for certain non-cash working capital items and net interest payments, increased by \$358,000 and decreased by \$157,000 for the quarter and the nine month-period ended September 30, 2015 respectively, compared to the same periods in 2014. Cash flows from non-cash working capital items increased by \$1.3 million and \$3.8 million during the quarter and the nine months ended September 30, 2015 as compared to the same periods of 2014. The increase in cash flows used for operations during the quarter is due mainly to HPA Plant operations and the decrease for the nine-month period ended September 30, 2015 is due mainly to reduction in general and administrative expenses partially offset by an increase in HPA plant operations. The increases in non-cash working capital items during the quarter ended September 30, 2015, are principally due to prepaid expenses and accounts payable and accrued liabilities. Whereas the increases during the nine month period are due to sales taxes, investment tax credits, prepaids and accounts payable and accrued liabilities.

### *Cash Flows from Financing Activities*

Cash flows from financing activities decreased by \$4.9 million and by \$2.9 million during the quarter and the nine months ended September 30, 2015 compared to the same periods in 2014. The decreases for the quarter and the nine-month period ended September 30, 2015 compared to the same periods in 2014 are due mainly to lower net proceeds received from the issuance of the 2015 convertible debentures and short-term

loan from Investissement Québec partially offset by higher proceeds from issuance of shares, series X convertible debentures, warrants, exercise of options, and long-term debt.

#### *Cash Flows used in Investing Activities*

Cash flows used in investing activities decreased by \$269,000 and increased by \$2.8 million during the quarter and the nine months ended September 30, 2015 respectively, compared to the same periods in 2014. The increase during the nine month period ended September 30, 2015 is mainly due to investments in HPA plant construction, partially offset by investment tax credits on property, plant and equipment received.

### **LIQUIDITY AND CAPITAL RESOURCES**

The Company is a development stage company that has not generated any revenues or significant cash flows from its operations. The Company's source of funding has primarily been from the sale of equity and debt securities, and to a lesser extent, earning interest income, which is highly dependent on the cash balances and prevailing interest rates. The Company has limited financial resources, has no recurring revenues and continues to rely on the issuance of shares, debt or other sources of financing to fund its overhead, HPA plant construction, commissioning and ongoing operations and to advance its development-stage projects. As at September 30, 2015, the Company had an aggregate cash and short-term investments balance of \$3.4 million, and positive working capital (current assets less current liabilities) of \$4.6 million. Following the November 5, 2015 secured debt financings received and the revised loan agreement with IQ regarding its 2015 ITC receivables, the Company had, on a pro-forma basis, a cash and short-term investments balance of \$19.6 million and pro-forma working capital of \$20.8 million, net of fees and commission but before expenses.

#### *Extension of \$2M Loan from Government of Québec*

On October 6, 2015, the Company entered into a revised agreement with the government of Québec regarding its \$2 million non-interest bearing loan contracted on March 24, 2010, whereby the first principal payment date was deferred to January 2020 and the last principal payment date in January 2024.

#### *Redemption of 2012 Convertible Debentures*

On October 16, 2015, the Company redeemed all outstanding 2012 debentures in the aggregate principal amount of \$25 million plus accrued interests. As per the terms of the Trust Indenture, for each \$1,000 principal amount of debentures redeemed, the Company issued 285.714 class A share purchase warrants exercisable until December 13, 2017 at a price of \$3.50. Accordingly, all of the security granted by the Company to secure the 2012 debentures were released and discharged.

#### *Amendments to Contribution Agreements – CED*

On October 20, 2015, the Company entered into amendments to its contribution agreements with Canada Economic Development for the \$800,000 and the \$4.0 million of non-interest bearing secured loans contracted on September 4, 2009 and February 5, 2014, respectively. The amendments provide that the \$4.0 million loan payable in 10 semi-annual installments which were to begin in April 2017, have now been deferred to January 2020. The loans were initially secured by a first ranking movable hypothec against the Company's equipment located at the Company's high purity alumina production facility in Cap-Chat, Québec, which was replaced by a second ranking hypothec against the (i) Company's equipment located at its HPA production facility in Cap-Chat, Québec and its Development Technology Center in Laval, and (ii) the immovable comprised of the Company's HPA production facility in Cap-Chat, Québec.

### *\$22M Secured Debt Financing*

On November 5, 2015, the Company completed a secured debt financing totalling up to C\$22 million (or US\$16.95 million) in the aggregate (the "Facility"). The Facility is comprised of a US\$6.5 million (C\$8.5 million) revolving credit facility, term loan A (US\$0.45 million, or C\$0.6 million) and term loan B (US\$10.0 million, or C\$13.0 million). The credit facility and term loans will bear interest at the London Interbank Offered Rate (or Libor) rate, which shall be no less than 0.5% (currently 0.2%), plus 6.5%.

A portion of the revolving credit facility and term loan A will be repayable as the Investment Tax Credits ("ITC") payments for the 2014 financial year are received by the Company, while the term loan B principal is repayable in 36 equal monthly installments starting December 1, 2016. The balance of the revolving credit facility will be used to finance the Company's eligible receivables. The Facility is subject to certain reporting, financial and other customary conditions. The Facility is secured by a 1st ranking hypothec on the universality of the Company's present and future movable and immovable assets, excluding the ITC receivables for the 2015 financial year, which are currently being financed by Investissement Québec ("IQ"). The Facility shall expire no later than November 4, 2019.

### *Short term loan*

The Company used a portion of proceeds of its November 5 financing, namely \$3,025,000, to repay in full the bridge loan contracted with IQ to finance the Company's 2014 ITCs. The security granted to IQ on the Company's 2014 ITC was subsequently discharged.

The Company also announced on November 5, 2015 that Investissement Québec ("IQ") had agreed to increase the amount of its second secured bridge loan, initially granted in June 2015 in the amount of C\$5 million, to C\$7.6 million. This loan is collateralized against the Company's ITC receivables for the 2015 and subsequent financial years, and is repayable upon receipt by the Company of ITC payments for the 2015 financial year from tax authorities, but in no event later than June 30, 2017. Other terms for the loan with IQ remain unchanged, with interest payable at prime (presently 2.7%) plus 3.5%.

The consolidated interim financial statements have been prepared on a going concern basis, meaning on the basis that the Company will be able to realize its assets and discharge its liabilities in the normal course of operations.

The application of the going concern concept is dependent upon the Company's ability to satisfy its liabilities as they become due and to obtain the necessary financing to complete the construction of its HPA plant, the attainment of profitable operations or the receipt of proceeds from the disposition of its mineral property interests. The Company is a development stage corporation and has not generated revenue or cash flows from its HPA plant, which is currently under construction. The Company's sole source of funding to this point has been the issuance of equity securities, debt and government grants. There can be no assurance that the HPA plant will operate successfully or economically, that the estimated capital costs will be sufficient to achieve the design capacity or the product purities and characteristics, or that the plant will provide a return on investment or become profitable.

If the going concern assumption were not appropriate for the consolidated financial statements, adjustments to the carrying value of assets and liabilities, reported expenses and consolidated statement of financial position classifications would be necessary. Such adjustments could be material.

## Contingencies

The Company may be subject to various contingent liabilities that occur in the normal course of its operations. The Company is not aware of any pending or threatened proceedings, which could potentially have a material adverse effect on the consolidated interim financial condition or future results of the Company.

## Commitments

As at September 30, 2015, the total purchase commitment for capital expenditures at the HPA project relating to equipment amounted to approximately \$1.1 million.

## Contractual Obligations

The Company expects to discharge its financial obligations related to the accounts payable and accrued liabilities and the short-term portion of the long-term debt with its working capital and the additional secured financing as described in the liquidity and capital section.

The following table presents the contractual maturities of the financial liabilities and operating leases as of September 30, 2015:

(in thousands of dollars, unless otherwise indicated)

	Carrying Amount	Contractual Cash flows	Payable within 1 year	Payable during		Payable After year 5
				Years 2 and 3	Years 4 and 5	
Accounts payable and accrued liabilities	\$ 8,535	\$ 8,535	\$ 8,535	\$ -	\$ -	\$ -
Short-term loan	8,025	8,708	124	8,584	-	-
Convertible debentures 2012 <sup>a)</sup>	21,592	29,402	500	28,902	-	-
Derivative financial instrument <sup>b)</sup>	146	-	-	-	-	-
Convertible debentures 2013 <sup>c)</sup>	502	482	28	55	399	-
Convertible debentures 2015 <sup>d)</sup>	631	1,280	26	103	103	1,048
Long-term debt	4,907	4,612	1	931	920	2,760
Operating leases	-	497	127	370	-	-
Purchase obligations	-	1,146	1,146	-	-	-
	\$ 44,338	\$ 54,662	\$ 10,487	\$ 38,945	\$ 1,422	\$ 3,808

<sup>a)</sup> Includes interest outflows at 8%. As of September 30, 2015, funds representing an amount of \$25.1 million were deposited in a segregated account as security for the debentures. These debentures were repaid shortly after September 30, 2015 prior to their contractual maturity (see note 15).

<sup>b)</sup> The embedded derivative has no outflows since it is included in the 2012 and 2015 convertible debentures.

<sup>c)</sup> Includes interest outflows at 7.5%. The Company may force conversion beginning on one-year anniversary and interest can be paid in cash or common shares at the Company's option.

<sup>d)</sup> Includes interest outflows at 5%.

## OFF BALANCE SHEET ARRANGEMENTS

The Company has certain off-balance sheet arrangements, consisting of leasing certain premises and equipment under the terms of operating leases and contractual obligations in the normal course of business.

## TRANSACTIONS WITH RELATED PARTIES

During the three and nine months ended September 30, 2015, the Company incurred \$16,000 and \$358,000 respectively (three and nine months ended September 30, 2014 - \$55,000 and \$190,000) in professional fees

from a law firm where a Board member, Pierre Meunier, is an equity partner at Fasken Martineau DuMoulin S.E.N.C.R.L., s.r.l. These transactions took place in the normal course of operations and were measured at the exchange amount, which is the amount established and accepted by the parties.

## SUMMARY OF QUARTERLY RESULTS

The following table sets out selected quarterly financial information for each of the last eight quarters:  
(in thousands of dollars, unless otherwise indicated)

Quarter ended	Net loss and comprehensive	Net loss per share (\$)
September 30, 2015	(2,133)	(0.01)
June 30, 2015	(3,740)	(0.01)
March 31, 2015	(2,686)	(0.01)
December 31, 2014	(3,474)	(0.01)
September 30, 2014	(229)	-
June 30, 2014	(4,285)	(0.02)
March 31, 2014	(4,411)	(0.02)
December 31, 2013	(9,031)	(0.05)

<sup>(1)</sup> Includes \$1,667,000 indemnification penalty on the flow-through shares, \$3,367,000 in transaction costs, \$535,000 disassembly and handling costs of certain equipment and \$1,982,000 FV variation on the 2013 convertible debentures.

The net loss decrease in the first quarter of 2014 compared to the quarter ended December 31, 2013, was a result of the absence of some costs such as financing fees involved in the new debenture transaction and the non-recurring costs for the indemnification penalty on the flow through shares experienced during the fourth quarter of 2013. The decrease in net loss during the second quarter of 2014 compared to Q1-2014, is mainly due to a decrease in financing fees and general and administrative charges. For the quarter ended September 30, 2014, the net loss was impacted favorably due to the recognition of the change in fair value of the derivative financial instruments relating to the series X convertible debentures.

For the quarter ended December 31, 2014, the net loss increase compared to the third quarter of 2014 was principally due to a \$1,782,505 write-off following the redesign of the plant and a lower amount recognized in the change in fair value of the derivative financial instruments relating to the series X convertible debentures.

The decrease in net loss during the first quarter of 2015 compared to the last quarter of 2014 is mainly due to a decrease in research and development, general and administrative, and HPA plant operations as well as the absence of some costs such as the 2014 write-off following the redesign and other expenses pertaining to the flow-through shares. The net loss increase in the second quarter of 2015 compared to Q1-2015, is due mainly to an increase in share-based payments expense following the grant of options during the second quarter as well as an increase in salaries.

The decrease in net loss during the third quarter of 2015 compared to the second quarter of 2015 is principally due to a decrease in general and administration, research and development and transaction costs.

## Financial Instruments and Risk Management

### *Fair Value of financial instruments*

A detailed description of the methods and assumptions used to measure the fair value of the Company financial instruments and their fair value are discussed in Note 13 – Financial instruments of the unaudited interim condensed consolidated financial statements for the quarter and nine months ended September 30, 2015.



### *Financial Risk Management*

For a detailed description of nature and extent of risks arising from financial instruments, and their related risk management, refer to Note 13 of the unaudited interim condensed consolidated financial statements for the quarter and nine months ended September 30, 2015. The Company is not aware of any significant changes to its risks factors from those disclosed at that time.

### *Risk and Uncertainties*

For a detailed description of risks and uncertainties associated with the Company, its business and operations, refer to the “Risk and Uncertainties” section of Orbite’s Management Discussion & Analysis and our Annual Information Form for the year ended December 31, 2014 and filed on March 31, 2015 and available on [www.sedar.com](http://www.sedar.com) or on our website [www.orbitetech.com](http://www.orbitetech.com).

Factors of uncertainty and risks that might result include the risks related to the need to raise capital to continue our growth, we may be subject to cost overruns, delays, labor shortages, labor unrest and other construction risks, the Company is dependent on a single principal asset, negative cash flows from operations, We may be unable to retain key employees, management personnel or other employees, if our competitors misappropriate unpatented proprietary know-how and our trade secrets, it may have a material adverse effect on our business, new markets, Alumina, rare earth and metal oxide prices and PEA disclosure, capital cost estimates, production, exploration and mining risks, environmental and other regulatory requirements, mineral resource estimates, title to properties, industry conditions, competition, permits and licenses, absence of feasibility studies, access to raw materials and inputs for production, joint ventures, development goals and time frames, changes to royalty regime, our business is subject to risks that may not be covered by insurance, litigation, risks related to our common shares, additional issuances of equity securities may result in dilution to our existing shareholders, our common shares are classified as a “penny stock” under SEC Rules, which limits the market for our common shares, we are a Canadian company and most of our directors and officers are Canadian citizens and/or residents, which could make it difficult for investors to enforce judgments against them or us in the United States, a decline in the price of our common shares could affect our ability to raise further working capital and adversely impact our operations, listing of our common shares and other risks stated in our continuous disclosure documents.

## **CRITICAL ACCOUNTING ESTIMATES**

The preparation of the financial statements in conformity with IFRS requires management to make judgements, estimates, and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, and expenses. Management’s best estimates concerning the future are based on the facts and circumstances available at the time estimates are made. Management uses historical experience, general economic conditions and trends, as well as assumptions regarding probable future outcome as the basis for determining estimates. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future period affected. There have been no changes in the significant judgements and estimates made by the management.

## **ADOPTION OF NEW ACCOUNTING STANDARDS, AMENDMENTS AND INTERPRETATIONS DURING THE YEAR**

The consolidated interim financial statements have been prepared in accordance with accounting policies which are consistent with those of the previous financial year.

### **New standards and interpretations not yet adopted**

Certain new standards, interpretations, and amendments to existing standards have been published and are mandatory for the Company's accounting periods beginning on or after January 1, 2016. The Company has not early adopted these standards. Those which are considered to be relevant to the Company's operations are as follows:

#### *IFRS 9 Financial Instruments*

On July 24, 2014 the IASB issued the complete IFRS 9 (IFRS 9 (2014)).

The mandatory effective date of IFRS 9 is for annual periods beginning on or after January 1, 2018 and must be applied retrospectively with some exemptions. Early adoption is permitted. The restatement of prior periods is not required and is only permitted if information is available without the use of hindsight.

IFRS 9 (2014) introduces new requirements for the classification and measurement of financial assets. Under IFRS 9 (2014), financial assets are classified and measured based on the business model in which they are held and the characteristics of their contractual cash flows.

The standard introduces additional changes relating to financial liabilities.

It also amends the impairment model by introducing a new 'expected credit loss' model for calculating impairment.

The Company intends to adopt IFRS 9 (2014) in its financial statements for the annual period beginning on January 1, 2018. The extent of the impact of adoption of the standard has not yet been determined.

## **DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING**

Disclosure controls and procedures ("DC&P") are procedures designed to provide reasonable assurance that all relevant information required to be disclosed in documents filed with securities regulatory authorities is recorded, processed, summarized and reported on a timely basis, and is accumulated and communicated to management, including its CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure. Management, including the CEO and the CFO, does not expect that the Company's DC&P will prevent or detect all error and all fraud. The inherent limitations in all control systems are such that they can provide only reasonable, not absolute, assurance that all control issues and instances of fraud or error, if any, within the Company have been detected.

Multilateral Instrument 52-109 ("MI 52-109"), "Certification of Disclosure in Issuers' Annual and Interim Filings", issued by the Canadian Securities Administrators ("CSA") requiring CEOs and CFOs to certify that they are responsible for establishing and maintaining Disclosure Controls for the issuer, that DC&P have been designed to provide reasonable assurance that material information relating to the issuer is made known to them, that they have evaluated the effectiveness of the issuer's DC&P, and that their conclusions about the

effectiveness of those DC&P at the end of the period covered by the relevant annual filings have been disclosed by the issuer.

MI 52-109 also requires the CEO and CFO to certify that they are responsible for establishing and maintaining internal controls over financial reporting ("ICFR"), as defined by the CSA, that the ICFR have been designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS, and that the Company has disclosed any changes in its ICFR during its most recent interim period that has materially been affected, or is reasonably likely to materially affect, its financial reporting.

As discussed above, the inherent limitations in all control systems are such that they can provide only reasonable, not absolute, assurance that all control issues and instances of fraud or error, if any, have been detected. Therefore, no matter how well designed, ICFR has inherent limitations and can provide only reasonable assurance with respect to financial statement preparation and may not prevent and detect all misstatements.

As at September 30, 2015, Orbite's CEO and CFO have designed Disclosure Controls, or caused it to be designed under their supervision, to provide reasonable assurance that material information relating to the Company is made known to them by others during the period and information required to be disclosed by the Company in its interim filings or other reports filed by it under securities legislation is recorded and reported with the time periods specified in securities legislation. The CEO and CFO also designed ICFR, or caused it to be designed under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

There have been no changes to the ICFR that had occurred during the quarter ended September 30, 2015, which materially affected, or are reasonably likely to materially affect, the Company's ICFR.

Orbite continues to review and document its DC&P and ICFR, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that systems evolve with the business.