

# ORBITE TECHNOLOGIES INC.

ANNUAL INFORMATION FORM
FOR THE YEAR ENDED DECEMBER 31, 2016

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#### DATE OF INFORMATION

All information contained in this annual information form (the "AIF" or "Annual Information Form") is current as at March 31, 2017, unless otherwise specified. Specifically incorporated by reference and forming a part of this AIF are the audited annual financial statements for the Company for the period ending December 31, 2016, together with the auditor's report thereon.

In this AIF, unless otherwise indicated or the context otherwise requires, the terms "Orbite", the "Company", "we", "us" and "our" are used to refer to Orbite Technologies Inc.

#### **FINANCIAL STATEMENTS**

This Annual Information Form should be read in conjunction with the Company's audited annual financial statements and management's discussion and analysis for the year ended December 31, 2016. These documents are available under the Company's profile on SEDAR at www.sedar.com.

#### **MONETARY REFERENCES**

All dollar amounts referred to herein are expressed in Canadian dollars, unless otherwise specified.

# **FORWARD-LOOKING INFORMATION**

This AIF contains forward-looking information within the meaning of applicable Canadian securities legislation. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking statements included or incorporated by reference in this AIF include, without limitation, statements with respect to:

- the Company's goal, cost and expected time frame to complete the construction of, and reach commercial operations at, its HPA Plant and increase its capacity to five tonnes per day ("tpd");
- the Company's goal and expected time frame to convert the extraction portion of the HPA Plant to the chloride technology, build a waste monetization plant and the SGA Plant;
- the Company's expectations that sales from its HPA Plant will be sufficient to fund operations;
- the Company's expectations regarding the ability to raise capital and secure loan facilities; and
- the Company's ability to secure sales contracts and strategic partnerships.

Forward-looking information is based on reasonable assumptions that have been made by the Company as at the date of such information and is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Orbite to be materially different from those expressed or implied by such forward-looking information, including but not limited to:

- Orbite may not be able to raise additional financing required in order to complete the phases of its development plan outlined in this AIF or develop its processes, technologies and properties;
- the fluctuation of alumina and metal prices, including the price of by-product elements, and currency
  exchange rates and other macroeconomic events may have adverse consequences and may result in
  the Company not being able to raise the additional financing required to fund its planned activities,
  including the development of its processes, technologies and properties;
- dependence on suppliers and contractual partners and their ability to fulfill their undertakings as planned;
- cost overruns and operational delays;
- the impact of general business and economic conditions;
- changes in government regulations, compliance with environmental requirements and the presence of
  unknown environmental hazards may result in significant unanticipated compliance and reclamation
  costs or delays in obtaining environmental permits and authorizations; some of the risks to our business
  may not be covered by insurance, and
- other risks detailed from time-to-time in the Company's quarterly filings, annual information forms, annual reports and annual filings with securities commissions or similar regulatory authorities and those which are discussed under the heading "Risk and Uncertainties".

Some of the important risks and uncertainties that could affect forward-looking statements are described in this AIF under "Risk and Uncertainties". Should one or more of these risks and uncertainties materialize, or should underlying factors or assumptions prove incorrect, actual results may vary materially from those described in forward-looking statements.

Material factors or assumptions involved in developing forward-looking statements include, without limitation, that:

- the Company will continue to be in compliance with regulatory requirements;
- the Company will have sufficient working capital and be able to secure additional funding necessary for the ramp up and operation of its HPA Plant at 3 tpd and increase its capacity to 5 tpd;
- the Company will have sufficient working capital and be able to secure additional funding necessary for the development of its processes and technologies and the conversion of the extraction section of the HPA Plant to the chloride technology and the construction of its contemplated waste monetization plant;
- the price of and demand for alumina and other metals, including by-product elements, will not decline significantly or for a lengthy period of time;
- the Company will have sufficient working capital and be able to secure additional funding necessary for the continued exploration of the Company's property interests and the construction of its contemplated SGA Plant;
- suppliers and contractual partners will fulfill their undertakings as planned; and
- the key personnel will continue their employment with the Company and its affiliates.
- the contemplated capital and operating costs of mineral extraction using the Company's processes and technologies will not increase significantly;

Although the Company believes that the expectations conveyed by the forward-looking statements are reasonable based on the information available to it on the date such statements were made, no assurances can be given as to future results, approvals or achievements. The forward-looking statements contained in this AIF are expressly qualified by this cautionary statement. The Company disclaims any duty to update any of the forward-looking statements after the date of this AIF to conform such statements to actual results or to changes in the Company's expectations except as otherwise required by applicable law.

The Company may, from time to time, make oral forward-looking statements. The Company advises that the above paragraph and the risks and uncertainties described in this Annual Information Form and in the Company's other documents filed with the Canadian securities commissions should be read for a description of certain factors that could cause the actual results of the Company to materially differ from those in the oral forward-looking statements. The Company disclaims any intention or obligation to update or revise any oral or written forward-looking statements whether as a result of new information, future events or otherwise, except as required by applicable law.

#### **CAUTIONARY NOTE TO U.S. INVESTORS**

Prospective U.S. investors should also be aware that the financial information contained in this AIF or incorporated by reference herein has been prepared in accordance with International Financial Reporting Standards accounting principles and (where audited) have been subjected to Canadian auditing and Canadian auditor independence standards. Accordingly, the Company's financial statements may not be comparable to financial statements of U.S. companies prepared in accordance with U.S. generally accepted accounting principles. Canadian public companies are required to prepare financial statements in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board, for financial years beginning on or after January 1, 2011.

# 1 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. 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. Since June 2015, the Company's securities are trading under the "Industrial-Technology" listing category of the Toronto Stock Exchange instead of the "Mining" category.

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, GOJ 1E0, where it owns a 5,900 m² 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.

The Common Shares of the Company are traded on the Toronto Stock Exchange under the symbol "ORT". Orbite Common Shares are also traded 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 symbols ORT.DB.D, ORT.DB.E and ORT.DB.F.

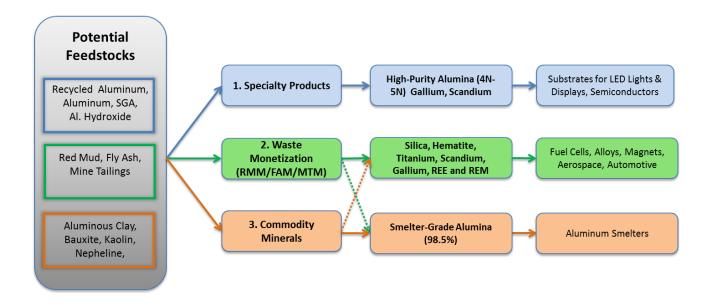
## 2 STRATEGY AND GOALS

The Company is a clean technology based mineral processing and resource development company.

The Company has developed proprietary processes and technologies, which are expected to enable the environmentally sustainable and cost effective production of high value products such as high-purity alumina ("HPA"), silica, hematite, magnesium oxide, titanium oxide, smelter-grade alumina ("SGA"), as well as rare earth oxides ("REO") and rare metal oxides ("RMO"), from a variety of potential feedstocks that could include red mud, fly-ash, aluminous clays, mine tailings, bauxite, and kaolin clay, as well as serpentine residues from chrysotile processing sites, all without generating red mud waste or tailings.

These processes and technologies aim to be environmentally neutral. They allow the extraction of all valuable products from a feedstock, with only a small fraction of residue remaining, which is not expected to have material adverse environmental impacts.

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 focused its commercialization plan around the following projects, listed in order of priority:



## 1. Short Term Priority: Specialty Products.

The Company's short term priority, being the production of specialty products, is focused on the Company's three tpd HPA Plant.

HPA is used primarily to manufacture:

- Industrial sapphire substrates used in electronics such as LED lighting applications, LED displays, and plasma display panels found in handheld devices, cellular phones, laptops, and televisions.
- Lithium Ion Batteries, which are used in multiple applications including portable electronics, electric vehicles and high capacity energy storage.
- Specialized ceramics requiring HPA with low and controlled impurity levels.

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 tpd of HPA and commencement of commercial production
- Phase 2 Optimization of the HPA Plant

Phase 2A – Increase of the HPA Plant capacity to five tpd of HPA

**Phase 2B** – Conversion of the alumina extraction unit to the Chloride-based technology

Based upon a variety of factors, such as market conditions and demand growth for the Company's 5N+ HPA, demand for and partner interest in the Company's waste monetization technology, and the relative profitability and economic potential of increasing the HPA Plant capacity versus converting the extraction

unit, the Company will decide whether to prioritize HPA Plant expansion or conversion of the extraction unit, or to proceed with both in parallel.

• Phase 1: The construction portion of Phase 1 of the development plan is now materially complete, supplier-related equipment deficiencies are being addressed. The beginning of the commercial production is expected to take place in Q4 2017 and the Company expects to ramp up commercial production to three tpd of HPA in Q1 2018, subject to raising adequate financing and implementing contemplated solution. As at December 31, 2016, the Company had incurred external capital costs of approximately \$57.7 million for completion of construction and commissioning the HPA Plant. As of December 31, 2016, the total capital costs accounted for the construction of the HPA Plant is \$122.8 million net of investment tax credits of \$47.0 million and including \$13.7 million borrowing costs which were capitalized.

The Company is pursuing discussions with a number of potential customers. Although it has received two commercial purchase orders it has not yet entered into any agreements for the sale of large quantities of its HPA.

**Phase 2A**: The detailed engineering and cost estimate for Phase 2A is targeted to be completed in the latter half of 2017 subject to raising adequate financing. After such work is completed, the Company will be able to more accurately estimate the costs and time involved in the HPA Plant's expansion to five tpd and, based on market conditions, decide when to implement it.

**Phase 2B**: Preliminary engineering for Phase 2B is planned to be completed during the first semester of 2018, subject to raising adequate financing. After such work is completed, the Company will be able to more accurately estimate the costs and time involved in the plant's conversion to the chloride-based technology and whether to prioritize HPA Plant expansion or conversion of the extraction unit.

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.

# 2. Medium Term Priority: Waste Monetization.

Once the alumina extraction unit of the HPA Plant has been converted to the chloride-based technology, the Company expects that its Cap-Chat facility will have the flexibility to use a variety of feedstocks, such as commercially available products (SGA, aluminum hydroxide or aluminum from recycled products), aluminous clay from the Company's Grande-Vallée deposit, kaolin, and industrial waste (red mud residue, fly ash or mine tailings), to produce HPA or SGA (for customer testing) and other by-products, such as hematite, magnesium oxides, silica, rare earth and rare metal oxides.

Consequently, in addition to being a commercial HPA production facility, the Cap-Chat plant will also serve as an industrial scale demonstration facility for Orbite's red mud monetization, fly ash monetization, and commodity minerals initiatives. 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. Fly ash is one of the waste by-products generated from the burning of coal in coal-fired power plants. Fly ash contains alumina, silica, iron, rare metals and other valuable elements, but no viable remediation technology has previously existed.

Based on the operating data and knowledge obtained from operating with multiple feedstocks at its Cap-Chat demonstration facility, Orbite plans to design and build its the first industrial prototype (estimated to be in the range of 100,000 – 200,000 tonnes per year "tpy" feedstock consumed) to be installed at a waste site to be selected.

The Company's goal would be to have a first prototype operational in 2020 followed by the commissioning of a full scale waste monetization plant (1 million tpy feedstock) in 2021 which would allow the Company to begin licensing its technology on a global scale. Such plants would process third-party stockpiles of waste, producing alumina and other high-value products and returning only a small residue to the stockpile of less than 10% of the original volume. At this time, the Company is pursuing discussions but has not entered into any agreements related to red mud or fly-ash monetization.

# 3. Longer Term Priority: Commodity Minerals

The Company proposes the building and operating of a 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 and technologies, 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 NI 43-101. Given the fact that very few resources have been allocated to the Grande-Vallée property since 2013 and no significant resources are planned to be allocated in the short or medium term, the Company filed a revised AIF on December 23, 2016 to announce it does not intend to update the PEA at this stage as it no longer considers its Grande-Vallée deposit as a material property under the terms of NI 43-101. However, given the past investments on the Grande-Vallée deposit which have indicated the existence of sufficient quantities of aluminous clay to operate the SGA Plant, the Company nevertheless maintains the mining of the Grande-Vallée deposit in its long-term objectives. **Investors should therefore not rely on the PEA for their decision to invest in securities of the Company.** 

The Company intends, following the HPA Plant's conversion to Orbite's chloride technology, to undertake 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.

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 SGA 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.

# 3 GENERAL DEVELOPMENT OF THE BUSINESS

## **Three-Year History**

# Recent Developments

• On January 6, 2017, Orbite announced the filing of a final short form base shelf prospectus with the securities regulatory authorities in each of the provinces in Canada. The prospectus together with each

- prospectus supplement will allow the Company to make offerings up to an aggregate amount of \$60,000,000. The prospectus will remain effective for a 25 month period.
- On January 16, 2017, Orbite provided a production update announcing the first quantity of 4N5+ HPA
  produced entirely from the newly designed and constructed plant. Due to mechanical issues with some
  heating elements of the calcination system, the Company also announced it had decided to proceed
  with a system cool down for inspection, prior to ramp up to continuous operation.
- On January 23, 2017, Orbite provided a production update to announce that HPA purity was maintained
  in the calcination section of the plant, a significant and better than expected result as an increase of
  impurities in the first few cycles was anticipated. The Company also announced having received its first
  two commercial purchase orders for the supply pf HPA;
- On January 26, 2017, Orbite announced it entered into a bought deal letter with Echelon Wealth Partners Inc. ("Echelon") for the purchase on a bought deal basis of 10,000 units of the Company at \$1,000 per unit for gross proceeds of \$10,000,000. Orbite also granted the underwriter an option to purchase up to an additional 1,500 units for additional gross proceeds of up to \$1,500,000.
- On February 1, 2017, Orbite announced that it had completed the bought deal public offering disclosed on January 26, 2017. The underwriter exercised in full its option to purchase additional units for aggregate gross proceeds of \$11,500,000. The units issued were qualified for sale by way of the Company's short form base prospectus dated January 6, 2017 and prospectus supplement dated January 27, 2017.
- On February 27, 2017, Orbite provided a production update and announced that it is approaching the Company's intermediate production target of one tpd of HPA of continuous throughput and attained instantaneous feed rates into the decomposer of up to 1.4 tpd.
- On March 31, 2017, Orbite provided an update of its production activities, including announcing a suspension of its production operations. The Company announced that:
  - Operations had difficulty in maintaining consistent and continuous ACH crystal feed rates at the
     1 tpd level and again experienced issues with the electrical heating element system of the decomposer and calciner.
  - A new, more robust ACH feed system was designed, tested and installed, and the heating element system was repaired. The calcination system is back at operating temperatures and ready for renewed ACH crystal injections.
  - However, recent developments have led Orbite to conclude that the present decomposer and calciner electrical heating system, as designed and supplied by Outotec, is not robust enough to reliably achieve the 3 tpd design capacity of the calcination system, but is rather limited to approximately 1-1.2 tpd.
  - This is an equipment issue and not a process issue. It is the Outotec supplied calcination
    equipment that does not meet contract design and performance specifications and is deficient,
    not the Orbite process.
  - The Orbite process has been proven; 5N+ equivalent ACH crystals have been produced and 4N7 HPA has been produced using 4N7 equivalent purity crystals (ie: no impurities were picked up in the calcination section).

- Preliminary scoping work previously undertaken by Orbite and its Technology Development Centre to increase plant capacity to 5 tpd has led to a straightforward solution that is believed could both resolve the issues encountered with the electrical heating element system and allow the capacity of the decomposer to be increased to 5 tpd (the calciner capacity is already 5 tpd). This solution is the installation of a predecomposer, operating at 300 400°C, that would remove a significant portion of the hydrochloric acid ("HCL") present in the ACH crystals prior to their injection into the decomposer, thereby significantly reducing thermal effects on the decomposer's electrical heating system.
- Orbite estimates that approximately \$8 million of external capital costs and 8 months are required to implement the solution for the reliable, consistent, and continuous production of 3 tpd of 5N+ HPA. Accordingly, operations will be suspended as we concentrate our human and financial capital on implementing this solution. Orbite's working capital is insufficient to cover the costs to implement the solution. The Company has no other committed sources of future financing currently available. Orbite is examining available options to raise funds and limit its cash outflows.
- Orbite has incurred in excess of \$30 million to purchase and install the calcination equipment and Orbite is examining all available legal remedies to recover a significant portion of these costs and associated damages to the Company.
- In addition and as part of its operating insurance plan, Orbite had subscribed to Boiler and Machinery and Business Interruption coverage. A claim has been filed under these policies to recover costs associated with repairing the heating element system and the fixed costs incurred during the downtime experienced. Further claims could be filed to cover fixed costs incurred during the repair period to come. The Business Interruption policy limit is \$22 million, however Orbite has not yet received confirmation of coverage from its insurer, and there can be no assurance that coverage will be assumed.
- As a result of the delays caused by the electrical heating element system issues and the additional stress imposed on the Company's financial resources resulting therefrom, the Company will not be able to meet certain covenants under its credit facilities, which will result in the right by the lender to request the immediate repayment of amounts borrowed under such facilities.

Year ended December 31, 2016

Construction and Commissioning of the HPA Plant

The Company's main focus during the year 2016 was to complete the construction and commissioning of its HPA Plant and commence commercial production. Orbite provided regular updates throughout the year on the progression of the construction and commissioning. Outlined below are the most important ones:

• On March 15, 2016, Orbite announced that due to the complexity of the piping involved and the tight quarters for installation, specially high temperature piping installation work advanced at one third of the budgeted and standard installation rate. A comprehensive review of the costs incurred and those required to complete specialty piping installation indicated that capital costs initially projected had to be increased by approximately \$9.9 million bringing the total external capital costs budget to \$56.2 million. The Company ended overtime work and pushed back the start of the commercial production into Q2.

The Company also indicated its financial resources were insufficient to cover such additional construction costs and explored financing alternatives.

- On March 21, 2016, Orbite announced that due to the additional financing requirements to complete its HPA production facility, it had temporarily scaled down the number of external contractors on site to reduce working capital requirements. Orbite employees continued commissioning activities as described in the Company's press releases of March 7 and March 15, 2016. Additionally, the Company announced that it was reviewing its project execution structure to promptly address deficiencies from its project management and engineering teams. Management continued working on a number of financing alternatives with its existing financial partners, including discussions with the Government of Québec and Investissement Québec ("IQ").
- On May 13, 2016, Orbite announced that as a consequence of the extra time required to complete the required financings, it anticipated commencement of commercial production in Q3, 2016.
- On June 21, 2016, Orbite announced that CNC Mecanique and Isolation Morissette were remobilized to work on the high temperature steam piping of the calcination system. The remainder of the piping mechanical and electrical work was put out to tender. Fjordtech Industries Inc. was awarded the contract for piping mechanical on a fixed-price basis with penalty provisions for late delivery. Contracts for the remaining electrical and instrumentation work were awarded the week of June 27, 2016. All commissioning and cold start-up activities of the decomposer and calciner units were completed successfully.
- On September 30, 2016, Orbite announced the commencement of production activities at the HPA Plant.
  The first batch of feedstock digestion commenced earlier that day and was followed by another batch.
  Commissioning and start-up of the crystallisation circuit was also well advanced and the first batches of liquor, produced in the digestion circuit, were to be transferred to the crystallisation circuit over the next few days for first production of aluminum chloride hexahydrate ("ACH") crystals. ACH crystals are the precursor to HPA.
- On December 14, 2016 Orbite announced that in preparation for the calcination of the produced ACH into HPA, the Company produced approximately 2 tonnes of amorphous HPA to constitute the initial 'bed' in the fluidized bed decomposer and calciner. This HPA was produced using the Company's legacy low-capacity Harper decomposer. The Outotec decomposer was at operating temperature (approximately 700°C) and the Company commenced introducing the bed material into the new calcination system. Once the bed in place and stabilized, the Company followed with the injection of ACH crystals into the calciner system for its calcination into HPA.
- Financing activities
- On January 28, 2016 Orbite announced that it entered into an underwriting agreement with Euro Pacific which agreed to buy on a bought deal basis 4,000 units of the Company at a price of \$1,000 per Unit for gross proceeds of \$4 million. In addition to the units distributed pursuant to the bought offering, the Company entered into agreements with several of its key suppliers who agreed to receive an aggregate of 2,938 units as consideration for outstanding invoices in the aggregate amount of \$2.9 million. The Company also granted the underwriter an option, exercisable at any time within 30 days of the closing of the bought offering, to purchase up to an additional 6,000 units for additional gross proceeds of up to \$6 million, resulting in aggregate gross proceeds of up to \$12.9 million (inclusive of the units-for-debt offering).

- On February 3, 2016, Orbite announced that further to its press release of January 28, 2016, it completed the first portion of the public offering of units in the amount of \$8.5 million under the short form base shelf prospectus and prospectus supplement dated March 18, 2015 and January 28, 2016 respectively. The gross proceeds were comprised of \$4 million raised on a bought deal basis, \$1.,5 million raised pursuant to the partial exercise by Euro Pacific of its underwriter's option together with \$2.9 million in outstanding supplier invoices which were converted into 2,938 units. Each unit consists of \$1,000 principal amount of 5% convertible unsecured unsubordinated debentures and 2,500 share purchase warrants of the Company. The Debentures will mature on February 3, 2021 and will bear interest at a rate of 5% per annum payable semi-annually. Orbite exercised its option and converted all of the remaining debentures on February 6, 2017.
- On February 23, 2016 Orbite announced that further to its press release of February 3, 2016, Euro Pacific
  exercised a portion of its underwriter's option to purchase an additional 1,060 units for gross proceeds
  of \$1.1 million. The additional units have the same terms and conditions as those issued in the first
  portion of the public offering. Orbite exercised its option and converted all of the remaining debentures
  on February 6, 2017.
- On March 4, 2016, Orbite announced that, further to its press releases of February 3 and February 23, 2016, the Company revised the terms of the underwriter's option, whereby the number of additional units that Euro Pacific, could purchase for resale was increased by 1,762 units to a total of 7,762 units. In addition, the underwriter's option, which was set to expire on March 5, 2016, was extended until close of business on April 15, 2016. The 1,762 additional units, and the underlying debentures and share purchase warrants, have the same terms and conditions as those previously issued.
- On April 27, 2016, Orbite announced that it entered into a letter of intent with IQ whereby IQ agreed to provide the Company with an aggregate financing of \$15 million.
- On May 5, 2016, Orbite announced that further to its press release issued on April 27, 2016, IQ concluded with Orbite a \$4.9 million bridge loan collateralized against the Company's investment tax credits receivable ("ITC") for the 2016 financial year. A first installment of \$2.3 million was received, while the balance of the loan was disbursed as the capital expenditures underlying the ITCs were expended by the Company. The bridge loan bears interest at a rate of 3.5% over the prevailing prime lending rate payable monthly and is repayable upon receipt by the Company of the 2016 ITC payments from tax authorities, but not later than July 23, 2018. The bridge loan was repaid in full on August 10, 2016.
- On May 6, 2016, Orbite announced that it had completed a first tranche of a non-brokered equity financing in the amount of \$1 million at a price of \$0.241 per share. The financing was completed on a private placement basis with arm's length investors on the same terms as, and incremental to the anticipated \$5 million equity financing by IQ announced on April 27, 2016.
- On May 19, 2016, following its press release of April 27, 2016, Orbite announced the closing of an equity financing in the amount of \$5 million with Ressources Québec inc. ("RQ"), a subsidiary of IQ. As part of the financing, RQ purchased 20.7 million Class A shares of Orbite at a price of \$0.241 per share and the Company amended the terms of the 17.9 million warrants issued to RQ in May 2014, which warrants are now exercisable into shares of the Company at a price of \$0.241 per share (instead of \$0.33) and will expire on May 2, 2019 (instead of May 27, 2017).
- On June 1, 2016, Orbite announced that, further to its press releases of April 27 and May 19, 2016, it completed a debt financing in the amount of \$5 million with IQ. As part of the financing, IQ subscribed to a convertible debenture in the capital amount of \$5 million at an interest rate of 10% annually. The

debenture is unsecured, matures five years from the closing date and bears interest at a rate of 10% annually, payable monthly. Interest earned during the first two years will be capitalized and payable upon the maturity date of the debenture or convertible into shares at the market price at the time of conversion, at the holder's sole discretion.

- On August 10, 2016, Orbite announced the closing of a private placement offering of 12,000 units of the Company for an aggregate principal amount of \$12 million, secured against the Company's ITC receivables resulting from capital expenditures at its HPA plant for the Company's 2016, 2017 and 2018 financial years. Each unit is comprised of \$1,000 principal amount of 9% annually secured debentures of the Company maturing 5 years from issuance and convertible into shares of the Company at a price of \$0.42, and 833 warrants exercisable into one share at a price of \$0.55 for a period of 3 years. A portion of the proceeds were used to repay in full the bridge loan received from IQ on May 5, 2016.
- On September 28, 2016, Orbite announced the closing of a private placement offering of convertible debentures for an aggregate principal amount of \$8.5 million, secured against the Company's ITC receivables resulting from capital expenditures at its HPA plant for the Company's 2015 financial year. Each debenture is comprised of \$1,000 principal amount bearing interest at a rate of 7% annually, maturing 2 years from the date of issue and convertible into Class A shares of the Company at a price of \$0.44. A portion of the proceeds were used to repay in full the bridge loan received from IQ in 2015.
- On October 27, 2016, Orbite announced that it had entered into an underwriting agreement with Echelon which agreed to buy on a bought deal basis 5,458 units of the Company at a price of \$1,000 per unit for gross proceeds of \$5.5 million.
- On October 31, 2016, Orbite announced that, further to its press release of October 27, 2016, it completed the bought deal public offering of units in the amount of \$5.5 million with Echelon, under the short form base shelf prospectus and prospectus supplement dated March 18, 2015 and October 27, 2016 respectively. Each unit consists of \$1,000 principal amount of 5% convertible unsecured unsubordinated debentures and 2,793 share purchase warrants of the Company. The Debentures will mature on October 31, 2021 and will bear interest at a rate of 5% per annum payable semi-annually.
- On December 28, 2016, Orbite announced the filing of a preliminary short form base shelf prospectus
  with the securities regulatory authorities in each of the provinces of Canada. The Company also filed a
  revised annual information form which no longer included by reference the NI 43-101 Revised Technical
  Report Preliminary Economic Assessment dated January 12, 2012, amended and restated on May 30,
  2012. A description of the changes made in the Revised AIF appears on its front page.

# Corporate and Business Developments

- On February 23, 2016 Orbite announced the appointment of Pierre Gignac as an independent member to the Company's Board of Directors.
- On March 31, 2016, Orbite announced the results of the 2015 financial year and provided a summary on the samples shipped. Since the beginning of 2015, Orbite shipped a total of 25 samples to 19 prospective customers and entered their supplier qualification program. Sample purity was customized to meet specific customer application requirements and ranged from 4N5 to 5N+. Initial feedback was positive and several customers requested multiple samples. The samples were produced using a modified, low-volume calcination set-up, utilizing ACH, the HPA precursor, produced at Orbite's HPA facility.

- On March 31, 2016 Orbite also provided a summary of the changes to its patent portfolio. Throughout 2015 and subsequent to year's end, the Company received 17 patents as well as 6 patent allowances.
   Four of the delivered patents and two of the allowances relate to Orbite's Red Mud and Fly Ash Monetization technology in a number of jurisdictions such as Canada, the U.S., Russia and Australia.
- On May 12, 2016, Orbite announced the appointment of Charles Taschereau as Vice-President and Chief Operating Officer (COO) for the Company, effective June 6, 2016.
- On June 22, 2016, Orbite held its 2016 annual shareholders meeting during which shareholders approved all of the resolutions proposed by management.
- On July 28, 2016, Orbite announced the results of the second quarter 2016 and provided an update on the HPA Plant and samples shipment. To date, 27 samples had been shipped to prospective customers, including one 50kg commercial sample. Two further commercial samples were ordered. A further 21 samples were to be shipped to 20 additional prospective customers.
- On July 28, 2016, Orbite also provided an update on its IP. During the second quarter, seven notices of
  allowance were received. Additionally, seven new patents were granted, for a total of 14 new intellectual
  property rights which cover notably the HPA production process, Red Mud Monetization and magnesium
  extraction and recovery in the U.S., Russia, Australia, Japan and Canada.
- On November 11, 2016 Orbite announced the results of the third quarter and provided the updates on samples and IP. During the quarter, three commercial samples were shipped with one remaining to be shipped. To date 31 samples were shipped to 19 prospective customers. The Company will be producing 18 more samples to fill requests from 14 new prospective customers. Also the Company was awarded 12 patents in six countries (Australia, Japan, Canada, U.S, Russia and China) and four notices of allowance were received.

Year Ended December 31, 2015

Construction and commissioning of the HPA Plant

- On March 12, 2015, Orbite announced it had appointed RHI Canada Inc. as its contractor for the installation of the refractory system for the decomposer and calcination units at its HPA production facility in Cap-Chat, Québec.
- On June 12, 2015, Orbite provided an update on the construction of its HPA production facility and due
  to the fact originally confirmed delivery dates for certain critical components of the high temperature
  steam system may not be met, it announced that the commencement of commercial production at the
  HPA Plant would occur in Q4 of 2015, instead of Q3 as originally projected.
- On July 31, 2015, Orbite provided another HPA construction update on the various sections of the plant
  and indicated that installation of refractory materials in the calciner, decomposer and piping was now
  materially complete.
- 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. Commissioning commenced in Q3 as planned and the start of
  commercial production continues to be planned for Q4 2015.
- On November 13, 2015 Orbite announced third quarter results and provided an update on HPA Construction. Commissioning of many sections of the plant was completed successfully. All critical long

lead items were received. However, components for the high temperature steam valves did not meet specifications and replacements valves had to be sourced and delivered. While this caused some modifications to be made to the order of completion of the various plant systems, management did not anticipate major changes to the overall project schedule.

On December 15, 2015, Orbite announced that a dispute, now resolved, with one of its contractors
pushed the end of construction of its HPA Plant and start of commercial production into the second
quarter of 2016.

# Corporate and Business development:

- On April 7, 2015, the Company announced it had shipped HPA samples to five prospective customers, thereby entering their supplier qualification programs. The samples were produced by calcining ACH, the precursor material for HPA, which was successfully produced at the Company's HPA facility in Cap-Chat in a production run during the third quarter of 2014.
- On May 5, 2015, Orbite also announced it had received patents in both Canada and the United States
  pertaining to its Red Mud Monetization technology namely Canadian patent 2,857,574 and U.S. patent
  9,023,301, both titled Processes for Treating Red Mud.
- On June 4, 2015, Orbite announced the passing of Mr. Peter Crossgrove, a director of the Company.
- On June 15, 2015, Orbite announced that effective June 17, 2015, the Company changed its name to
  Orbite Technologies Inc. Concurrently with its name changed, the Company's shares began trading
  under the "Industrial/Technology" listing segment on the Toronto Stock Exchange, instead of "Mining".
- On June 18, 2015, the Company held its 2015 annual and special shareholders meeting during which shareholders approved all of the resolutions proposed by management, including the approval of the Company's newly implemented restricted share unit plan and deferred share unit plan.
- On June 29, 2015, Orbite announced that it received notification from IP Australia, the Australian Government agency that administers intellectual property rights, of the granting and the delivery of patent 2012,308,068 pertaining to Processes for preparing alumina and various other products. The new patent provides protection until September 16, 2032.
- On July 2, 2015, Orbite announced that the National Research Council of Canada (NRC) would evaluate
  Orbite's HPA for use in lithium-ion battery separators in collaboration with Orbite's Technology
  Development Center.
- On July 23, 2015, Orbite announced the passing of Mr. Christian Van Houtte, a director of the Company.
- On September 10, 2015, Orbite announced it shipped new samples of HPA to prospective customers.
  The Company had previously shipped 4N8 HPA samples to prospective customers on April 7, 2015.
  Feedback on purity and chemical composition of samples was positive and these prospective customers indicated their desire to test HPA that is more representative of full-scale, commercial production, notably relative to mechanical properties.
- On October 15, 2015, Orbite announced it had shipped additional 5N+ HPA samples to seven prospective customers. Six of the prospective customers who received the new 5N+ samples had not previously received Orbite's HPA.
- On November 10, 2015, the Company announced that the United States Patent and Trademark Office granted the Company U.S. patent No. 9,181,603 titled "Processes for Treating Fly Ash".

# Financing activities and financial contributions

- On January 14, 2015, Orbite announced it had received, from IQ, a \$3.025 million bridge loan, collateralized against the Company's ITC's receivable for the year 2014, estimated at \$4.0 million. The loan carried an interest rate of 3.5% over the prevailing prime lending rate. The loan was fully repaid on November 5, 2015.
- On January 15, 2015, Orbite filed a preliminary short form base shelf prospectus with the securities
  regulatory authorities in each of the provinces of Canada and filed its final short form base shelf
  prospectus on March 20, 2015. The prospectus provided the Company the ability to raise funds up to
  \$30 million for a period of 25 months.
- On January 30, 2015, the Company announced it had exercised the Series Y rights certificate, as amended, requiring the holder to purchase the corresponding number of units subject to applicable conditions and provisions. These Series Y subscription rights were subsequently terminated, on April 13, 2015, by mutual consent of the holder and the Company, and are no longer in effect.
- On February 16, 2015, the Company announced it was selected to receive up to \$4.5 million in nondilutive funding from Sustainable Development Technology Canada to be applied towards Orbite's technology development, demonstration and commercialization related to the processing of red mud.
- On March 3, 2015, Orbite filed a management proxy circular soliciting proxies for the vote relating to the Series Y Subscription rights to be held during a special meeting of shareholders on April 2, 2015. On March 26, 2015, the Company announced the postponement of the shareholders meeting to April 27, 2015, which was cancelled subsequent to the termination of the Series Y Subscription Rights on April 13, 2015.
- On March 30, 2015, the Company entered into an underwriting agreement with Euro Pacific under which it agreed to buy on a bought deal basis by way of prospectus supplement, 8,500 units of the Company at a price of \$1,000 per unit for gross proceeds of \$8.5 million. In addition, the Company also granted the underwriter an upsizing option to purchase up to an additional of 6,500 units for additional gross proceeds of up to \$6.5 million (resulting in aggregate of gross proceeds of up to \$15 million).
- On April 6, 2015, the Company announced it had completed the first portion of the public offering of
  units in the amount of \$10 million under its short form base shelf prospectus and prospectus supplement
  dated March 18 and March 30, 2015 respectively. Euro Pacific retained an option to purchase an
  additional \$5 million of units until May 6, 2015. Conversion of the remaining outstanding debentures
  occurred on April 6, 2016.
- On May 6, 2015, Orbite completed the issuance of 5,000 additional units for gross proceeds of \$5 million as a result of the exercise by Euro Pacific of its financing option, bringing the aggregate gross proceeds for such public offering to \$15 million. The additional units had the same terms and conditions as those issued in the first portion of the public offering announced on April 6, 2015. Conversion of the remaining outstanding debentures occurred on April 6, 2016.
- On June 12, 2015, Orbite confirmed amongst other things that IQ agreed to provide Orbite with a \$5.0 million bridge loan, collateralized against the Company's ITC for the year 2015.
- 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 to

January 2024.

- Throughout the year 2015, the Company received funds from the government towards its 2012 and 2013 Quebec ITC, related to equipment purchased for manufacturing and processing in the Gaspé region during the 2012 and 2013 financial years. 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 was 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 provided that the \$4.0 million loan payable in 10 semi-annual installments which were to begin in April 2017, were 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.
- On November 5, 2015, the Company completed a secured debt financing totaling 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 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 were being financed by IQ. The Facility shall expire no later than November 4, 2019.
- The Company also used a portion of proceeds of its November 5 financing, namely \$3 million to repay in full the bridge loan contracted in January 2015 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 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. The loan was fully repaid on September 28, 2016.

# Year Ended December 31, 2014

- On January 30, 2014, Orbite announced it was granted a \$4 million non-interest bearing repayable financial contribution from Canada Economic Development to be used for the purchase and installation of the alumina calciner. The contribution is interest free, repayable in 10 consecutive equal semi-annual installments starting 24 months following completion of the HPA Facility and was awarded through Canada Economic Development's Québec Economic Development Program.
- On February 17, 2014, Orbite announced the nomination of Mr. Glenn Kelly, previously Executive Vice
  President and Chief Operating Officer of the Company, as President and Chief Executive Officer,
  replacing Mr. Richard Boudreault, who also resigned as director of the Company.
- On March 10, 2014, the Company issued the series X and Y subscription rights to Crede Capital Group, LLC ("Crede"), a US based institutional investor. Terms and conditions for the series X and Y subscription

- rights and the related debentures are summarized in the Company's amended and restated prospectus dated December 6, 2013.
- On May 12, 2014, Orbite announced the nomination of Mr. Claude Lamoureux as Chairman of the Board
  of Directors of the Company and the appointment of Mr. Glenn Kelly, the Company's President and CEO,
  as a member of the Board.
- On May 12, 2014, Orbite ended ongoing discussions and terminated its memorandum of understanding with Rusal UC pertaining to its Smelter Grade Alumina project.
- On May 27, 2014, Orbite announced the completion of a private placement offering with RQ, a subsidiary of IQ. As part of the financing, RQ purchased 35,714,286 units of the Company at a price of \$0.28 per unit, each unit was comprised of one Class A share and one half (1/2) of one Class A share purchase warrant. Each full warrant entitles RQ to purchase one Class A share of the Company at a price of \$0.33 for 36 months from the date of closing. The terms of warrants that were part of the unit were amended in May 2016.
- On June 19, 2014, Orbite held its Annual and Special Meeting of Shareholders where the shareholders ratified and approved the name change of the Company, the revised shareholders rights plan, the new governing by-laws and the early warning requirement for director election.
- On July 11, 2014, Orbite announced an investment of \$10 million in the form of convertible debentures
  and warrants pursuant to the exercise of the Series X Subscription Rights. Under the placement, Crede
  purchased units consisting of \$10 million principal amount of convertible unsecured debentures and 13
  million warrants. The Debentures mature five years from issuance, namely July 11, 2019 and bear interest
  at a rate of 7.5% per annum.
- On July 15, 2014, the Company received an initial payment of \$6 million from tax authorities in consideration of ITC on the equipment purchased for manufacturing and processing in the Gaspé region. The payment relates to the 2012 financial year. The amount was deposited in a segregated account and served as security for the convertible debentures issued in December 2012 which have since been fully redeemed.
- On August 6, 2014, the Company recommenced construction activities at its HPA production facility in Cap-Chat, Québec. This first phase of construction entailed the structural reinforcement of the HPA building structure required for the subsequent installation of the Outotec calcination equipment.
- On September 3, 2014, the Company announced completion of the first phase of the construction project, namely the structural reinforcement of the HPA building for the subsequent installation of the Outotec calcination equipment. It further announced that fabrication of the calcination equipment was completed and installation at site was slated to commence the week of September 8th. The mechanical contract for this installation was awarded to CNC Mechanical (2002) Inc. of Boucherville, Québec.
- On October 6, 2014, the Company announced it received \$6.3 million as the second installment related to its 2012 Québec Investment Tax Credits. The funds were due to the Company in relation to equipment purchased for manufacturing and processing in the Gaspé region during the 2012 financial year.
- On October 29, 2014, the Company announced it discovered non-conformities with some of the
  refractory material supplied to the Company. The Company announced it therefore deferred installation
  of the refractory system, allowing for further testing with its suppliers to confirm that the replacement
  materials would meet long-term operational requirements. Orbite expected to commence refractory
  installation in January 2015, and anticipated commercial production to commence slightly later than

- originally anticipated, in the second quarter of 2015.
- On November 6, 2014, Orbite announced the acquisition, for no consideration, of patent applications relating to an inventive process for treating magnesium-bearing materials. The acquisition is the result of a universal assignment of the applications in favor of Orbite by Alliance Magnésium Inc.
- On November 10, 2014, Orbite announced amendments to the terms of its series Y subscription rights issued on March 10, 2014 to Crede Capital, LLC. The Company and Crede mutually agreed to amend the terms of the Rights to postpone to any time between January 15 and January 30, 2015 Orbite's option to require exercise of the Rights, and to extend the deadline for the Company's undertaking to convene a shareholders meeting for the approval of the Rights to January 30, 2015. The series Y subscription rights have since been cancelled.
- On December 4, 2014, Orbite announced that, further to its press release of October 29, 2014, the Company had selected and approved the replacement refractory materials for the inner lining of the decomposer and calciner.
- On December 10, 2014, Orbite announced the resignation of Mr. Shaun Usmar as Director of the Company, following his appointment as Chief Financial Officer of Barrick Gold.
- On December 12, 2014, as a consequence of delayed delivery by its European supplier of some of the
  components of the replacement refractory components, Orbite announced that the commencement of
  commercial production at its HPA facility was deferred to Q3 2015. Orbite also announced it was
  increasing its project budget to approximately \$42 million, representing an increase in total plant cost
  from \$105.9 million to \$117 million.
- On December 16, 2014, Orbite announced that the Government of Québec confirmed the Company would receive \$4 million as the third installment of its 2012 and 2013 Québec Investment Tax Credits.
   The funds were due to the Company in relation to equipment purchased for manufacturing and processing in the Gaspé region during the 2012 and 2013 financial years.
- On December 18, 2014, Orbite announced that the Canadian Intellectual Property Office granted and issued two new patents to Orbite. The two patents are Canadian patent 2,829,049, titled "Processes for Recovering Rare Earth Elements from Aluminum-Bearing Materials", and Canadian patent 2,834,356, titled "Methods for Preparing Hematite". Both patents give Orbite the exclusivity for the use of these inventions for a period of twenty (20) years following their respective filing date.

# 4 BUSINESS OF THE COMPANY

# 4.1 Orbite's Proprietary Processes

#### Overview

The Company has developed innovative and proprietary processes for the production of HPA, SGA, and other high-value by-products, such as silica, hematite, magnesium oxide, rare earth and rare metal products, from a variety of potential feedstocks including aluminous clay, bauxite, kaolin, red mud and fly-ash.

Alumina, iron, silica, titanium and magnesium are the most abundant rock-forming elements in the earth's crust and are therefore also found in many man-made wastes such as red mud and fly ash, which are generated from the processing of bauxite at alumina refineries and from the burning of coal at power plants. The concentration of these principal elements in the potential feedstock(s) will influence SGA, red mud monetization (RMM) and fly ash monetization (FAM) plant designs and economics. Plants are expected to be dedicated to a specific feedstock or to a specific mix of feedstocks. Rare earth and rare metals products can also be successfully recovered as high-value by-products even if present in the feedstock(s) in low concentrations.



The following table summarizes the approximate constituent elements of the potential feedstocks and the resulting products from plants using the Orbite technology:

Plant Design		HPA/SG	RMR Plants	FAR Plants		
Feedstock(s)	Aluminous Clay	Bauxite	Kaolin	Nepheline	Red Mud Waste	Fly Ash
Abundance	Ubiquitous Worldwide	Tropical and Sub- Tropical Regions Only	Specific Regions Worldwide	Specific Regions	Waste Stockpiles Near Alumina Refineries	Waste Stockpiles Near Coal Power Plants
Alumina (Al <sub>2</sub> O <sub>3</sub> )	18-25%	40-60%	18%-80%	20-40%	10-25%	12-30%
Hematite (Fe <sub>2</sub> O <sub>3</sub> )	7-10%	2-20%	0-2%	0-3%	28-35%	10-15%
Silica (SiO <sub>2</sub> )	>50%	1-7%	Up to 65%	35-55%	8-12%	27-35%
REO/RMO Potential	Ga <sub>2</sub> O <sub>3</sub> , Sc <sub>2</sub> O <sub>3</sub> , REO	Ga <sub>2</sub> O <sub>3</sub> , Sc <sub>2</sub> O <sub>3</sub>	Not Determined	Ga <sub>2</sub> O <sub>3</sub> , Sc <sub>2</sub> O <sub>3</sub> , REO	Ga <sub>2</sub> O <sub>3</sub> , Sc <sub>2</sub> O <sub>3</sub>	Sc <sub>2</sub> O <sub>3</sub> , REO
Other Important By-products	MgO, K <sub>2</sub> O, TiO <sub>2</sub>	TiO <sub>2</sub>	Not Determined	K <sub>2</sub> O, Na <sub>2</sub> O	TiO <sub>2</sub>	MgO, TiO <sub>2</sub>

Note: Grade ranges and potential elements are only provided for general comparison between feedstocks and should not be relied upon as being representative or economic.

# General description of the processes

The processes begin with the pre-treatment of feedstock(s) followed by their leaching in hydrochloric acid. The efficiency with which the feedstock(s) are dissolved is an important determinant in the suitability of the feedstock with the processes. Minerals contained in suitable feedstock(s) are dissolved and the constituent elements are either soluble, remaining in solution in chloride form (aluminum chloride, iron chloride, etc.), or are non-soluble, and are filtered out of the solution (silica, titanium, etc.). The non-soluble elements can be further selectively separated and purified to produce higher-purity silica at 99.9% or greater purity and titanium oxide at 95% purity.

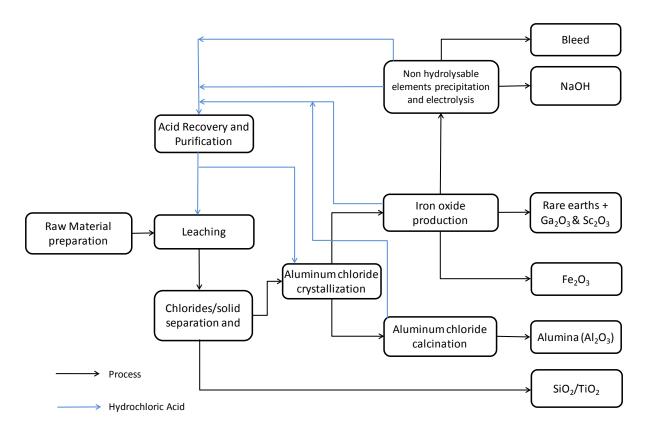
Orbite Technologies Inc.

Individual chlorides are then selectively crystalized, precipitated and extracted in a specific sequence from the pregnant solution containing all the soluble elements in chloride form. This begins with aluminum chloride followed by iron chloride and the other elements, resulting in individual high-purity chloride solutions, which are subsequently converted into their oxide forms (i.e. alumina, hematite, magnesium oxide). For high-purity alumina, the aluminum chloride purity is increased through additional crystallization/precipitation steps. The concentration of rare earth and rare metal chlorides held in the solution is gradually increased in a closed-loop section of the process, until the concentrations are sufficient for their individual extraction using proven technologies.

By design, over 99.75% of the chlorine is recovered during the conversion of the chlorides into oxides, and through contact with hydrogen, and is regenerated into hydrochloric acid, which is then reused as required throughout the process, thereby minimizing the need to import additional hydrochloric acid. As a result, the major constituent elements contained in the feedstock can be recovered into one of the finished products, in some cases as an impurity to one of these products, with all the finished products having the potential of being marketable, including the large volume of silica that is produced.

Accordingly, there are minimal mineral residues or tailings generated from using the Orbite processes which differs completely from the remainder of the alumina and the mining industries. The alumina industry, using the industry standard Bayer process, relies on high-quality low-silica bauxite and generates on average of up to 2 tonnes of red mud waste per tonne of alumina produced. The mining industry in general generates a substantial volume of mineral wastes and tailings in their efforts to extract a few valuable elements, an approach which is not environmentally and economically sustainable.

# **Simplified Diagram of Orbite's Proprietary Process**



## 4.2 Technology Development Center

The Company can rely on its Technology Development Center ("TDC") in Laval, Québec, to advance different research and development initiatives as well as provide support and testing services to the HPA plant. The state-of-the-art equipment in the facilities includes assaying equipment, leaching reactors and calciners.

The TDC plays a key role in process optimization. Currently focused on optimization of the HPA process; in the future, the TDC will work towards the technical realization of Orbite's waste monetization and commodity minerals initiatives. Know-how developed at the TDC will be tested and fine-tuned in the commercial setting of the HPA facility in Cap-Chat.

HPA is not a uniform product market. Criteria such as impurity levels, particle size distribution and product density play an important role in what products will be brought to market, and what applications will be pursued. The TDC is playing a key role in product customization, enabling Orbite to deliver a well-positioned and diversified portfolio of HPA products. The TDC will also play a key role in future specialty and commodity products launches.

# 4.3 Intellectual Property

During 2016, 16 additional patents were granted while 2 were granted so far in 2017. The Company's intellectual property portfolio now contains 15 intellectual property families shown in the following table:

Processes for Extracting Aluminum from Aluminous Ores.

Processes for Extracting Aluminum from Aluminous Ores.

Processes for Extracting Rare Earth Elements from Aluminum-Bearing Materials.

Processes for Extracting Rare Earth Elements from Various Ores.

Methods for Preparing Hematite.

Methods for Separating Iron lons from Aluminous Ions.

Processes for Preparing Alumina and Various Other Products.

Processes for Treating Red Mud.

Processes for Treating Fly Ash.

Processes for Preparing Titanium Oxide and Various Other Products.

Processes for Recovering Rare Earth Elements and Rare Metals.

Processes for Treating Various Materials.

Processes for Purifying Aluminum Ions.

Processes for Preparing Alumina and Various Other Products.

Processes for Decomposition and Calcination of Alumina.

The Company owns 100% of the intellectual property rights of its 50 patents and 52 pending patent applications in 11 different countries through the international Patent Cooperation Treaty ("PCT") process administered by the World Intellectual Property Organization ("WIPO"). The intellectual property portfolio is protected by provisional filings under the PCT which takes approximately 30 months to complete and provides coverage worldwide until the filing in individual countries at the national phase.

The first intellectual property family is patented in Australia, Canada, China, Japan, Russia and in the United States. In 2016, the Company filed 3 national entry phases in various countries, 4 divisional applications in various countries (Australia, Canada and Russia) as well as 4 continuation applications in USA.

## 4.4 Employees

As at December 31, 2016, the Company employed 85 full time employees, of which approximately 55 were assigned to the HPA Plant in Cap-Chat, Québec. The significant number of employees at the Cap-Chat facility makes Orbite the largest private employer in the Haute-Gaspésie region.

The Company's activities at the HPA plant require a specialized skill set, ranging from operators trained in chemical and industrial processes to mechanical and chemical engineers. While the Company is trying to target local hiring, we are also hiring people from various regions across the province and elsewhere in Canada to fill out our specialized positions.

In 2016, Orbite hired more than 50 employees for both permanent and temporary positions. Of these, several are from diverse culture, making Orbite one of the most diverse employers in the region.

Since 2013, Orbite offers an in-house training program in collaboration with local partners which allows the Company to develop and maintain employees' skills and knowledge in accordance with its high standards. This training is offered on a continuous basis.

In 2016, the employees working in the operations, maintenance and laboratory departments in Cap-Chat, voted to become part of a union represented by Unifor. Negotiations to put in place the first collective agreement have recently begun and are expected to conclude later on this year.

#### 4.5 Environmental Legislation

Orbite, like any other company, is subject to environmental legislation, which, as they exist as the date of this document, is not expected to have a material adverse effect on the financial conditions and ongoing operations of the HPA Plant, capital expenditures or competitive conditions.

In order to operate the HPA plant, the Company obtained the following certificate of authorisation from the Minister of Sustainable Development, Environment and the Fight against Climate Change (the "MDDELCC"), (i) related to the production of high purity alumina with a maximum capacity of production of 3 tonnes per day of alumina, issued on October 14, 2015 pursuant to Article 22 of the Environment Quality Act (Québec); (ii) related to the installation and exploitation of abatement equipment for all air emissions, issued on November 3, 2015 pursuant to Article 48 of the Environment Quality Act (Québec), and (iii) relating to the installation and operation of a water treatment system for the industrial water effluent issued on December 18, 2012 pursuant to Article 32 of the Environment Quality Act (Québec).

# 4.6 Markets for Orbite's processes and Products

#### **HPA Market Overview**

HPA is a very small but high-value segment of the global alumina market. HPA is defined as having a purity level of at least 99.9% (3N) but more typically of 99.99% (4N) up to purities of 99.999% (5N). HPA is used primarily to manufacture industrial sapphire substrates used in electronics, which, due to their properties as excellent heat and poor electrical conductors, 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. HPA has various applications across a broad range of industries:

- By 2016, approximately 70% of HPA is expected to be used to manufacture sapphire single-crystal
  applications, primarily as substrates for LED lighting and displays as well as display covers for personal
  electronics.
- Semiconductors (e.g. for tablets, personal computers, and smart phones among others), LED phosphors (e.g. plasma televisions), lithium-ion batteries (LIB), fluorescent and high intensity discharge (HID) lamps ceramics for industrial, military or medical applications as well as specialized and advanced filtration are other potential applications for HPA.
- LIB are used in multiple applications including portable electronics, electric vehicles and high capacity energy storage. The market for LIB will be driven by growth in the Electric Vehicle (EV) and Plug-in Hybrid Electric Vehicles (PHEV). Both are in their infancy and represent a small portion of the total passenger vehicle market. Amongst the various separator technologies to improve LIB safety and longevity, ceramic coated separators appear to be emerging as the most promising as they prevent the positive and negative electrodes from electrically contacting each other while allowing rapid ionic transport to complete the circuit for the passage of current in the LIB. The increase in sales of EV and PHEV over the coming years could significantly increase the demand for HPA in coated separators for LIB.

The size of the HPA market in 2016 was estimated at approximately 26,000 tonnes and is expected to grow at a compounded annual growth rate of 15% through the next years according the graph below.

70,000 25% 64,310 21% 60,000 20% 21% 20% 18% 52,960 20% Global Market Volume (Tons) 17% 50,000 OY Growth Rate (%) 43,856 15% 40,000 36,547 31,111 30,000 26,259 10% 21.841 20,000 5% 10,000 0% 2015 2016 2017 2019 2020 2018 2021 Market Volume (tons) → Growth Rate (%)

2015-2021 Global High Purity Alumina Market Volume

Source: 2015 Persistence Market Research Report - Global High Purity Alumina Market

While 4N (99.99%) alumina is mostly used for standard commercial applications, 4N5 (99.995%) and 5N (99.999%) offer the higher quality and performance required in high-tech applications and therefore often are priced higher. Prices are very difficult to estimate due to the fragmented nature of the market and as supply contracts are typically negotiated under non-disclosure agreements. The price of HPA at any given purity level also depends on the impurity profile (such as the content of silica, iron, etc.), the product type (powder, block, cake, seed, pellets, ball, ingot), and the product characteristics (particle size, density, etc.). Other factors include the size of the order, timing and size of deliveries, reliability of the supply, and differences in bargaining power between the buyer and seller. HPA prices have decreased significantly from peak levels in 2010/2011, based primarily on increased supply from many emerging small producers in China.

Most HPA supply is from China, Japan, Korea and Taiwan. The Company is a new entrant and is expected to become an important non-Asian supplier of HPA once its HPA plant achieves commercial production.

The following table is a partial compilation of known HPA producers and estimates of their potential production. These estimates are for comparative purposes only and should not be construed as official guidance. The Company estimates current HPA prices range from US \$10/kg to US \$20/kg for 4N HPA, US\$15/kg to US \$25/kg for 4N5 and greater than US\$25/kg for 5N+.

COUNTRY COMPANY		HPA PRODUCTION		PURITY	PRODUCT	REGIONAL	
			(TONNES)		CAPABILITY	TYPES	FOCUS
		2014	2015	2016			
Japan / Korea	Sumitomo Chemical	3 020	3 800	4 400	4N5	Various	Korea, Global
South Africa / N America	Sasol	1 800	2 000	2 000	5N	Powder, Pellet	USA, Europe
Russia	RHT	160	240	300	4N7	Powder	Korea, Russia, Japan, China, Europe
Korea	HMR	100	180	200	5N	Block, Pellet, Powder	Japan, Korea
France	BAIKOSWKI	1 200	1 600	1 800	4N5	Block, Powder	USA, Europe, Japan, Korea
China	Donghu	100	150	200	5N	Powder, Cake, Ingot, Seed	Korea
Japan	Nippon Light Metal	1 100	1 200	1 200	4N5	Block, Pellet, Powder	Japan, Global
China	Hebei Pengda	3 000	3 600	4 000	5N	Block, Discs	China, Global
China	Posco / KC Corp	250	750	1 500	5N	N/A	Korea, Russia, China
China	Xuancheng Jing rui	1 200	1 600	1 800	5N	Block, Powder	N/A
China	Dalian Rall	600	800	1 000	5N	Block, Powder	China
China	Dalian Luming	300	300	400	N/A	N/A	N/A
China	UNION	200	300	300	5N	5N	Korea, Japan
China	Shandong Aluminum Industry	360	400	400	≥ 4N	N/A	N/A
China	Zhengzhou Institute	300	400	400	4N	Powder	N/A
China	Yifeng New Materials	300	360	400	≥ 4N	Granule	N/A
China	Zichuan Pheonix	300	360	400	4N	Powder	N/A
China	Kunming Institute of Precious Metals	200	240	300	N/A	Granule	N/A
China	Huantuo Group	800	1 000	1 000	N/A	Granule	N/A
China	Xinfumeng	2 500	3 200	3 800	4N8	Powder	China, Russia, Europe, North America
China	Honghe Chemical	300	300	400	5N	Powder, Block	N/A
China	XinMeiYu	300	400	450	5N	Powder, Pellet, Crystal, Granule	Mainly Korea
China	WenShiKe	200	300	400	N/A	Granule	N/A
China	HFCT	200	200	240	5N5	Block, Pellet, Powder	China, Japan, USA, Global
China	SINOMATERIALRisingTech	160	220	270	5N	Powder, Block	Taiwan, Korea, Russia, China, Global
China	Ecomis	190	250	310	N/A	Powder, Pellet	Mainly Taiwan
China	Zhengsen Chemical	80	120	150	5N	Block, Pellet, Powder	China, Global
China	Crown New Material	600	800	1 000	N/A	N/A	N/A
	Other	7 940	9 270	10 600			
	TOTAL	27 760	34 340	39 620			

Source: QYResearch – Deep Research Report on Global and China High Purity Alumina Industry, 2014, 2012 and 2011, Orbite Aluminae Inc.

#### Waste Monetization- 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, 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.

# Waste Monetization – 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 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

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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 remaining being sent to stockpiles. Fly ash contains alumina, silica, iron, rare metals and other valuable elements, but no viable monetization technology has previously existed.

The Company estimates that between 495 million and 650 million tonnes of fly ash are produced annually, a figure that could increase by 50% by 2030 as the World Coal Institute estimates that coal usage will increase by that amount.

#### Smelter-Grade Alumina

Smelter-grade alumina (SGA) is the main feedstock used at aluminum smelters for the production of aluminum metal. According to the International Aluminium Institute, global production in 2016 was 115.5 million tonnes of SGA resulting in the production of 58.9 million tonnes of aluminum metal. Regional breakdown is shown below.

# East & Central North America Europe - 3,981 4,027 West Europe -3,779 Asia (ex China) 3,442 China Reported -31,641 GCC - 5,197 China Estimated Unreported - ND South America -1.361 Africa - 1,691 Oceania - 1,971 **ROW Estimated** Unreported -1,800

# 2016 Metallurgical Alumina production by region

China is currently the largest producer and consumer of aluminum as a result of its significant growth. Regionally, Québec is the 4<sup>th</sup> largest aluminum-producing region after China, Russia and Gulf Corporation Council (GCC).

SGA is produced at alumina refineries where high-quality bauxite (containing low silica content) is processed using the industry-standard Bayer process. This requires a heat source (natural gas, coal, etc.) as well as a steady supply of caustic soda and high-quality bauxite. Bauxite is typically mined in tropical and sub-tropical regions. A critical industry issue is the rapid decline in bauxite quality near infrastructure (roads, rail and sea

ports), particularly in Jamaica, Guinea, Australia, China and India. Bauxite must be transported to alumina refineries, and the alumina in turn must be transported to aluminum smelters which are typically in distant countries. For example China produces 51% of the world's aluminum but has less than 3% of the world's bauxite reserves (source: CRU).

# 4.7 Mineral Exploration Properties

#### Québec

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.

Orbite owns 100% of 99 mineral claims totaling approximately 55 square kilometers ("km²") as well as one mining lease of 98.5 hectares ("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 December 31st 2016, Orbite also owned 100% of 138 mineral claims covering approximately 78.4 km<sup>2</sup> at sites near Rimouski and Cap-Chat, Québec. These claims cover a portion of the regional aluminous clay "Orignal Formation" which hosts the Grande-Vallée deposit. However, as of the date of this AIF, Orbite now owns 142 mineral claims covering approximately 80.6 km<sup>2</sup> at sites near Rimouski and Cap-Chat, Québec following the reclaiming of certain properties.

During 2015, Orbite started a process of not renewing claims in the Levis to Rimouski area, recognizing that these claims did not show the required potential as an aluminous clay resource.

# Mining Lease

In September 2012, the Company was issued a 20-year renewable mining lease (BM 1013) on its Grande-Vallée property. Granted by the Ministère des Ressources naturelles et de la Faune du Québec Québec's Ministry of Natural Resources and Wildlife, now called the Ministère de l'Énergie et des Ressources Naturelles ("MERN")

Unless otherwise exempted by the *MERN*, mining operations on the property must be initiated by the Company no less than four (4) years from issuance of the mining lease. A request to obtain a four-year extension of the delay to initiate mining operations was made to the MERN. The MERN recently informed the Company that the extension was not granted and, as a result and in order to protect its asset the Company is in the process of registering claims for the property covered by the mining lease.

Since the filing of the PEA in 2012, the Company's business plan and resources have been refocused in the short term and medium term on the commercial production of HPA and the monetization of its technologies for the treatment of red mud and fly ash. Given the fact that very few resources have been allocated to the Grande-Vallée property since 2013 and no significant resources are planned to be allocated in the short or medium term, the Company does not intend to update the PEA at this stage as it no longer considers its Grande-Vallée deposit as a material property under the terms of NI 43-101. However, given the past investments on the Grande-Vallée deposit which have indicated the existence of sufficient quantities of aluminous clay to operate the SGA Plant, the Company nevertheless maintains the mining of the Grande-Vallée deposit in its long-term objectives. Investors should therefore not rely on the PEA for their decision to invest in securities of the Company.

Orbite owns other properties that are non-core and non-material to the Company. LE TAC, which is located 12 km southeast of Desmaraisville in the Abitibi region of Québec, was a property with 75 claims. During Q1 2013, the Company completed a geophysical survey on the LE TAC property. The results of this survey were summarised in a report submitted to the Company in Q3 2013. The property was non-core and claims were not renewed in 2016.

The Company also owns eight other properties in the Abitibi region totalling 13 claims in the aggregate. Two are located in Bourlamaque Township near the city of Val d'Or, and the rest is in Drouet Township in the Chibougameau region of Québec.

#### Nova Scotia

In November 2012, the Company 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 ha (approximately 26.1 km²) in central Nova Scotia. In order to acquire a 100% undivided interest in the Chaswood Property, Orbite had to fulfill certain conditions which were more fully disclosed in previous years' annual information forms. The conditions have not been met. In light of the Company's business strategy where the commercialization of the commodity minerals is in the longer-term horizon, management decided it would not allocate any additional resources to the Chaswood Property. Consequently, the assets related to this property have been written-off during the fourth quarter of 2016.

# 5 RISKS AND UNCERTAINTIES

In the course of its business and affairs, the Company faces, amongst others, the following risks and uncertainties:

Risks Associated With Our Business

## Going Concern

The Company's ability to execute its business plan and operate at a commercial level as a going concern will be dependent on a number of factors. As the Company is evolving from a development stage company to an operating company, it 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. The Company has negative cash flow from operations. As described under "Recent Development", the Company recently announced a serious issue concerning its supplied decomposer and calciner electrical heating system, a key component in the commercial production of HPA, and a potential solution that would require approximately \$8 million of external capital costs and 8 months to implement. The Company's working capital is insufficient to cover the costs to implement such solution. The Company is examining available options to raise funds and limit its cash outflows. There can be no assurance that the Company will be able to secure the requisite financing to implement the solution, that the solution will effectively remediate the issue or that the HPA Plant will operate successfully or economically at targeted levels.

In addition, as a result of the delays caused by the electrical heating element system issues and the additional stress imposed on the Company's financial resources resulting therefrom, the Company will not be able to meet its debt covenants under its Credit facility, which will result in the right by the lender to request the immediate repayment of amounts borrowed under the credit facility. The Company may be unable to meet its current obligations.

The Company's 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 implement the solution identified to remedy the electrical heating system issues, complete the construction and production ramp-up of its HPA Plant and commence commercial production, the attainment of profitable operations or the receipt of proceeds from the disposition of its mineral property interests. Other than current limited working capital, possible exercise of outstanding share purchase warrants and stock options, potential insurance proceeds from claims filed under its Boiler and Machinery and Business Interruption insurance policy for which the Company has not yet received confirmation of coverage from its insurer, the Company has no other funds available to it.

The conditions described above indicate the existence of material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern.

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

## Commercial Operation of the HPA Plant

The Company is currently in the process of correcting supplier-related deficiencies with the calcination equipment, on the Gaspé Peninsula in the Province of Québec. The construction portion of the development plan is materially complete, and the beginning of the commercial production is expected to take place in Q42017.

The Company expects to initially produce to inventory as some of its prospective customers continue to test and qualify the samples shipped to date as well as new samples that will be provided from the full production process at the HPA plant. The Company has received its first two commercial purchase orders for the supply of HPA, the first steps in filling the Company order pipeline. As the Company continues to build its sales funnel and demand for its product, it anticipates closing additional sales agreements. Such expectations are based on discussions to date with potential clients and management's understanding of the marketplace and demand for HPA and products requiring HPA. The Company has not yet entered into agreements for the sale of large quantities of HPA. There can be no guarantee as to the number of purchase orders or commitments, the quantity of HPA represented by such orders and commitments or the timing for receiving same. Factors that may impact such orders and commitments include the ability of the Company to reliably and consistently produce HPA meeting client requirements and confidence of clients in such ability, market conditions and demand for products requiring HPA, overall market conditions and the strength of the economy.

Our credit facilities contain financial covenants which, in order to be satisfied, require commercial operation of our HPA Plant. Our borrowings under such facilities include an amount of US\$3 million which may not be

used until the Company starts producing HPA on a commercial basis and completes a sale. If we are unable to successfully start commercial production or if we incur delays in starting commercial production and are not able to obtain waiver of covenant defaults from our lender, we may be unable to access the restricted portion of our borrowings and may be faced with the acceleration of our reimbursement obligations under our credit facilities.

As the Company moves into the commercial operation phase of its HPA Plant, it may be subject to a number of risks associated with the operation of a new plant based on a new technological process, including the following:

- Delays in Operation. The Company's ability to achieve commercial production at the contemplated output levels and within the contemplated timeframe and operational cost levels may be subject to potential delays, interruption of operations or increased costs due to many factors, including, without limitation: design errors; non-performance by third party contractors; increases in materials or labour costs; construction performance falling below expected levels of output or efficiency; breakdown or failure of equipment or processes; operator errors; labour disputes, disruptions or declines in productivity; inability to attract sufficient numbers of qualified workers; violation of permit requirements; and major incidents and/or catastrophic events such as fires, explosions, earthquakes or storms. Any such delays, interruption of operations or increased costs could be materially adverse to the Company and its purchase commitments or potential purchase commitments and its financial results.
- Business Interruptions. The Company may incur losses resulting from business interruptions. The
  Company may be subject to contractual obligations to deliver product in a timely manner. Any disruption
  in the Company's activities which leads to a business interruption could harm its customers' confidence
  level and lead to the cancellation of contracts and legal recourse against the Company or otherwise
  adversely impact its financial results.
- Commodity Price Risk. The price for, and availability of, various inputs will fluctuate due to numerous
  factors beyond the Company's control, including economic conditions, currency exchange rates, global
  demand for products incorporating HPA, trade sanctions, tariffs, labor costs, competition, over capacity
  of producers and price surcharges. Fluctuations in availability and cost of inputs may materially affect the
  Company's business, financial condition, results of operations and cash flows. To the extent that the
  Company is not able to pass on any increases, its business, financial condition, results of operations and
  cash flows may be materially adversely affected.
- Sources of Supply. The Company may not be able to secure the critical raw material feedstock on which it will depend for the operation of the HPA Plant such as power, water, aluminum hydroxide, hydrochloric acid and other inputs. The Company procures and expects to procure its raw materials from a limited number of suppliers. The loss of any one of these suppliers or a reduction in the level of deliveries to the Company may reduce its production capacity and impact its deliveries to customers. This would in turn negatively impact the Company's sales, net margins and may lead to liabilities with respect to supply contracts.
- Inventory Price Risk. The Company may be subject to risk associated with the value of inventories it builds in relation to the market price of such inventories. This risk will be more significant initially, as the Company will produce to inventory in anticipation of purchase orders and commitments. The highly illiquid nature of the HPA inventories may increase such risk. Going forward, passed such initial inventory build-up, the Company expects to rely on a combination of standard risk measurement techniques, such as value at risk as well as a more empirical assessment of the market conditions to manage inventory

levels. Decisions on appropriate physical stock levels are expected to be taken by considering both the value at risk calculations and the market conditions.

Currency Risk. Currency translation and transaction risk may negatively affect the Company's net sales, cost of sales and gross margins, and could result in significant exchange losses. The Company reports its financial results in Canadian dollars, while it expects that a substantial portion of its commercial HPA sales will be denominated in foreign currencies.

#### OTHER RISKS ASSOCIATED WITH OUR BUSINESS ARE AS FOLLOWS:

The Company is dependent on a single principal asset

Orbite's principal asset is its HPA Plant which has not yet achieved production on a continuous commercial scale as contemplated by Orbite. Any adverse development affecting the HPA Plant would materially adversely affect Orbite's financial condition, results of operations, prospects and its ability to continue as a going concern.

#### New Markets

The success of our business will depend, in part, on the establishment of new markets by us or third parties for HPA and rare earth products that may be in low demand. Although HPA and rare earth products are used in critical existing and emerging technologies, such as hybrid and electric vehicles, wind power turbines and LED lighting, the success of our business depends on creating new markets and successfully commercializing HPA and rare earth products in existing and emerging markets. Any unexpected costs or delays in the commercialization of any of the foregoing products and applications could have a material adverse effect on our financial condition and results of operations.

The Company has negative cash flows from operations

Orbite currently generates negative cash flows from operations, due to the expenses incurred developing its technologies and completing the ramping up of production of and optimizing its HPA Plant. Further, Orbite has not yet commercialized its product by entering into agreements for the sale of large quantities of its HPA.

We will need to raise capital to continue our growth.

Orbite is in the process of evolving from being a development stage company to becoming an operating company as commercial revenues generated from our HPA production facility will commence in 2017. With one main short-term project and multiple future projects, each with different funding requirements, Orbite has limited financial resources, and has currently no recurring cash flows from its operations. If we cannot obtain capital through financings or otherwise, our ability to execute our development plans and achieve profitable operational levels will be greatly limited. Historically, we have funded our operations through the issuance of equity and debt financing arrangements. We may not be able to obtain additional financing on favorable terms, if at all. Our future cash flows and the availability of financing will be subject to a number of variables, including demand for HPA as well as other by-products. Our current credit facilities contain restrictive covenants that limit our ability to incur additional indebtedness and grant security interests on our assets, and may reduce some financing alternatives. Our inability to access additional capital for our operations and projects will have a material adverse effect on our business, financial condition, results of operations, prospects and could also eventually impair our ability to continue as a going concern.

Our investment in the HPA Plant is, among other things, based on the assumption that material portions of the investment will be refunded by the Government of Québec by way of refundable tax credits. There can be no assurance that these tax credits will be available and, if available, that same will be refunded by the Government of Québec in a timely manner. The unavailability of the tax credits or any delay in obtaining a refund of the tax credits could have a material adverse effect on the Company.

#### Credit Facilities

The Company is party to credit facilities with an institutional US based lender, which credit facilities and underlying loans are contingent on several contractual covenants and restrictions. These covenants, subject to certain prescribed exceptions, include restrictions on subscribing other debt, distributions of assets, liens on assets of the Company, corporate reorganizations, purchase of assets, amendment to material agreements and starting new businesses, all of which create restrictions on business operations. The Company is also required to meet ongoing financial covenants (including operating cash flow to fixed charges financial ratios — first of which financial covenant is to be met by June 30, 2017), the HPA Convenant which will not be meet on April 1, 2017, solvency conditions and cannot be subject to the occurrence of events deemed to have adverse material effects on the affairs of the Company. Should the Company find itself in breach of any such covenants and restrictions, such breach shall be deemed a default under the credit facilities and may lead to enforcement proceedings by the lender, including recall of loaned amounts, seizure of assets of the Company (including its HPA production facility) and imposition of penalties and higher rate interest payments, any of which could adversely affect the operations of the Company on a going forward basis. The debt financing may also lead to diversion of cash flow to satisfy debt-servicing obligations.

We may be unable to retain key employees, management personnel or other employees

The loss of any of our key management personnel would have an adverse impact on our future development and could impair our ability to succeed. Our performance is substantially dependent upon the expertise of key management personnel and our ability to continue to hire and retain such personnel. Efficient production of HPA and SGA using modern techniques and equipment requires skilled technicians and engineers. Our ability to attract, hire and train the necessary number of such personnel could have an adverse impact on our labour costs and ability to reach planned production levels.

The Company is currently negotiating its first collective bargaining agreement which will govern the working relationship with certain employees. Failure to reach such agreement upon mutually agreeable terms could result in work stoppages or other labour disturbances such as strikes, walkouts or lock-outs, increased costs of labour and/or labour conditions imposed upon the parties by an arbitrator, which could have adverse effects on financial results, operational execution and customer satisfaction.

If our competitors misappropriate unpatented proprietary know-how and our trade secrets, it may have a material adverse effect on our business.

The loss of or inability to enforce our patents, intellectual property and other proprietary know-how, and trade secrets (collectively our "Intellectual Property") could adversely affect our business. We depend heavily on our Intellectual Property and the design expertise of our employees. If any of our competitor's copies or otherwise gains access to our Intellectual Property or develops similar technologies or processes independently, we would not be able to compete as effectively. The measures we take to protect our Intellectual Property and design expertise may not be adequate to prevent their unauthorized use. Further, the laws of foreign countries may provide inadequate protection of such Intellectual Property rights. We may

need to bring legal claims to enforce or protect such Intellectual Property rights. Any litigation, whether successful or unsuccessful, could result in substantial costs and diversions of resources. In addition, notwithstanding the rights we have secured in our Intellectual Property, other persons may bring claims against us that we have infringed on their intellectual property rights or claims that our Intellectual Property right interests are not valid. Any claims against us, with or without merit, could be time consuming and costly to defend or litigate and, therefore, could have an adverse effect on our business.

We may be subject to cost overruns, delays, labor shortages, labor unrest and other construction risks

The ramping up of production of our HPA Plant, its conversion to the chloride production process, its increase of production capacity, the building and operation of the contemplated waste monetization and SGA plants will require substantial engineering, construction and operating expertise and execution. Cost estimates for these projects have increased over initial estimates. Potential cost overruns and completion delays are significant risks in projects of this nature due to many factors, including, without limitation, weather and seasonal factors affecting construction projects generally; delays in obtaining, or conditions imposed by, regulatory approvals; design errors; non-performance by third party contractors; increases in material or labor costs; construction performance falling below expected levels of output or efficiency; breakdown or failure of equipment or processes; contractor or operator errors; labor disputes, disruptions or declines in productivity; inability to attract sufficient numbers of qualified workers; changes in project scope; violation of permit requirements; and major incidents and/or catastrophic events such as fires, explosions, earthquakes or storms. There can be no assurance that these projects will be successfully completed within estimates, on schedule, or at all.

#### Capital Cost Estimates

Any capital and operating cost estimates made in respect of our current and future production facilities, including our HPA and our projected waste monetization and SGA production facilities may not prove to be accurate. Production of HPA and rare earths and metal oxides by-products is a capital-intensive business. Our plans for our HPA and projected waste monetization and SGA production facilities require significant capital expenditures. Capital and operating costs are estimated based on the interpretation of a number of factors. Any of the following events could affect the accuracy of such estimates: incorrect data on which engineering assumptions are made; efficiency of our proprietary process, delay in construction schedules; unanticipated transportation costs; accuracy of major equipment and construction cost estimates; labour negotiations; availability of fossil fuels at market prices, changes in government regulation (including regulations regarding prices, cost of consumables, royalties, duties, taxes, permitting and restrictions on production quotas on exportation of minerals); and title claims.

# Environmental and Other Regulatory Requirements

Government approvals and permits are required to be maintained in connection with the Company's production and exploration activities. Although the Company currently has all the required permits for its operations as currently conducted, there is no assurance that delays will not occur in connection with obtaining all necessary renewals of such approvals or permits for the existing operations or additional permits for any possible future changes to the Company's operations, including any proposed capital improvement programs. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Amendments to current laws, regulations and permitting requirements, or more stringent application of existing laws, may have a material adverse impact

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on the Company resulting in increased capital expenditures or production costs, reduced levels of production at producing properties or abandonment or delays in development of properties.

# Competition

The competitive position of the Company depends upon its ability to obtain sufficient funding and develop projects in a successful and economic manner. Some of the factors which allow producers to remain competitive in the market over the long term are the cost of production and operation generally, and proximity to market. The Company also competes with other companies for skilled and technical personnel. In addition, the market for HPA and rare earth and metal oxide by-products is limited and the Company will compete with other producing companies for customers. An increase in the global supply of these products and predatory pricing by our competitors could materially adversely affect our operating or financial results. The global aluminum and alumina markets are dominated by a small number of large vertically integrated companies which dominate on a global scale the mining of bauxite, the refining of alumina and the production and sale of aluminum. In addition, there are a number of smaller companies with projects to mine, refine and sell alumina. There are also several small and large companies active in the refining, production and sale of rare earths and other metals of the nature expected to be produced as by product of our contemplated operations. The Company also competes with such companies and other natural resource companies in the acquisition, exploration, financing and development of new properties and projects. Many of these companies are more experienced, larger and better capitalized than the Company. In particular, such companies may be less vulnerable to volatility in the alumina market.

# Absence of feasibility studies

No independent preliminary economic assessment has been completed in connection with the construction, design and operation of HPA Plant. There are no assurances that the HPA Plant and the contemplated waste monetization and SGA Plant projects will be completed as expected or that the estimated capital costs will be sufficient to achieve the plants as expected, the design capacity or the product purities and characteristics, or that the respective plants will provide a return on investment or be profitable. No prefeasibility study or feasibility study pursuant to the requirements of NI 43-101 has been completed to date by the Company. As such, the information provided herein does not constitute a "preliminary feasibility study" or a "feasibility study" within the meaning of NI 43-101.

#### Joint Ventures

The Company intends to participate in joint ventures and strategic alliances. There can be no assurance that the Company will be able to find suitable partners and/or enter into joint venture agreements under suitable terms. Moreover, whether or not the Company holds majority interests or maintains operational control in such arrangements, its partners may have economic or business goals that are inconsistent with or opposed to those of the Company; exercise veto rights so as to block actions that the Company believes are in its best interests, take actions contrary to the Company's policies or objectives, be unable or unwilling to fulfill their obligations under the joint venture, strategic alliance or other agreement. There can be no assurance that its joint ventures will be beneficial to the Company, whether due to the above described risks, unfavorable global economic conditions, increases in construction costs, currency fluctuations, political risks or other factors.

# Development Goals and Time Frames

The Company sets goals for and makes public statements regarding timing of the accomplishment of objectives material to its success, such as the commencement of commercial production of its HPA Plant, discussions regarding strategic partnerships, and the timing of its waste monetization project. The actual timing of these events can vary dramatically due to factors such as delays or failures in Orbite's contemplated financings, the uncertainties inherent in the environmental and mining regulatory approval process, and delays in achieving production or marketing milestones necessary to commercialize its products. There can be no assurance that the Company will be able to adhere to its current schedule for production and sale of HPA, waste monetization project or any other product or project. If Orbite fails to achieve one or more of these milestones as planned, it could have a material adverse effect on the business carried on by the Company.

# Our business is subject to risks that may not be covered by insurance

The construction of a commercial production plant and the production of HPA, storage, transportation and marketing of HPA and by-products involve many risks. These risks include equipment failures and other accidents, weather conditions, natural disasters and changes to the regulatory environment, any of which could result in personal injury or damage or destruction to the plant, equipment, and the environment as well as the interruption of operations. The impact of these risks upon the Company is increased because of its dependence on a limited number of projects. The Company is insured against some, but not all, potential risks appropriate to its stage of development; however there can be no assurance that such insurance will be adequate to cover any losses or exposure to liability. There can be no assurance that the Company will be able to acquire adequate insurance coverage for the future increases in construction and operational activities contemplated by the Company. The Company may also become subject to liability for pollution or other hazards against which it cannot insure or against which it may elect not to insure because of high premium costs or other reasons. The Company may also become subject to liabilities which exceed policy limits. In such circumstances, the Company may be required to incur significant costs that could have a material adverse effect upon its performance, results of operations and economic viability.

# Litigation

The Company may become involved in, named as a party to, or the subject of, various legal proceedings, as well as contract disputes, regulatory proceedings, tax proceedings and legal actions relating to property damage, property taxes, land rights, and the environment, title claims, land tenure disputes, environmental claims, and occupational health and safety claims. The outcome with respect to future proceedings cannot be predicted with certainty and may be determined adversely to the Company and as a result, could have a material adverse effect on the Company's assets, liabilities, business, financial condition and results of operations. Even if the Company prevails in any such legal proceedings, the proceedings could be costly and time-consuming and would divert the attention of management and key personnel from the Company's business operations, which could adversely affect the Company's financial condition and results of operations.

#### Risks Related To Our Common Shares

The trading price of our Common Shares has and may continue to fluctuate significantly and shareholders may have difficulty reselling their Common Shares.

During the year 2016, our Common Shares have traded as low as \$0.20 and as high as \$0.485 on the TSX. Our Common Shares are also listed on the OTCQX, an over-the-counter trading facility. In addition to volatility associated with over-the-counter securities in general, the market price of our Common Shares could decline due to the impact of any of the following factors:

- under performance or other performance related issues affecting our HPA production facility;
- changes in the demand for HPA, or rare earths and metal oxides;
- disappointing results from our marketing and sales efforts;
- failure to meet our revenue or profit goals or operating budget;
- decline in demand for our Common Shares;
- downward revisions in securities analysts' estimates or changes in general market conditions;
- lack of funding generated for operations;
- delays in the implementation of our projects and increased costs related to our HPA, waste monetization and projected SGA production facilities;
- short selling, manipulation of our Common shares and prohibited trades;
- unfounded rumours and collusion;
- investor perception of our industry or our business prospects; and
- general economic trends.

In addition, stock markets have experienced extreme price and volume fluctuations and the market prices of securities have been highly volatile. These fluctuations are often unrelated to operating performance and may adversely affect the market price of our Common Shares.

Additional issuances of equity securities may result in dilution to our existing shareholders

Our Articles of Incorporation authorize the issuance of an unlimited number of Class A Shares. Our Board of Directors has the authority to issue additional Class A shares to provide additional financing in the future and the issuance of any such shares may result in a reduction of the book value (on a per share basis) or market price of the outstanding shares. If we do issue any such additional shares, such issuance will also cause a reduction in the proportionate ownership and voting power of all other shareholders. Further, any such issuances could result in a change of control.

A decline in the price of our Common Shares could affect our ability to raise further working capital and adversely impact our operations.

A decline in the price of our Common Shares could result in a reduction in the liquidity of our Common Shares and a reduction in our ability to raise additional capital for our operations. Because our operations to date have been principally financed through the sale of equity securities, a decline in the price of our Common Shares could have an adverse effect upon our liquidity and our continued operations. A reduction in our ability to raise equity capital in the future would have a material adverse effect upon our business plan and operations, including our ability to continue our current operations. If our Common Share price declines, we may not be able to raise additional capital or generate funds from operations sufficient to meet our obligations.

# Listing of our Common Shares

The listing of our Common Shares on the TSX is conditional upon our ability to maintain the applicable continued listing requirements of the TSX. The TSX may consider the delisting of the Common Shares if, in its opinion, it appears the Company is in serious financial difficulty or if there is significant doubt regarding its ability to continue as a going concern. In such circumstances, the TSX may place Orbite under a delisting review that could lead to the delisting of its Common Shares from the TSX.

If the Common Shares are delisted from the TSX, they may be eligible for listing on a substitute exchange, such as the TSX Venture Exchange. In the event that Orbite is not able to maintain a listing for the Common Shares on the TSX or a substitute exchange, it may be extremely difficult or impossible for shareholders to sell their Common Shares in Canada. Moreover, if Orbite is delisted from the TSX, but obtains a substitute listing for the Common Shares, the Common Shares may have less liquidity and more price volatility than experienced on the TSX. Shareholders may not be able to sell their Common Shares on any such substitute exchange in the quantities, at the times, or at the prices that could potentially be available on a more liquid trading market. As a result of these factors, if the Common Shares are delisted from the TSX, the price of the Common Shares may decline and the Company's ability to obtain financing in the future could be materially impaired.

Our Common Shares are Classified as a "penny stock" under Securities and Exchange Commission Rules, which limits the market for our Common Shares.

Because our Common Shares are not traded on the NASDAQ National Market or the NASDAQ Capital Market, and because the market price of the Common Shares is less than \$5 per share, our Common Shares are Classified as a "penny stock". SEC Rule 15g-9 under the U.S. Securities Exchange Act of 1934 imposes additional sales practice requirements on broker-dealers that recommend the purchase or sale of penny stocks to persons other than those who qualify as an "established customer" or an "accredited investor". This includes the requirement that a broker-dealer must make a determination that investments in penny stocks are suitable for the customer and must make special disclosures to the customers concerning the risk of penny stocks. Many broker-dealers decline to participate in penny stock transactions because of the extra requirements imposed on penny stock transactions. Application of the penny stock rules to our Common Shares reduces the market liquidity of our Common Shares, which in turn affects the ability of holders of our Common Shares to resell the Common Shares they purchase, and they may not be able to resell at prices at or above the prices they paid.

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.

We are a company incorporated under the laws of Canada and most of our directors and officers reside in Canada. Therefore, it may be difficult for investors to enforce any judgments obtained against us or any of our directors or officers within the United States. All or a substantial portion of such persons' assets may be located outside the United States. As a result, it may be difficult for investors to effect service of process on us or our directors or officers, or enforce any judgments obtained against us or our officers or directors within the United States, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state thereof. Consequently, you may be effectively prevented from pursuing remedies under U.S. federal securities laws against them or us. In addition, investors may not be able to commence an action in a Canadian court predicated upon the civil liability provisions of the securities laws of the United States. There may be doubt as to the enforceability, in original actions in Canadian courts, of liability based upon the U.S. federal securities laws and as to the enforceability in Canadian courts of

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judgments of U.S. courts obtained in actions based upon the civil liability provisions of the U.S. federal securities laws. Therefore, it may not be possible to enforce those actions against us or any of our directors or officers.

#### Exploration and Mining Risks

The Company has not completed a comprehensive feasibility study and there can be no assurance that the development of the Company's mineral project and the commercialization of the Company's alumina (and other material) extraction process into a commercially viable business opportunity, will be successful.

#### Changes to Royalty Regime

Crown royalties are determined by government regulation and are generally calculated as a percentage of the value of the gross production. The rate of royalties payable generally depends in part on prescribed reference prices, geographical location, field discovery date, method of recovery, and the type or quality of the ore produced. There can be no assurance that the Government of Québec, the Government of Canada or any other government having jurisdiction over the Company will not adopt a new royalty regime or modify the methodology of royalty calculations which could increase the royalties paid by the Company. An increase in royalty could reduce the Company's earnings and/or it could make capital expenditures by the Company uneconomic.

#### 6 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.

# 7 CAPITAL STRUCTURE

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 after 2011 have a maximum ten-year term with vesting period at the discretion of the Board of Directors. 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 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. Class

As of March 31, 2017, the Company had 514,645,670 Class A Shares issued and outstanding. The Company also had 140,754,068 Share Purchase Warrants exercisable at a weighted average price of \$0.54 and expiring between December 2016 and February 2022. The Company also had 21,992,250 Common Share Purchase Options at a weighted average price of \$0.61. The Company could issue a further 70,285,940 Common Shares if all remaining Debentures were fully converted at the option of the holders. There were no RSU nor DSU outstanding as of December 31, 2016, and March 31, 2017.

Outstanding Class A shares	514,645,670
Share purchase warrants	140,754,068
Share Options	21,992,250
Convertible debentures (IQ)	20,746,888
2016-2018 ITC Debentures (1)	28,571,429
2015 ITC Debentures	19,318,182
Convertible debentures (October 2016) (2)	399,441
Convertible debentures (February 2017) (3)	1,250,000
Fully Diluted	747,677,928

<sup>&</sup>lt;sup>(1)</sup> Not including the redemption warrants.

# Shareholders Rights Plan

The Company has put in place a Shareholder Rights Plan Agreement (the "Rights Plan") dated September 9, 2008, revised on May 9, 2014, which remains effective as of the date hereof. The Rights Plan was first approved and ratified by shareholders of the Company on August 29, 2008 and became effective on September 9, 2008. The Rights Plan is designed to provide the Company's shareholders and the Board of Directors additional time to assess an unsolicited take-over bid for the Company and, where appropriate, to give the Board of Directors additional time to pursue alternatives for maximizing shareholder value. It also encourages fair treatment of all shareholders by providing them with an equal opportunity to participate in a take-over bid. In recommending the confirmation and ratification of the Rights Plan, it is not the intention of the Board of Directors to preclude a bid for control of the Company. The Rights Plan provides various mechanisms whereby shareholders may tender their shares to a take-over bid as long as the bid meets the "Permitted Bid" criteria (as such term is defined in Section 1.1 "Certain Definitions" of the Rights Plan).

<sup>(2)</sup> Assuming a conversion price of \$0.358, not including the additional shares to be issued for the make-whole amount.

<sup>(3)</sup> Assuming a conversion price of \$0.32, not including the additional shares to be issued for the make-whole amount.

Furthermore, even in the context of a take-over bid that would not meet the Permitted Bid criteria, the Board of Directors would still have a duty to consider any take-over bid for the Company and consider whether or not it should waive the application of the Rights Plan in respect of such bid. In discharging such duty, the Board of Directors must act honestly and in good faith with a view to the best interests of the Company and its shareholders.

# Summary of the Rights Plan

The following is a summary of the key terms of the Rights Plan. The summary is qualified in its entirety by the full text of the Rights Plan, a copy of which may be obtained without charge by writing to the Company to the attention of the Secretary of the Company at 6505 TransCanada Highway, Montreal, Québec H4T 1S3, or from the Company's public disclosure documents found at www.sedar.com. Capitalized terms used in this summary without definition have the meanings attributed to them in the Rights Plan unless otherwise indicated.

The Rights Plan requires that any offer to acquire Class A Shares of the Company be made to all holders of Class A Shares and the purchase of such Class A Shares cannot be completed unless shareholders holding at least 50% of the outstanding Class A Shares (other than those held by the offeror and parties related to or acting jointly or in concert with the offeror) are tendered in favour of the offer. The Rights Plan discourages discriminatory, coercive or unfair take-overs of the Company and gives the Board of Directors time, if the Board of Directors determines in the circumstances that it is appropriate to take such time, to pursue alternatives to maximize shareholder value in the event an unsolicited take-over bid is made for all or a portion of the outstanding Class A Shares of the Company. Pursuant to the terms of the Rights Plan, the Company issued one right (a "Right") in respect of each Class A Share of the Company outstanding at the close of business on September 9, 2008 (the "Record Time") in addition to one Right in respect of each additional Class A Share of the Company issued after the Record Time. The Rights initially trade together with the Class A Shares and are represented by the certificates representing such Class A Shares (including certificates issued prior to the Record Time). Until such time as the Rights separate from the Class A Shares and become exercisable, certificates representing the Rights will not be distributed to shareholders of the Company.

#### Flip-In Event and Exercise Price

If a person (an "Acquiring Person") acquires (other than pursuant to an exemption available under the Rights Plan, one of which is a take-over bid permitted by the Rights Plan (a "Permitted Bid")) beneficial ownership of 20% or more of the Class A Shares of the Company (a "Flip-in Event"), including Class A Shares held by persons related to or acting jointly or in concert with such Acquiring Person, the Rights (other than those held by such Acquiring Person and any persons related to or acting jointly or in concert with such Acquiring Person which become void under the terms of the Rights Plan) will separate from the Class A Shares and permit the holder thereof to purchase Class A Shares of the Company at a 50% discount to the then prevailing market price of such shares. The Rights are not exercisable until the Separation Time. In the event that, prior to the Expiration Time, a Flip-in Event which has not been waived by the Board of Directors occurs, each Right (except for Rights Beneficially Owned or which may thereafter be Beneficially Owned by an Acquiring Person, an Affiliate or Associate of an Acquiring Person or a Joint Actor (or a transferee of any such Person), which Rights will become null and void) shall constitute the right to purchase from the Company, upon exercise thereof in accordance with the terms of the Rights Plan, that number of Class A Shares having an aggregate Market Price on the date of the Flip-in Event equal to twice the Exercise Price, for the Exercise Price (such Right being subject to anti-dilution adjustments). For example, if at the time of the

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Flip-in Event the Exercise price is \$25 and the Market Price of the Class A Shares is \$10, the holder of each Right would be entitled to purchase Class A Shares having an aggregate Market Price of \$50 (that is, five Class A Shares) for \$25 (that is, a 50% discount from the Market Price).

# 8 MARKET FOR SECURITIES

The common shares of the Company are listed and posted for trading on the Toronto Stock Exchange (the "TSX") under the symbol "ORT" and the OTCQX International under the symbol "EORBF". The following table sets out the monthly price and volume of trading for the common shares of the Company on the TSX during the fiscal year ended December 31, 2016:

TSX Price Range (in \$)

Month	Low	High	Total Volume
January 2016	0.28	0.475	25,726,978
February 2016	0.27	0.325	23,685,268
March 2016	0.20	0.315	45,657,252
April 2016	0.235	0.29	17,790,482
May 2016	0.26	0.315	15,797,521
June 2016	0.29	0.32	13,570,795
July 2016	0.31	0.45	24,684,975
August 2016	0.34	0.43	16,763,369
September 2016	0.40	0.485	26,646,345
October 2016	0.255	0.465	43,825,433
November 2016	0.265	0.315	15,526,528
December 2016	0.27	0.33	12,474,674

# 9 ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

The Company has no escrowed securities or securities subject to contractual restriction on transfer.

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# 10 PRIOR SALES

For the 12 months ended December 31, 2016, Orbite issued the following Common Shares:

Date	Price per share (\$)	Number of shares
January 7, 2016 <sup>(4)</sup>	0.390	1,000,000
January 20, 2016 <sup>(4)</sup>	0.480	1,200,000
February 8, 2016 <sup>(1)</sup>	0.304	9,023,529
February 9, 2016 <sup>(1)</sup>	0.303	1,720,028
February 10, 2016 <sup>(1)</sup>	0.300	499,873
February 11, 2016 <sup>(1)</sup>	0.300	8,342,507
February 12, 2016 <sup>(1)</sup>	0.300	1,785,603
February 15, 2016 <sup>(1)</sup>	0.300	333,906
February 22, 2016 <sup>(1)</sup>	0.301	570,232
February 25, 2016 <sup>(1)</sup>	0.300	3,343,527
February 26, 2016 <sup>(1)</sup>	0.300	76,913
March 2, 2016 <sup>(1)</sup>	0.300	167,321
March 10, 2016 <sup>(1)</sup>	0.301	30,066
April 7, 2016 <sup>(1)</sup>	0.256	712,644
May 6, 2016 <sup>(6)</sup>	0.241	4,264,938
May 19, 2016 <sup>(5)</sup>	0.241	20,746,888
May 31, 2016 <sup>(2)</sup>	0.269	104,787
July 6, 2016 <sup>(3)</sup>	0.300	50,000
July 6, 2016 <sup>(1)</sup>	0.308	979,666
July 13, 2016 <sup>(4)</sup>	0.400	62,500
July 18, 2016 <sup>(1)</sup>	0.325	3,614,590
August 2, 2016 <sup>(4)</sup>	0.390	26,500
August 22, 2016 <sup>(3)</sup>	0.300	10,000
August 25, 2016 <sup>(4)</sup>	0.390	500,000
September 12, 2016 <sup>(4)</sup>	0.390	540,000
September 15, 2016 <sup>(4)</sup>	0.390	242,500
September 16, 2016 <sup>(4)</sup>	0.400	159,375
September 19, 2016 <sup>(4)</sup>	0.390	13,500
September 21, 2016 <sup>(4)</sup>	0.390	16,007
September 22, 2016 <sup>(4)</sup>	0.400	159,375
September 23, 2016 <sup>(4)</sup>	0.390	19,000
September 26, 2016 <sup>(4)</sup>	0.390	121,618
September 27, 2016 <sup>(4)</sup>	0.390	19,000
September 28, 2016 <sup>(4)</sup>	0.390	500,000
September 28, 2016 <sup>(3)</sup>	0.360	300,000
September 28, 2016 <sup>(3)</sup>	0.400	100,000
September 29, 2016 <sup>(4)</sup>	0.400	159,375
September 29, 2016 <sup>(4)</sup>	0.390	200,000
September 30, 2016 <sup>(4)</sup>	0.390	10,500
September 30, 2016 <sup>(4)</sup>	0.400	560,625
October 3, 2016 <sup>(4)</sup>	0.390	123,100
October 5, 2016 <sup>(4)</sup>	0.390	20,000
October 12, 2016 <sup>(4)</sup>	0.390	30,000
October 19,2016 <sup>(3)</sup>	0.300	40,000
	0.500	+0,000

Date	Price per share (\$)	Number of shares
70)		
October 19, 2016 <sup>(4)</sup>	0.241	1,000,000
October 20, 2016 <sup>(3)</sup>	0.300	100,000
November 7, 2016 <sup>(1)</sup>	0.275	14,202,299
November 8, 2016 <sup>(1)</sup>	0.277	3,614,313
November 9, 2016 <sup>(1)</sup>	0.277	470,527
November 17, 2016 <sup>(1)</sup>	0.276	199,740
November 30, 2016 <sup>(2)</sup>	0.280	25,036
December 16, 2016 <sup>(1)</sup>	0.275	840,937

Notes:

- (1) Issued upon conversion of debentures, inclusive of accrued interest and make-whole amount.
- (2) Issued in payment of interest under convertible debentures.
- (3) Issued upon exercise of options.
- (4) Issued upon exercise of warrants.
- (5) Issued to Investissement Québec.
- (6) Issued under a Private Placement

For the 12 months ended December 31, 2016, Orbite issued the following securities convertible into Common Shares:

Date	Price per share (\$)	Number of shares
February 3, 2016 <sup>(6)</sup>	0.400	21,205,000 <sup>(7)</sup>
February 3, 2016 <sup>(14)</sup>	0.400	21,205,000
February 3,2016 <sup>(15)</sup>	0.400	970,200
February 4, 2016 <sup>(1)</sup>	0.320	100,000
February 23, 2016 <sup>(6)</sup>	0.400	2,650,000 <sup>(16)</sup>
February 23, 2016 <sup>(14)</sup>	0.400	2,650,000
February 23, 2016 <sup>(15)</sup>	0.400	185,500
May 26, 2016 <sup>(2)</sup>	0.241	17,857,143 <sup>(3)</sup>
June 1, 2016 <sup>(4)</sup>	0.241	20,746,888 <sup>(5)</sup>
June 6, 2016 <sup>(1)</sup>	0.300	750,000
July 4, 2016 <sup>(1)</sup>	0.310	200,000
August 10, 2016 <sup>(10)</sup>	0.420	28,571,429 <sup>(11)</sup>
August 10,2016 <sup>(12)</sup>	0.550	18,571,429 <sup>(13)</sup>
August 10, 2016 <sup>(14)</sup>	0.550	9,996,000
August 10, 2016 <sup>(15)</sup>	0.440	1,714,286
September 1, 2016 <sup>(1)</sup>	0.410	2,900,000
September 28, 2016 <sup>(3)</sup>	0.440	19,318,182 <sup>(9)</sup>
September 28,2016 <sup>(15)</sup>	0.440	772,727
October 31, 2016 <sup>67</sup>	0.358	15,245,810 <sup>(17)</sup>
October 31, 2016 <sup>(14)</sup>	0.358	15,244,194
October 31, 2016 <sup>(15)</sup>	0.358	762,291
November 1, 2016 <sup>(1)</sup>	0.315	200,000

# Notes:

Grant of options.

Repricing of warrants to Investissement Québec.

<sup>(3)</sup> Maximum number of Common Shares issuable upon full exercise of the warrants to Investissement Québec.

<sup>10%</sup> unsecured convertible debentures issued to Investissement Québec.

- (5) Maximum number of Common Shares issuable upon full conversion of the10% unsecured convertible debentures issued to Investissement Québec.
- (6) 5% unsecured convertible debentures due February 3, 2021 (the "February 2016 Unsecured Convertible Debentures").
- (7) Maximum number of Common Shares issuable upon full conversion of the February 2016 Unsecured Convertible Debentures issued on February 3, 2016, assuming that no amount of the Make-Whole Amount is paid by the Company by way of Common Shares. A maximum of 7,068,333 Common Shares was issuable in payment of the Make-Whole Amount depending on the applicable conversion price of the February 2016 Unsecured Convertible Debentures issued on February 3, 2016.
- 8) 7% secured convertible debentures due in 2018 (the "2015 ITC Debentures").
- (9) Maximum number of Common Shares issuable upon full conversion of the 2015 ITC Debentures.
- 9% secured convertible debentures due in 2021 (the "2016-2018 ITC Debentures").
- Maximum number of Common Shares issuable upon full conversion of the 2016-2018 ITC Debentures.
- Maximum number of warrants issuable upon an early conversion by the Company of the 2016-2018 ITC Debentures.
- (13) Maximum number of Common Shares issuable upon full exercise of the warrants issuable upon an early conversion by the Company of the 2016-2018 ITC Debentures.
- (14) Issuance of Warrants
- (15) Issuance of Broker Warrants
- Maximum number of Common Shares issuable upon full conversion of the February 2016 Unsecured Convertible Debentures issued on February 23, 2016, assuming that no amount of the Make-Whole Amount is paid by the Company by way of Common Shares. A maximum of 883,333 Common Shares was issuable in payment of the Make-Whole Amount depending on the applicable conversion price of the February 2016 Unsecured Convertible Debentures issued on February 23, 2016.
- (17) Maximum number of Common Shares issuable upon full conversion of the October 2016 Unsecured Convertible Debentures issued on October 31, 2016, assuming that no amount of the Make-Whole Amount is paid by the Company by way of Common Shares. A maximum of 5,081,937 Common Shares was issuable in payment of the Make-Whole Amount depending on the applicable conversion price of the October 2016 Unsecured Convertible Debentures issued on October 31, 2016.

# 11 DIRECTORS AND EXECUTIVE OFFICERS

The following information sets out, for each director and executive officer of the Company, his name, province and country of residence, the positions and offices in the Company currently held by that individual, the period during which such individual has served as a director or executive officer of the Company and that individual's principal occupation during the past five years, if different than the principal occupation stated below:

Name and Municipality of Residence	Office held with the Company	Principal Occupation during the past 5 years	Director or Executive Officer since
Claude Lamoureux <sup>(1)(2)</sup> Toronto (Ontario) Canada	Director and Chairman of the Board	Corporate Director	2013
Stéphane Bertrand <sup>(1)(2)</sup> Eastman (Québec) Canada	Director	President of SBCG	2009
Pascal Decary Paris France	Director	Senior Executive Vice-President of Veolia Environmental Services	2013
Pierre Gignac <sup>(1)</sup> Gatineau (Québec) Canada	Director	Chief Risk Officer at Export Development Canada	2016
Lionel Léveillé <sup>(1)(2)</sup> Candiac (Québec) Canada	Director	Senior Partner Explorer Solutions Inc.	2006
Pierre B. Meunier Montreal (Québec) Canada	Director	Lawyer (Fasken Martineau Dumoulin LLP)	2008

Name and Municipality of Residence	Office held with the Company	Principal Occupation during the past 5 years	Director or Executive Officer since
Glenn R. Kelly Trois-Rivières (Québec) Canada	President and Chief Executive Officer	President, CEO and Chairman of the Board of CO2 Solutions	2013
Charles Taschereau Chambly (Québec) Canada	Vice President and Chief Operating Officer	Chief Executive Officer of Congo Equipment S.A.R.L. Chief Operating Officer & President of Canada Lithium Corp.	2016
Jacques Bédard Mirabel (Québec) Canada	Vice President, Finance Chief Financial Officer Treasurer	Chief Financial Officer Orbite Technologies	2010
Denis Arguin Orford (Québec) Canada	Vice-President of Engineering and Operations	V-P Strategic and Technological Business Development of Enerkem	2013
Yves Noël, Eng., MBA Vaudreuil (Québec) Canada	Vice-President Business Development	Vice-President Sales and Marketing of Orbite Technologies	2011
Geneviève Marchand Montreal (Québec) Canada	Director, Legal Affairs and Secretary	Chief Legal Officer and Secretary Argex Titanium	2016

<sup>(1)</sup> Members of the Audit Committee

Each director serves as a director until the next annual general meeting of shareholders of the Company or until his successor is elected or appointed.

As at the date of this annual information form, the directors and executive officers of the Company, as a group, beneficially own or otherwise exercise control or direction over, directly or indirectly, an aggregate of 6,090,993 Common Shares of the Company, representing approximately 1.2% of the issued and outstanding Common Shares of the Company.

# **Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

Other than as provided below, no director or executive officer is, as at the date of this annual information form, or has been within the last ten years, a director, chief executive officer or chief financial officer of any company that

- (a) was subject to a cease trade order, an order similar to a cease trade order, or an order that denied the relevant company access to any exemption under applicable securities legislation, and which in all cases was in effect for a period of more than 30 consecutive days (an "Order"), which Order was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer of such company; or
- (b) was subject to an Order that was issued after the proposed director ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer of such company.

<sup>(2)</sup> Members of the Corporate Governance and Human Resources Committee

On November 29, 2011, the Company issued a news release providing the summary of the results of a scoping study entitled Preliminary Economic Assessment on Metallurgical Grade Alumina Project (the "Initial PEA"). The Initial PEA was issued on January 12, 2012. On February 10, 2012, the AMF advised the Company in writing that it considered portions of the Initial PEA to be non-compliant with NI-43-101 and required that a revised NI 43-101 compliant report, co-signed by a "Qualified Person" pre-approved by the AMF be filed no later than February 24, 2012. On February 16, 2012, the AMF issued a temporary management cease trade order under Policy Statement 12-203 which prohibited trading in securities of the Company by insiders of the Company, including Jacques Bédard, Stéphane Bertrand, Lionel Léveillé, Pierre Meunier and Yves Noel. The management cease trade order was lifted on March 2, 2012.

The Company was unable to file the revised PEA complying with the AMF's requirements by the February 24, 2012 deadline, and consequently, a general cease trade order (the "CTO") was issued by regulatory authorities regarding the Company's securities pending the filing of a NI 43-101 compliant PEA or a favourable independent audit of sections 7 to 14 and 21 (with respect to alternative energy scenarios) of the PEA. On March 2, 2012, an agreement in principle between Orbite and the AMF was approved by the Bureau de décision et de révision pursuant to which an independent audit (the "Audit") would be performed in respect of sections 7 to 14 and 21 (with respect to alternative energy scenarios) of the PEA and the preparation by independent Qualified Persons of a new PEA. On March 27, 2012, an independent Audit report authored by Roche Ltd., Consulting Group and geologist Alex Knox, M.Sc., was issued confirming the validity of the conclusions of the audited portions of the Initial PEA, including the absence of evidence of improper or exaggerated claims in terms of the quantities of rare earth elements and rare metals, referred to in the Initial PEA, while identifying certain procedures which did not conform to industry best practices, including non-standard sampling procedures, but concluded that the foregoing should have only a minor impact, if any, on the overall conclusions of the Initial PEA. The CTO was lifted on April 5, 2012.

Mr. Pierre Meunier was a director of Innoventé Inc. which, on December 19, 2014, was subject to a cease trade order for failing to file its interim financial statements.

On May 12, 2015, a cease trade order was imposed on RB Energy, a public issuer where Mr. Stéphane Bertrand was a director, for failing to file its annual financial statements and Management Discussion & Analysis for the year ended December 31, 2014. Mr. Bertrand resigned his position as director of RB Energy on April 1, 2015.

Mr. Jacques Bédard was Chief Financial Officer of ART Advanced Research Technologies Inc. ("**ART**") when it filed a notice of intention to make a proposal pursuant to the Bankruptcy and Insolvency Act (Canada) on November 2, 2009. A cease trade order was in turn issued by regulatory authorities on November 19, 2009 since 3<sup>rd</sup> quarter financial statements for the quarter ended September 30, 2009 were not filed. The proposal under Bankruptcy and Insolvency Act (Canada) was subsequently approved by the Company's creditors and the Superior Court of Québec on December 9, 2009, thereby allowing for a reorganization of ART's equity and its continued operation as a private company.

Other than provided below, no director or executive officer of the Company or any shareholder holding a sufficient number of Common Shares of the Company to affect materially the control of the Company:

(a) is, as at the date of this annual information form, or has been within the last ten years, a director or executive officer of any company that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings,

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arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets;

- (b) has, within the last ten years, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or become subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold his, her or its assets;
- (c) has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- (d) has been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to reasonable investor in making an investment decision regarding the Company.

Mr. Meunier was a director of Innoventé Inc. when it filed on July 17, 2014, a notice of intention to its creditors which was subsequently rejected. On December 18, 2014, Innoventé Inc. became bankrupt. On December 19, 2014, Innoventé Inc. was also subject to a cease trade order for failing to file its interim financial statements.

Mr Charles Taschereau was an executive of RB Energy when he left its employment in January 2014, and Mr. Stéphane Bertrand was a director of RB Energy Inc., which filed a motion on October 14, 2014 pursuant to the Companies' Creditors Arrangement Act (the "CCAA") before the Commercial Division of the Québec Superior Court of the District of Montreal. The Court granted a limited initial order on October 14, 2014 under the CCAA for a stay of proceedings against RB Energy Inc. until October 15, 2014, which stay period was subsequently extended until May 29, 2015. Mr. Bertrand resigned his position as director on April 1, 2015. On May 8, 2015 the Court pronounced two orders which terminated the CCAA proceedings and appointed a receiver to the property of RB Energy, thus declaring the company bankrupt.

Mr. Jacques Bédard was Chief Financial Officer of ART Advanced Research Technologies Inc. when it filed a Notice of Intention to make a proposal pursuant to the *Bankruptcy and Insolvency Act (Canada*) on November 2, 2009. The proposal was subsequently approved by the Company's creditors and the Superior Court of Québec on December 9, 2009.

The foregoing information, not being within the knowledge of the Company, has been furnished by the respective directors and executive officers.

#### **Conflicts of Interest**

The Company's directors and officers may serve as directors or officers of other companies or have significant shareholdings in other resource companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors and officers of the Company may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict will abstain from voting for or against the approval of such participation or such terms.

#### 12 INFORMATION ON THE AUDIT COMMITTEE

#### **Charter of the Audit Committee**

The charter of the Audit Committee is annexed as schedule "A".

#### **Composition of the Audit Committee**

The Audit Committee is currently composed of Pierre Gignac, as chair, Claude Lamoureux, Stéphane Bertrand and Lionel Léveillé. Under National Instrument 52-110 Audit Committees ("NI 52-110"), a member of an audit committee is "independent" if he or she has no direct or indirect material relationship with the issuer, that is, a relationship which could, in the view of the Board of Directors, reasonably be expected to interfere with the exercise of the member's independent judgment. For the purpose of assessing the independence of a member of an audit committee, NI 52-110 further provides that an individual will be deemed to have a material relationship with an issuer if he or she accepts, directly or indirectly, any consulting, advisory or other compensatory fee from the issuer, other than as remuneration for acting in his or her capacity as a member or as part-time chair or vice-chair of the Board of Directors of the issuer or any committee thereof. For this purpose, the indirect acceptance by an individual of any consulting, advisory or other compensatory fee includes the acceptance of a fee by an entity in which such individual is a partner, member of officer, and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer.

Based on the foregoing, the Board of Directors has determined that Pierre Gignac, Claude Lamoureux, Stéphane Bertrand and Lionel Léveillé are all independent members of the audit committee as such terms are defined in NI 52-110.

# **Relevant Education and Experience**

**Mr. Pierre Gignac,** prior to his retirement in 2015, Mr. Gignac spent 17 years at Export Development Canada ("EDC") in a variety of senior roles, including Interim Chief Executive Officer. EDC, is a Crown corporation. Before joining EDC, Mr. Gignac worked in several senior positions at Metropolitan Life, one of the world's largest insurance and financial services companies, lastly as Vice-President and Actuary, responsible for the Actuarial/Financial Management Department, the Life and Financial Services Product Development Units, and the Customer Service/Administration Department. Mr Gignac is a Fellow of the Society of Actuaries, Fellow of the Canadian Institute of Actuaries, and a Chartered Financial Analyst. He is a graduate of Columbia University's Senior Executive Program and from Laval University.

Mr. Claude Lamoureux, an actuary by training, was the inaugural President & C.E.O of the Ontario Teachers' Pension Plan. From 1990 to his retirement in 2007, he oversaw Teachers' development into one of the world's leading pension plans with more than \$100 billion in net assets, an innovative investment program, and outstanding services to more than 250,000 plan members. Prior to 1990, Mr. Lamoureux spent 25 years as a senior financial executive with Metropolitan Life in Canada and the US, heading the Company's operations in Canada from 1986 to 1990. He co-founded the Canadian Coalition for Good Governance in 2002. Mr. Lamoureux has served on many Boards and currently is on the boards of Atrium Innovations Inc., Maple Leaf Foods Inc., Industrial-Alliance, the Foundation for the Advancement of Investor Rights, and St-Michael Hospital. Mr. Lamoureux holds a B.A. from the Université de Montréal, a B.Comm. (Actuarial science) from Laval University, and honorary doctorates from Glendon College at York University and HEC, Montreal. He is a Fellow of the Canadian Institute of Actuaries, the Society of Actuaries and the Institute of Corporate

Directors. Mr. Lamoureux has been honoured as an Officer of the Order of Canada, Officer of the National Order of Québec and a member of the Order of Ontario.

**Mr. Stéphane Bertrand**. Holder of a Master's degree in Economy from University of Montreal, Mr. Bertrand is currently the President of SBCG - Conseil en gestion and Senior Consultant to the mining and energy sectors. Since 2011, he is also the Executive Director of the International Summit of Cooperatives as well as the Executive Director of the Canadian International Aluminum Conference (CIAC) since 2013. He assumed the role of Executive Director of the World Energy Congress – Montreal 2010, in September 2007 where he headed the Montreal Office. Between 2003 and 2007, he was Chief of Staff for the Premier of Québec, where his responsibilities included close involvement in the development of Québec's budget and government policies. Prior to serving as Chief of Staff, Stéphane Bertrand was an executive with Gaz Métro Inc.

**Mr. Lionel Léveillé**. Trained in electrical engineering, Mr. Lionel Léveillé was President and CEO of Adacel Inc., which operates in the field of aerial navigation control simulation, from February 2001 to July 2005. He has enjoyed an illustrious career in the military and aerospace industry, serving as President of Raytheon Canada, Vice-President of Héroux-Devtek, Vice-President of Bombardier, Vice-President of Oerlikon Aerospace, and Executive Vice-President of CMC Electronics (formerly Canadian Marconi Company). During this period he was also involved with the Aerospace Industries Association of Canada, serving as Chair of several committees as well as Vice-Chairman and Chairman.

# **Pre-Approval Policies and Procedures for Audit Services**

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services.

# **External Auditor Service Fees**

# (a) Audit Fees

"Audit fees" consist of fees for professional services for the audit of the Company's annual financial statements, review of interim financial statements, assistance to underwriters and related matters. KPMG LLP, Chartered Accountants, the Company's external auditors, billed the Company \$110,500 in audit fees for the fiscal year ended December 31, 2016 and \$102,500 for the fiscal year ended December 31, 2015.

#### (b) Audit Related Fees

"Audit related fees" consist of fees for professional services that are reasonably related to the performance of the audit or review of the Company's financial statements and which are not reported under "Audit Fees" above. The Company incurred \$127,610audit related fees, which include prospectus related work as well as accounting, tax and valuation assistance to management.

# (c) Tax Fees

"Tax fees" consist of fees for professional services for tax compliance, tax advice and business reorganization and structuring. The Company incurred \$55,325tax fees from its external auditors during the fiscal year ended December 31, 2016 mainly comprised of tax compliance services as well as providing management regular support and assistance in various tax audits and \$139,929in 2015.

#### (d) All Other Fees

The Company incurred \$832in other fees for advisory services in relation to the diagnostic review of the COSO 2013 documentation in the context of the 52-109 certification during the fiscal year ended December 31, 2016 and 14,168in 2015.

#### **Reliance on Exemption**

The Company is not relying on exemptions set out in NI 52-110.

# 13 LEGAL PROCEEDINGS AND REGULATORY ACTIONS

During the fiscal year ended December 31, 2016, the Company was not subject to:

- (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority;
- (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision; or
- (c) any settlement agreements entered into before a court relating to securities legislation or with a securities regulatory authority.

# 14 INTERESTS OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as set out below, the Company believes that no director or executive officer of the Company or any person or Company that beneficially owns, or controls or directs, directly or indirectly, more than 10% of any Class or series of the Company's outstanding voting securities or any associate or affiliate of any of the persons or companies referred to above has any material interest, direct or indirect, in any transaction which materially affected the Company or is reasonably expected to materially affect the Company.

During the fiscal year ended December 31, 2016, the Company incurred \$361,000 (2015 - \$377,000) 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.

# 15 TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for the Class A shares of the Company is Computershare Investor Services Inc. at its principal offices in Montreal and Toronto.

### 16 MATERIAL CONTRACTS

Other than as set out below, during the fiscal year ended December 31, 2016, the Company did not enter into any material contracts, other than contracts entered into in the ordinary course of business:

(a) Underwriting Agreement dated January 28, 2016 between Orbite Technologies Inc. and Euro Pacific Canada Inc. and an Amendment thereto dated March 4, 2016;

- (b) Agency Agreement dated August 10, 2016 between Orbite Technologies Inc. and Echelon Wealth Partners Inc.;
- (c) Warrant Indenture dated August 10, 2016 between Orbite Technologies Inc. and Computershare Trust Company of Canada;
- (d) Warrant Indenture dated August 10, 2016 between Orbite Technologies Inc. and Computershare Trust Company of Canada;
- (e) Agency Agreement dated September 28, 2016 between Orbite Technologies Inc. and Echelon Wealth Partners Inc.:
- (f) Indenture dated September 28, 2016 between Orbite Technologies Inc. and Computershare Trust Company of Canada;
- (g) Indenture dated October 31, 2016 between Orbite Technologies Inc. and Computershare Trust Company of Canada;
- (h) Warrant Indenture dated October 31, 2016 between Orbite Technologies Inc. and Computershare Trust Company of Canada.

#### 17 INTERESTS OF EXPERTS AND QUALIFIED PERSONS

KPMG LLP, Chartered Accountants are the independent auditors who prepared the Auditors' Report to the shareholders for the consolidated financial statements for the fiscal year ended December 31, 2016. KPMG LLP, Chartered Accountants, have advised the Company that they are independent with respect of the Company within the meaning of the relevant rules and regulations prescribed by the relevant professional bodies in Canada and any applicable legislation and regulation.

#### 18 ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com.

Additional information, including directors' and officers' remuneration and indebtedness, if any, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, is contained in the Company's last management information circular dated May 16, 2016 prepared in connection with the Company's general and annual meeting of shareholders held on June 22, 2016.

Additional financial information is provided in the Company's audited consolidated annual financial statements and management's discussion and analysis for the fiscal year ended December 31, 2016.

#### **SCHEDULE "A"**

#### ORBITE TECHNOLOGIES INC.

#### **AUDIT COMMITTEE CHARTER**

#### **ARTICLE 1 - PURPOSE AND COMPOSITION**

### 1.1 Audit Committee

The purpose of the Audit Committee (the "Committee") of Orbite Technologies Inc. (the "Company") is to assist the Board of Directors (the "Board") in its oversight of:

- (i) the integrity of the Company's financial statements;
- (ii) the internal and external auditor qualifications and independence;
- (iii) the performance of the Company's internal audit function and independent auditor;
- (iv) the integrity of internal controls;
- (v) The procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters and the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters and
- (vi) the identification of the material risks that may affect the Company and the implementation of appropriate measures to manage such risks.

The Committee does not have the mandate of planning or conducting a financial audit, nor is it responsible for determining whether the financial statements are complete and fully reflect the Company's situation or whether accounting principles applicable to the Company have actually been applied. In these respects, after having carried out the verifications dictated by the circumstances, and having ensured the existence of adequate internal controls, the Committee relies on the accounting and financial expertise of the President and Chief Executive Officer and the Chief Financial Officer of the Company who are responsible for the integrity of the information submitted to the Committee and to the Board.

The Committee of the Company shall be composed of not less than three directors of the Company, all of whom shall be independent within the meaning of Regulation 52-110 respecting audit committees (Québec) (the "Regulation 52-110"), as amended or replaced from time to time, subject to the exceptions set out in Regulation 52-110. All members of the Committee shall be financially literate as prescribed in Regulation 52-110.

# 1.2 Management

Management is responsible for:

(i) the preparation, presentation and integrity of the Company's financial statements and for maintaining appropriate accounting policies and internal controls and procedures

designed to ensure compliance with accounting standards and applicable laws and regulations; and

(ii) identifying the material risks and putting in place appropriate measures allowing to manage such risks.

#### 1.3 Auditor

The independent auditor is responsible for auditing the Company's annual financial statements and reviewing the Company's quarterly financial statements (if requested by the management of the Company or if required under the applicable legislation).

#### **ARTICLE 2 - SCOPE OF MANDATE**

The responsibilities of the Committee extend to Orbite Technologies Inc., its subsidiaries and their divisions. In this mandate, the word "Company" refers to Orbite Technologies Inc., its subsidiaries and their divisions.

#### **ARTICLE 3 – RESPONSIBILITIES AND DUTIES**

To fulfill its responsibilities and duties the Committee shall:

# 3.1 Financial Disclosure

- (i) review the Company's:
  - 1. interim and annual financial statements;
  - 2. management's discussions and analyses;
  - 3. interim and annual earnings press releases;
  - 4. annual information forms;
  - 5. prospectuses; and
  - 6. other documents containing audited or unaudited financial information, at its discretion;
- (ii) and report thereon to the Board before such documents are approved by the Board and disclosed to the public;
- be satisfied that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements, other than the disclosure provided by the financial statements, management's discussions and analyses and earnings press releases, and shall periodically assess the adequacy of those procedures.

#### 3.2 Independent Audit

The Committee shall:

- recommend to the Board the independent auditor to be appointed for purposes of preparing or issuing an auditor's report or performing other audit, review or attest services;
- review and approve the audit plan, the terms of the independent auditor's engagement, the appropriateness and reasonableness of proposed audit fees, and any issues relating to the payment of audit fees, and make a recommendation to the Board with respect to the compensation of the independent auditor;
- (iii) review the independence of the independent auditor;
- (iv) meet with the independent auditor and with management to discuss the audit plan, audit findings, any restrictions on the scope of the independent auditor's work, and any problems that the independent auditor experiences in performing the audit;
- (v) review with the independent auditor and management any changes in the applicable accounting principles that may be material to the Company's financial reporting;
- (vi) review pro forma or adjusted information not in accordance with the applicable accounting principles; have the authority to communicate directly with the independent auditor;
- (vii) require the independent auditor to report directly to the Committee;
- (viii) directly oversee the work of the independent auditor that is related to the preparation or issue of an auditor's report or other audit, review or attest services for the Company, including the resolution of disagreements between management and the independent auditor regarding financial reporting;
- (ix) meet with the independent auditor to discuss the annual financial statements (including the report of the independent auditor thereon) and the interim financial statements (including the review engagement report of the independent auditor thereon);
- (x) review any management letter containing the recommendations of the independent auditor, and the response and follow up by management in relation to any such recommendations;
- (xi) review any evaluation of the Company's internal control over financial reporting conducted by the independent auditor, together with management's response;
- pre-approve (or delegate such pre-approval to one or more of its independent members) in accordance with a pre-approval policy, all engagements for non-audit services to be provided to the Company or its subsidiary entities by the independent auditor, together with all non-audit services fees, and consider the impact of such engagements and fees on the independence of the independent auditor;
- (xiii) review and approve the Company's hiring policy regarding partners, employees and former partners and employees of the present and former independent auditor of the Company;
- (xiv) in the event of a change of auditor, review and approve the Company's disclosure relating thereto.

# 3.3 Financial Complaints Handling Procedures

- (i) establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and
- establish procedures for the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

#### 3.4 Annual Review

(i) The Committee shall review and assess the adequacy of its mandate annually, report to the Board thereon and recommend any proposed changes to the Board for approval. The Committee shall also perform an annual evaluation of the performance of the Committee and shall report to the Chairman of the Board thereon.

#### **ARTICLE 4 - OPERATION OF THE COMMITTEE**

In connection with the discharge of its duties and responsibilities, the Committee shall observe the following procedures:

- (i) Reporting. The Committee shall report to the Board.
- (ii) Meetings. The Committee shall meet at least four times every year, and more often if necessary, to discharge its duties and responsibilities hereunder.
- (iii) Advisors. The Committee shall have the authority to engage independent counsel and other advisors as it determines necessary to carry out its duties and to set and pay, at the Company's expense, the compensation of such advisors.
- (iv) Chairman. The Committee will recommend a director as Chairman of the Committee to the Board for approval.

If the Chairman of the Committee is not present at any meeting of the Committee, one of the other members of the Committee present at the meeting shall be chosen by the Committee to preside.

- (v) Quorum. A majority of committee members, present in person, by video-conference, by telephone or by a combination thereof, shall constitute a quorum.
- (vi) Secretary. The Committee shall appoint a Secretary who need not be a member of the Committee or a director of the Company. The Secretary shall keep minutes of the meetings of the Committee.
- (vii) Calling of Meetings. A meeting of the Committee may be called by the Chairman of the Committee, by the independent auditor of the Company, or by any member of the Committee.
- (viii) Notice of Meeting. Notice of the time and place of every meeting may be given orally, in writing, by facsimile or by e-mail to each member of the Committee at least 48 hours prior to the time fixed for such meeting.
- (ix) A member may in any manner waive notice of the meeting. Attendance of a member at the meeting shall constitute waiver of notice of the meeting, except where a member attends

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- a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting was not lawfully called.
- (x) Auditor's Attendance at Meetings. The independent auditor shall be entitled to receive notice of every meeting of the Committee and, at the expense of the Company, to attend and be heard at any meeting of the Committee. If so requested by a member of the Committee, the independent auditor shall attend every meeting of the Committee held during the term of office of the independent auditor.
- (xi) Access to Information. The Committee shall have access to any information, documents and records that are necessary in the performance of its duties and the discharge of its responsibilities under this Charter.
- (xii) Review of Charter. The Committee shall periodically review this Charter and recommend any changes to the Board as it may deem appropriate.
- (xiii) Reporting. The Chairman of the Committee shall report to the Board, at such times and in such manner, as the Board may from time to time require and shall promptly inform the Chairman of the Company of any significant issues raised during the performance of the functions as set out herein, by the independent auditor or any Committee member, and shall provide the Chairman copies of any written reports or letters provided by the independent auditor to the Committee.