

**ORBITE ALUMINAE INC.**



**ANNUAL INFORMATION FORM**

FOR THE YEAR ENDED DECEMBER 31, 2014

31 mars, 2015

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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, 2015, unless otherwise specified. Specifically incorporated by reference and forming a part of this AIF are: (i) the audited consolidated financial statements for the Company for the period ending December 31, 2014, together with the auditor's report thereon; and (ii) a technical report entitled “*NI 43-101 Revised Technical Report – Preliminary Economic Assessment on Orbite Aluminae Inc. Metallurgical Grade Alumina Project*” dated January 12, 2012, amended and restated on May 30, 2012 (the “**Preliminary Economic Assessment**” or the “**PEA**”).

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 Aluminae Inc. and 8238375 Canada Inc., its wholly-owned subsidiary.

## FINANCIAL STATEMENTS

This annual information form should be read in conjunction with the Company's audited consolidated annual financial statements and revised management's discussion and analysis for the fiscal year ended December 31, 2014. These documents are available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

## MONETARY REFERENCES

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

## FORWARD-LOOKING INFORMATION

Certain information contained in this Annual Information Form, including any information as to Orbite's strategy, plans or future financial or operating performance, constitutes “forward-looking statements”. All statements, other than statements of historical fact, are forward-looking statements. The words “believe”, “expect”, “anticipate”, “contemplate”, “target”, “plan”, “intends”, “continue”, “budget”, “estimate”, “may”, “will”, “schedule” and similar expressions identify forward-looking statements. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements.

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

- fluctuations in the spot and forward price of alumina, high purity alumina, scandium, gallium or certain other commodities (such as other rare earths and metal oxides);
- diminishing quantities or grades of resources and reserves;
- the impact of inflation;
- our goal to begin or grow production on an economically viable basis;
- our ability to finance and build smelter-grade and high purity alumina production facilities;
- our expectations regarding the ability to raise capital and secure loan facilities;
- our ability to secure strategic partnerships;

- changes in municipal, provincial and federal government legislation, taxation, controls, regulations, expropriation and political or economic developments in Canada or other countries in which we do or may carry on business in the future;
- business opportunities that may be presented to, or pursued by, us;
- our ability to successfully integrate acquisitions;
- operating or technical difficulties in connection with mining or development activities;
- operating or technical difficulties in connection with operations of our High Purity Alumina production facility currently in the commissioning phase, or any other production facility we may build in the future;
- employee relations;
- the contemplated capital and operation costs of mineral extraction using the Orbite's processes and technologies will not increase significantly;
- availability and costs associated with mining inputs and labour;
- litigation;
- the speculative nature of mineral exploration and development, including the risks of obtaining necessary licenses and permits; and
- contests over title to properties.

In addition, there are risks and hazards associated with the business of mineral exploration, development and mining, including environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding (and the risk of inadequate insurance, or inability to obtain insurance, to cover these risks). Many of these uncertainties and contingencies can affect our actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, us. Readers are cautioned that forward-looking statements are not guarantees of future performance. All of the forward-looking statements made in this Annual Information Form are qualified by these cautionary statements.

The Company may, from time to time, make oral forward-looking statements. The Company advises that the above paragraph and the risk factors 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.

### **Scientific and Technical Information**

Unless otherwise indicated, scientific or technical information in this document relating to mineral reserves, mineral resources or the Orbite technological process is based on information prepared by employees or consultants of Orbite, in each case under the supervision of, or has been reviewed and approved by, Marc Filion, Eng., Ph.D, MBA, not independent of Orbite.

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

### **Cautionary note to U.S. Investors**

Readers should be aware that the disclosure in this AIF, including the documents incorporated by reference herein, uses terms that comply with reporting standards in Canada and certain estimates are made in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Unless otherwise indicated, all resource estimates contained in or incorporated by reference in this AIF have been prepared in accordance with NI 43-101. These standards differ significantly from the requirements of the U.S. Securities and Exchange Commission (the "SEC"), and resource information contained herein and incorporated by reference herein may not be comparable to similar information disclosed by U.S. companies.

This AIF, including the documents incorporated by reference herein, uses the terms "indicated mineral resources" and "inferred mineral resources" to comply with the reporting standards in Canada. We advise U.S. investors that while these terms are recognized and required by Canadian regulations, the SEC does not recognize them. U.S. investors are cautioned not to assume that any part or all of the mineral deposit in these categories will ever be converted into mineral reserves. These terms have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility.

For the above reasons, information contained in this AIF and the documents incorporated by reference herein containing descriptions of our mineral deposit may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the U.S. federal securities laws and the rules and regulations thereunder.

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 Aluminae Inc. (the “**Company**” or “**Orbite**”) was incorporated on June 17, 1983 under the *Canada Business Corporations Act*. On October 11, 2011, the Company amended its articles to change its name to “Orbite Aluminae Inc.” (formerly known as Exploration Orbite V.S.P.A. 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.

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

The Company’s only subsidiary, 8238375 Canada Inc., was incorporated on June 29, 2012 under the *Canada Business Corporations Act* and is a wholly-owned subsidiary of the Company expected to be used as a joint-venture vehicle.

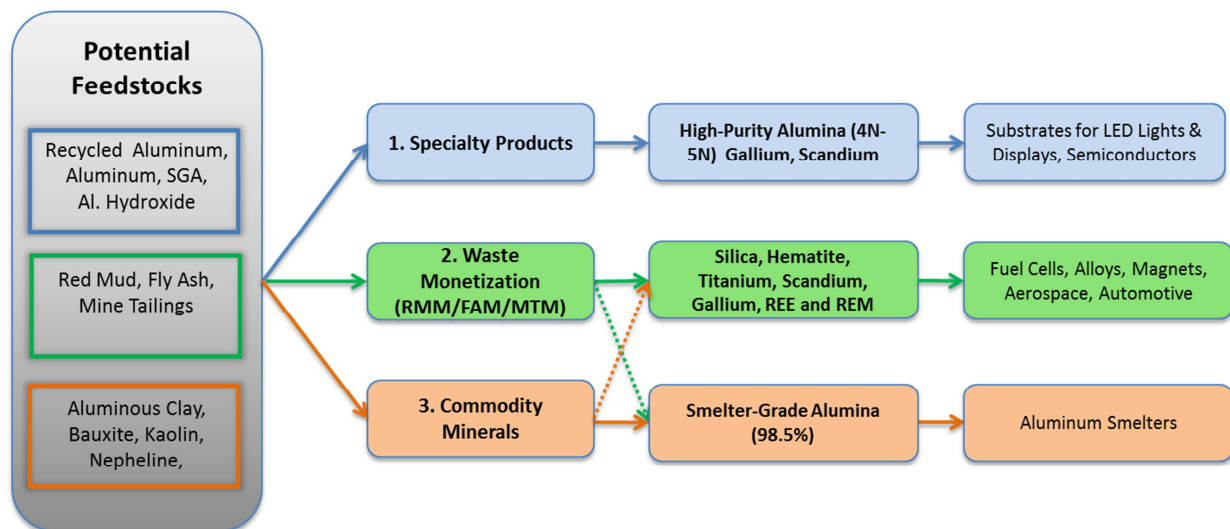
## 2. GENERAL DEVELOPMENT OF THE BUSINESS

The Company is a clean technology based mineral processing and resource development company. The Common Shares of the Company are traded on the Toronto Stock Exchange under the symbol “ORT”. Orbite Common Shares are also traded since September 10, 2012 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 and ORT.DB.A.

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, all without generating red mud waste or tailings as well as serpentine residues from chrysotile processing sites. 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 residue remaining, which are 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.** The Company's short term priority, being the production of specialty products, will commence with the Company's HPA plant in Cap-Chat, Québec (the "HPA Plant"), scheduled to enter commercial production in the third quarter of the 2015 financial year at a capacity of three tonnes per day of high purity alumina.

The preliminary cost estimate and engineering for increasing production capacity to five tonnes per day is expected to be completed in the first half of 2015, with a decision to proceed with plant expansion to be taken during the second half of 2015. Plant expansion is expected to be carried out during the first half of 2016, with ramp up to 5 tpd to start in Q3 of 2016.

**2. Medium Term Priority.** The Company's medium term priority relates to waste monetization. In February 2013, the Company signed a memorandum of agreement with Veolia Environmental Services ("Veolia") for the exclusive worldwide remediation of red mud using red mud monetization ("RMM") plants based on the SGA Plant design. The Company and Veolia are working on achieving specific milestones in 2015 that include the ownership and funding structure of the first demonstration scale RMM plant, assignment of tasks, preliminary engineering and establishing a construction timetable and project plan. The Company is also planning to convert the extraction section of the HPA Plant to a demonstration facility for multi-feedstocks, including aluminous clays, red mud, fly ash, and mine tailings using its chloride technology. Preliminary engineering for the conversion of the HPA Plant's alumina extraction unit to Orbite's chloride-based technology is planned to occur by the end of 2015. Conversion to the chloride technology along with the addition of a scandium and gallium extraction unit is planned to commence in Q2, 2016, with completion tentatively expected for the second half of 2016.

Once completed, the HPA facility will also serve as an industrial scale demonstration facility for Orbite's Waste Monetization (Red Mud, Fly Ash, and Mine Tailings) and Commodity Minerals technologies for the achievement of its mid and long-term goals, while continuing to produce High Purity Alumina.

Based upon operating with multiple feedstocks in 2016/2017, Orbite plans to use the operating data and knowledge to design and build the first industrial prototype (estimated to be in the range of 100k – 200k tpy feedstock) to be installed at the waste site (red mud, fly ash, or mine tailings ponds). The Company's goal would be to have a first prototype operational in 2018 followed by the commissioning of a full scale waste monetization plant (1M tpy feedstock) in 2020.

**3. Longer Term Priority.** Related to commodity minerals, the Company proposes the building and operating of a SGA production plant (the “SGA Plant”) to process aluminous clay from the Company’s Grande-Vallée property. The Company has completed the basic engineering and the PEA for the proposed SGA Plant. The SGA Plant design is expected to be based on the parameters of the PEA, which assumed the processing of 2.5 million tonnes of aluminous clay per year resulting in an estimated annual production of 540,000 tonnes of SGA as well as by-products that include high-purity hematite, high-purity silica, magnesium oxide, and individually separated rare earth and rare metal oxides. The Company intends, after the completion of the HPA Plant and its conversion to Orbite’s chloride technology in 2016, to undertake, in 2017, a feasibility study for the SGA Plant, including site selection and detailed engineering, subject to securing sufficient project funding and selection of a joint venture partner.

### Three-Year History

The following is a description of the general developments of the Company for the last three fiscal years.

#### *Year Ended December 31, 2012*

- On January 12, 2012, the Company filed a Preliminary Economic Assessment Technical Report for its proposed smelter-grade alumina (“SGA”) plant, for which the highlights were previously announced on November 29, 2011. On February 10, 2012, the Autorité des marchés financiers (the “AMF”) advised the Company in writing that it considered portions of this report (the “non-compliant report”) to be non-compliant with NI 43-101 - Standards of Disclosure for Mineral Projects (“NI 43-101”) and required that an NI 43-101 compliant report be filed no later than February 24, 2012. The Company was unable to file a revised PEA Technical Report by the February 24, 2012 deadline; and consequently a cease trade order (“CTO”) was issued by regulatory authorities regarding the Company’s securities pending the filing of a NI 43-101 compliant PEA Technical Report or of a favourable third party independent audit of sections 7 to 14 for the aspects pertaining to rare earth elements and certain other deficient sections of the non-compliant report. On March 27, 2012, an independent Audit Report (the “Audit Report”) was completed by the engineering firm Roche Ltd and by consulting geologist Alex W. Knox, M. Sc., a rare earth specialist, confirming the validity of the conclusions of the audited portions of the non-compliant report and that there was no evidence of exaggerated claims or disclosures in the non-compliant report, and consequently, the CTO was lifted effective April 5, 2012. The Company subsequently completed and filed an NI 43-101 compliant PEA Technical Report dated May 30, 2012 (the “PEA”). For further details on the PEA, see Section “*Proposed SGA Production Plant*”.
- On March 8, 2012, the Company announced the successful conclusion of its alumina pilot phase which began in 2009, ceasing pilot operations at Cap-Chat and initiating the planning for the conversion of the facility into a commercial HPA plant producing high-purity alumina (“HPA”). Commissioning was expected to begin at the end of 2012, with an initial production of one tonne per day of 99.99% (4N) and greater purities.
- On March 15, 2012, the Company announced the inauguration of a new R&D laboratory in Laval to advance different research and development initiatives as well as provide support and testing services to the HPA plant.
- On March 15, 2012, Orbite announced it obtained the support of the Micmac Nation of Gespeg for its smelter-grade alumina project in the Gaspé region of Québec.
- On March 28, 2012, the Company announced the signing of a non-binding Memorandum of Understanding with UC RUSAL, the world’s largest aluminum producer, pursuant to which the



parties intend to invest into a joint venture to build Orbite's first SGA plant. The first SGA plant is intended to be built in three incremental phases and RUSAL's possible investment into the first phase could be \$25 million Canadian dollars with the right to participate in the following phases.

- On April 18, 2012, Orbite announced the close association and consistency of rare-earth ("REO") and rare-metal ("RMO") oxides with alumina at its Grande-Vallée deposit based on systematic re-assaying from drilling completed in 2007 and 2011 for REO and RMO. Systematic re-assaying of drilling completed in 2008 to 2010 for REO and RMO was also underway. Additional tests performed in Europe confirmed the capacity to produce a highly concentrated chloride filtrate of the rare-earth ("REE") and rare-metal elements ("RME") following the removal of iron, confirming the REO and RMO contained in the aluminous clay could be successfully recovered using Orbite's processes.
- On April 24, 2012, Orbite announced the acquisition of 952 new claims covering a total of 543.2 km<sup>2</sup> at sites near Québec City, Rimouski and Cap-Chat, Québec. These new claims cover a substantial portion of the aluminous clay contained within the "Original Formation" which also hosts the Grande-Vallée deposit.
- On May 15, 2012, Orbite announced the appointments of Michael Hanley and Jean-Sébastien David to its Board of Directors, as well as appointments to its management team with Jonathan Labranche as Director of Legal Affairs and Guy-Louis Boucher as Vice-President, Sustainable Development.
- On May 24, 2012, Orbite announced its collaboration with the regional county municipalities ("MRCs") to implement a manpower training program, and the receipt of its construction permit for the HPA plant from the Cap-Chat municipality.
- On June 5, 2012, Orbite announced a new drilling campaign at Grande-Vallée in support of the proposed SGA plant Feasibility Study.
- On June 14, 2012, Orbite announced the start of construction at the HPA plant in Cap-Chat, Québec.
- On June 21, 2012, Orbite announced that an independent analysis at MEAB's pilot plant facility in Germany confirming the potential for a 23% increase in recovery rates for individual rare earth oxides ("REO") and rare metal oxides ("RMO") over those used in the PEA which assumed 75%. The results concluded the Orbite processes are expected to generate the following minimum oxide recovery yields for REO and RMO contained in the feedstock: 93.86% gallium oxide, 93.11% scandium oxide, and 87.47% yttrium oxide. The Company also announced the results of the re-assaying of drilling completed in 2008 to 2010 for REO and RMO, confirming and reinforcing the rare earth and rare metal conclusions of the PEA. Complete results indicated a strong correlation of the REO and RMO with alumina. The exception was scandium oxide (a rare metal), which demonstrated a consistent value in most samples without correlating to the alumina.
- On June 26, 2012, Orbite announced that, in collaboration with CMI-UVK (Austria) and MEAB (Germany), it had successfully produced its first heavy rare earth and scandium oxides. This confirms the ability of the Orbite processes to recover and produce heavy rare earth oxides (such as dysprosium and erbium) and rare metal oxides (such as gallium, scandium and yttrium) using aluminous clay from Grande-Vallée. Process parameters and a final design for the rare earth and rare metal recovery circuits were also completed.

- On June 27, 2012, Orbite also announced it signed a memorandum of understanding (“MOU”) with National Aluminum Corporation Limited (“NALCO”), based in India, which operates Asia’s largest integrated aluminum complex. The agreement provides for the testing of NALCO’s bauxite ores (gibbsite and boehmite) as well as the red mud waste generated from its Bayer process alumina refineries.
- On June 27, 2012, Orbite also announced, in collaboration with independent AGAT Laboratories (Mississauga) and Evans Analytical Group (Liverpool, New York), successful test results using red mud as a feedstock with its proprietary processes, confirming the potential to remediate red mud. Red mud is the waste by-product of the production of alumina from bauxite using the industry standard Bayer process. Red mud contains the same constituent elements as bauxite from which it was produced (alumina, iron, titanium, magnesium, REO, RMO, etc.). Process parameters and a conceptual basis for a red mud remediation (“RMR”) plant were established based on the SGA plant design. Test results estimated an overall recovery rate from red mud of 92.42% alumina, 91.19% Fe<sub>2</sub>O<sub>3</sub>, 80.54% MgO, 97.76% Na<sub>2</sub>O and 93.28% CaO. Test results also estimated that silica and titanium oxide, which are non-soluble in hydrochloric acid and are both common to red mud, could be further separated from each after liquid/solid separation stage to produce TiO<sub>2</sub> at a purity exceeding 95% and SiO<sub>2</sub> at a purity exceeding 95%.
- On June 28, 2012, Orbite announced it had retained the services of CMI Chemline, which operates in Brazil, China, France and Germany, to complete the design and engineering of the acid regeneration at the HPA plant, thus enabling the eventual recovery of rare earth and rare metal elements at the HPA plant.
- On June 29, 2012, Orbite announced the production of its first samples of 99.999% (5N) high-purity alumina at the Company’s laboratory in Laval, and the intention to eventually achieve higher purities.
- On September 6, 2012, Orbite announced it received a 20-year renewable mining lease (BM 1013) from the Ministère des Ressources naturelles et de la Faune du Québec, Québec’s Ministry of Natural Resources and Wildlife. Covering 98.5 hectares of its Grande-Vallée claims and containing approximately 70 million tonnes of aluminous clay, sufficient to supply an SGA plant with the same operating parameters as considered in the PEA, for over 20 years.
- On September 10, 2012, Orbite’s common shares began trading on the OTCQX International, a United States based stock exchange, under the symbol “EORBF.”
- On September 19, 2012, Orbite announced that it had developed a proprietary purification technology for silica based on its hydrochloric acid leaching processes. This chemical analysis was independently verified by AGAT Laboratories (Mississauga) and the physical characteristics were evaluated by TEKNA. This development should allow the Company to further purify a portion or all of the silica generated at its HPA and SGA plants to the 99.9% (3N) level. The PEA assumed silica produced at the proposed SGA plant would be at 95% purity.
- On September 20, 2012, Orbite announced it had received notices of allowance for its patent applications in Russia and China. Orbite also announced the appointments to its management team of Marc Johnson as Vice President, Investor Relations (subsequently as Vice President, Corporate Development), Berthier Lavoie as Director, Human Resources, and Antoine Charbonneau as Director, Sales and Marketing.

- On September 26, 2012, Orbite announced that based on successful tests at the Company's Laboratory, it had developed process parameters and a final design for using fly ash as a feedstock with its proprietary processes, confirming the potential to remediate fly ash. Fly ash, a waste by-product of coal combustion, is generated at all coal-fired power plants, and typically contains 5% to 35% alumina and other elements, reflecting the composition of the coal that was combusted. Test results estimated preliminary recovery rates exceeding 88% for alumina and 96% for other oxides (silica, hematite, magnesium, etc.). The results were independently verified by AGAT Laboratories (Mississauga).
- On October 2, 2012, Orbite announced that it had completed the final design of the proposed SGA plant, based on the basic engineering, which included an optimization of the plant design, with the support of M&K Chemical Engineering Consultants (USA), that reduces the consumption of water (by at least 60%) resulting in a reduction in the consumption of fossil fuels (by at least 30%).
- On November 14, 2012, Orbite announced it signed an option agreement to acquire a 100% interest in the Chaswood kaolin clay and sand claims situated approximately northeast of Halifax, Nova Scotia. Chaswood consists of 163 claims covering approximately 26.1 km<sup>2</sup> in central Nova Scotia and is accessible by a network of paved highways and all-weather secondary roads. The property is strategically located near a natural gas pipeline and is in proximity to the Port of Halifax, which could handle international and domestic shipments of alumina from a nearby SGA plant. For further details and requirements for completing the option agreement, see Section "*Chaswood Option Agreement*".
- On December 13, 2012, Orbite announced the completion of a \$25 million convertible debenture offering. The convertible debentures bear an interest rate of 8%, have maturity of December 13, 2017, and are convertible at the holder's option into common shares at a conversion price of \$3.50 per share. The convertible debentures are secured by the HPA plant building (excluding all the equipment) and the 2012 refundable investment tax credits (RITCs) totalling approximately \$19 million at the end of December 31, 2014 and the 2013 RITCs resulting from capital costs to be incurred in 2013. For further details, see Section "*Financing Activities*".
- On December 18, 2012, Orbite announced the start of commissioning activities at the Cap-Chat HPA plant subsequent to receiving the necessary permits and that it had obtained intellectual property insurance.
- On December 21, 2012, Orbite announced the completion of a \$5 million units private placement. For further details, see Section "*Financing Activities*".

#### *Year Ended December 31, 2013*

- On February 4, 2013, Orbite announced it signed an exclusive worldwide collaborative agreement with Veolia Environmental Services ("Veolia") for the remediation of red mud. Veolia is a global integrated operator of waste management services that is active across all segments (solid, liquid, non-hazardous and hazardous waste). For further details, see Section entitled "*Red Mud Remediation (RMR)*".
- On May 7, 2013, Orbite announced that it has appointed Mr. Glenn R. Kelly as Chief Operating Officer. Orbite also disclosed the creation of a Board of Directors ("BOD") Executive Committee to assist management in the advancement of its projects, and changes to the members of the joint BOD-management Disclosure Committee.
- On May 15, 2013, Orbite concluded an agreement with its principal suppliers to resolve a billing

dispute which involved a lump sum payment of \$3.6 million, with the remainder settled by issuance of an aggregate of 14,525,146 class A shares to Gastier MP Inc. and Vtek consultants Inc., at a price of \$0.945 per share.

- On May 21, 2013, Orbite appointed Mr. Peter Crossgrove, Mr. Pascal Decary and Mr. Claude Lamoureux to its Board of Directors.
- On June 5, 2013, Orbite announced the resignations of Mr. Toby Gilsig, Mr. Charles Chevrette and Mr. Michael Hanley from its Board of Directors.
- On June 6, 2013, Orbite provided updated capital cost and timeline estimates for completing the HPA plant to a capacity of 3 tonnes per day, based on two estimates from independent engineering firms. The capital cost estimate was revised, before refundable investment tax credits ("RITC"), to \$105.9 million (or \$75.9 million net of RITC), which represented an increase of \$20.9 million to the previously provided estimate. The timeline estimate is based upon a 12-month project execution timeline.
- On June 17, 2013, Orbite concluded a binding offtake agreement with Glencore AG, a subsidiary of Glencore Xstrata plc, for the purchase of 100% of the smelter-grade alumina from the Company's proposed SGA plant in Québec, Canada for an initial term of 10 years from the commencement of commercial production.
- In July 2013, the Company initiated the implementation of measures with the objective of reducing its operational fixed costs via an streamlined organizational structure, including the abolishment of the positions of Vice-President Sustainability and Vice-President Corporate Development.
- On October 8, 2013, the Company announced the promotion of Mr. Denis Arguin, Vice President Operations to the position of Vice President Engineering and Operations, replacing Mr. Denis Primeau, formerly Chief Engineer. Mr. Yves Noël, formerly Chief Marketing Officer, was named Vice President Business Development.
- On October 24, 2013, the Company announced an updated construction timeline, development plan and budget for its HPA Plant (See "*HPA Production Plant – Construction and Capital Cost Updates*").
- On November 8, 2013, Orbite announced the execution of a binding commitment by a U.S. based institutional investor providing for the future subscription of \$40 million in additional units having identical terms to those of the Units issued pursuant to the December Prospectus (see below), with the exception that the conversion price shall be based on the 5 day VWAP of the Company's shares on the last trading day prior to the date on which the subscription rights in respect of which the units are issued first become exercisable, and the Warrants granted shall be equivalent to 45% of the number of Common Shares into which the Debentures are convertible, exercisable at a 20% premium over such conversion price. The investor's commitment is conditional on several conditions, including regulatory approval and shareholder approval.
- On December 10, 2013, Orbite completed a prospectus offering (the "December Prospectus") of units in the aggregate amount of \$16,000,000 units (the "Units"). Each Unit consists of \$1,000 principal amount of 7.5% convertible unsecured unsubordinated debentures (the "Debentures") and share purchase warrants (a "Warrant") of the Company equivalent to 35% of the number of Common Shares into which the Debentures are convertible. Each full Warrant entitles the holder to purchase one Class A share at the price of \$0.48 (which is equal to a 20% premium over the conversion price) for a period of 36 months following issuance. The Debentures have a 5 year term

and will bear interest at a rate of 7.5% per annum payable semi-annually in arrears on May 31 and November 30 of each year (the "Interest"). Each Debenture is convertible into Class A shares of the Company (the "Common Shares") at the option of the holder at any time at a conversion price of \$0.40 per Common Share (the "Conversion Price"). Holders who convert their Debentures will receive accrued and unpaid interest to the date of conversion in addition to a make-whole interest payment equal to the interest amount that such holder would have received if such holder had held the Debentures until the maturity date (the "Make-Whole Amount"). Such Make-Whole Amount shall be reduced by 1% for each 1% that the five (5) day Volume Weighted Average Price of the Common Shares on the Toronto Stock Exchange (the "VWAP") at time of conversion exceeds the Conversion Price. The Interest may be paid, at the sole option of the Company, in cash or in Common Shares whereas the Make-Whole Amount (if any) will be paid in Common Shares.

*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 calcinator, a key element in Orbite's high purity alumina production facility. 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 3, 2014, the Company announced that the Government of Québec formally approved a \$10 million equity investment in Orbite by Investissement Québec ("IQ"), a mandatory of the Québec Government.
- On March 11, 2014, the Company issued the series X and Y subscription rights to Crede Capital Group, LLC ("Crede"), a US based institutional investor. Once exercisable, the series X subscription rights will require Crede to purchase \$10 million of debentures of the Company while the series Y subscription rights will require Crede to purchase up to \$30 million of debentures of the Company, subject to regulatory and shareholder approval. 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.
- March 17, 2014 Orbite provided the market with an update on its HPA production facility and held its first ever quarterly conference call attended by over approximately 300 people.
- 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 Ressources Québec ("RQ"), a subsidiary of Investissement Québec. As part of the financing, Ressources Québec purchased 35,714,286 units of the Company at a price of \$0.28 per unit, each unit being

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.

- 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 (the “**Subscription Rights**”). Under the placement, Crede purchased units consisting of \$10 million principal amount of convertible unsecured debentures (the “**Debentures**”) and 13,000,000 warrants (the “**Warrants**”). The Debentures will mature five years from issuance, namely July 11, 2019 and will bear interest at a rate of 7.5% per annum (the “**Interest**”). Each Debenture is convertible, at the option of the holder, at any time prior to the maturity date, into class A shares (“**Shares**”) at a conversion price of \$0.50 per Share (the “**Conversion Price**”), representing the 5 day VWAP at time of the conditional exercise of the Series X subscription rights. Upon conversion, the holder shall also be entitled to Shares equal to the additional interest such holder would have received if it had held the Debenture until maturity divided by the market price of the Shares prior to the date of conversion (the “**Make-Whole Amount**”), in addition to accrued and unpaid Interest, in cash or in Shares at the Company’s discretion. Each Warrant entitles the holder to purchase one Share for a period of 3 years from its issuance at a price of \$0.60 per share.
- On July 15, 2014, the Company received an initial payment of \$6 million from tax authorities in consideration of investment tax credits on the equipment purchased for manufacturing and processing in the Gaspé region. The payment relates to the 2012 financial year, and the Company expects subsequent payments to follow. The amount was deposited in a segregated account and serves as security for the convertible debentures issued in December 2012.
- On August 6, 2014, the Company commenced construction activities at its high purity alumina (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 at Outotec's Burlington, Ontario facilities was completed and installation at site was slated to commence the week of September 8th, following curing of the new foundation to support the equipment. 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, and decided to pre-empt potential future mechanical issues that would have required substantial and costly refractory maintenance. The Company

announced it therefore deferred installation of the refractory system, allowing for further testing with its suppliers to confirm that the replacement materials will 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 "applications"). The acquisition is the result of a universal assignment of the applications in favor of Orbite by Alliance Magnésium Inc., a Québec based private company, following the public disclosure of related intellectual property regulatory filings.
- On November 10, 2014, Orbite announced amendments to the terms of its series Y subscription rights issued on March 10, 2014 (the "Rights") to Crede Capital, LLC ("Crede"). 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.
- 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 calcinator.
- 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 by one quarter to Q3 2015. Orbite also announced it was increasing its project budget to approximately \$42M (inclusive of a \$3M contingency provision), representing an increase in total plant cost from \$105.9M to \$117M.
- 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.

The following is a description of the general developments of the Company subsequent to the financial year ended December 31, 2014:

- On January 8, 2015, Orbite announced that the Canadian Intellectual Property Office ("CIPO") issued a notice of allowance for patent application No. 2,857,574, pertaining to *Processes for Treating Red Mud*. Orbite expects patent issuance within CIPO's usual timeframe of 9 to 12 weeks.
- On January 14, 2015, Orbite announced it had received from Investissement Québec a \$3.025 million bridge loan, collateralized against the Company's investment tax credits receivable for the

year 2014, estimated at \$4.0 million. The loan, repayable by June 30, 2016, will carry an interest rate of 3.5% over the prevailing prime lending rate, which currently stands at 3%. Interest is payable monthly and the loan is subject to other customary terms and conditions

- On January 15, 2015, Orbite filed a preliminary short form base shelf prospectus (the "Prospectus") with the securities regulatory authorities in each of the provinces of Canada. The Prospectus is not a commitment to undertake any financing but provides flexibility over the normal course of business to fund the Company's Cap Chat facility for the production of High Purity Alumina and the demonstration of the Company's proprietary waste monetization technology.
- 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. The completion of the Series Y financing is subject to satisfaction of the prescribed closing conditions, including regulatory approval from the TSX, shareholder approval for which a meeting is expected to take place on April 27, 2015, the absence of an event constituting an "adverse material affect" on the Company's operations between the time the Series Y Subscription Rights were subscribed and the issuance date of the underlying debentures and warrants, and the creditworthiness of the investor.
- On February 16, 2015, the Company announced it was selected to receive up to \$4.5M in non-dilutive 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 February 16, 2015, Orbite announced that, further to its press release of December 12, 2014, the Europe-sourced components of the new castable material for the refractory system at the Company's HPA plant in Cap-Chat had arrived in the port of Montreal.
- On March 3, 2015, Orbite filed a management proxy circular soliciting proxies for the upcoming vote relating to the Series Y Subscription rights initially expected to be held during a special meeting of shareholders on April 2, 2015. On March 26 and March 31, 2015, the Company announced the postponement of the shareholders meeting to April 27, 2015.
- On March 12, 2015, Orbite announced the 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 March 23, 2015, the Company announced that it proposed to offer for sale a minimum of 8,500 units of the Company (each, a "Unit") and a maximum of 15,500 Units at a price of \$1,000 per Unit for minimum gross proceeds of \$8,500,000 and maximum gross proceeds of \$15,500,000 (the "Offering"). On March 26, 2015, the Company announced that as a consequence of recent market activity and conditions, it will not be proceeding with the Offering.
- On March 26, 2015, the Company announced that as a consequence of recent market activity and conditions, it would not be proceeding with the public offering of convertible debentures disclosed in its press release of March 23, 2015. The Company also announced that the special meeting of shareholders initially expected to be held on April 2, 2015 for the purposes of the Series Y Subscription Rights, was postponed to April 27, 2015.
- On March 30, 2015, the Company received a payment of \$4 million from tax authorities in consideration of investment tax credits on the equipment purchased for manufacturing and



processing in the Gaspé region. The payment relates to the 2012 financial year and the Company expects subsequent payments to follow. At the date of publication of the consolidated financial statements the total amount of \$20.3 million received in connection with the refundable investment tax credits resulting from the purchase of manufacturing equipment related to the Company's HPA facility was deposited in a segregated account and serves as security for the convertible debentures issued in December 2012 and maturing in December 2017.

- On March 30, 2015, the Company entered into an underwriting agreement with Euro Pacific Canada Inc. (the "Underwriter") under which the Underwriter agreed to buy on a firm underwriting (bought deal) basis by way of prospectus supplement, 8,500 units of the Company (each, a "Unit") at a price of \$1,000 per Unit for gross proceeds of \$8,500,000 (the "Offering"). 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 \$6,500,000 (resulting in aggregate of gross proceeds of up to \$15,000,000). Each Unit consists of \$1,000 principal amount of convertible unsecured unsubordinated debentures (the "Debentures") and 1,077 share purchase warrants, each such warrant exercisable into one share for a period of 36 months at a price of \$0.39 per share. The Debentures will mature 5 years from their issue date (the "Maturity Date") and will bear interest at a rate of 5% per annum. Each Debenture will be convertible at any time prior to the Maturity Date, into the number of shares computed on the basis of (i) the principal amount of the Debentures divided by the conversion price of \$0.325 per share (the "Conversion Price"), and (ii) an amount equal to the additional interest amount that such holder would have received if it had held the Debenture until the Maturity Date (the "Make-Whole Amount") divided by the then 5 day volume weighted average trading price of the Common Shares on the TSX (the "Current Market Price"). The Make-Whole Amount shall be reduced by 1% for each 1% that the Current Market Price at time of conversion exceeds the Conversion Price. The aggregate number of shares to be issued upon conversion of the Debentures and for any payment of the Make-Whole Amount in Common Shares shall not exceed the number of Common Shares equal to the principal amount of the Debentures divided by \$0.325 less the 25% maximum discount allowable in accordance with the rules of the Toronto Stock Exchange.
- On March 31, 2015, the Company filed a prospectus supplement to its base shelf short form prospectus dated March 18, 2015, qualifying for issuance the Units described in the preceding paragraph.

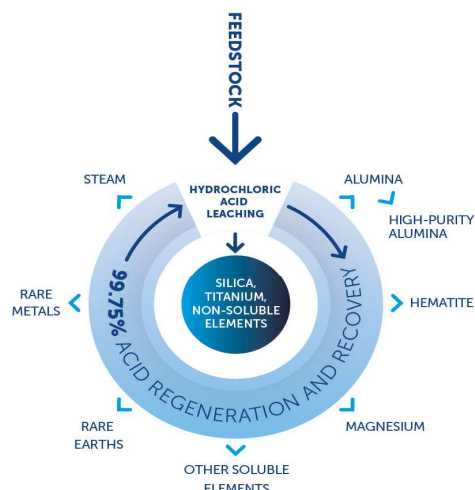
### 3. BUSINESS OF THE COMPANY

#### 3.1 Orbite's Proprietary Processes and Pilot Plant Operations

##### Overview

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

Although the processes focus primarily on the production of alumina, Orbite has also developed processes for preparing hematite, methods for separating iron ions from aluminum ions, processes for treating red mud and processes for treating fly ash. Orbite has further developed processes for preparing various other oxides.



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 remediation (RMR) and fly ash remediation (FAR) plant designs and economics. Plants are expected to be dedicated to a specific feedstock or to a specific mix of feedstocks. Rare earth & 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 approximate constituent elements of the potential feedstocks and the resulting products from plants using Orbite technology:

| Plant Design                               | HPA/SGA Plants  |   |                            |   | 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% <sup>2</sup>   | 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.

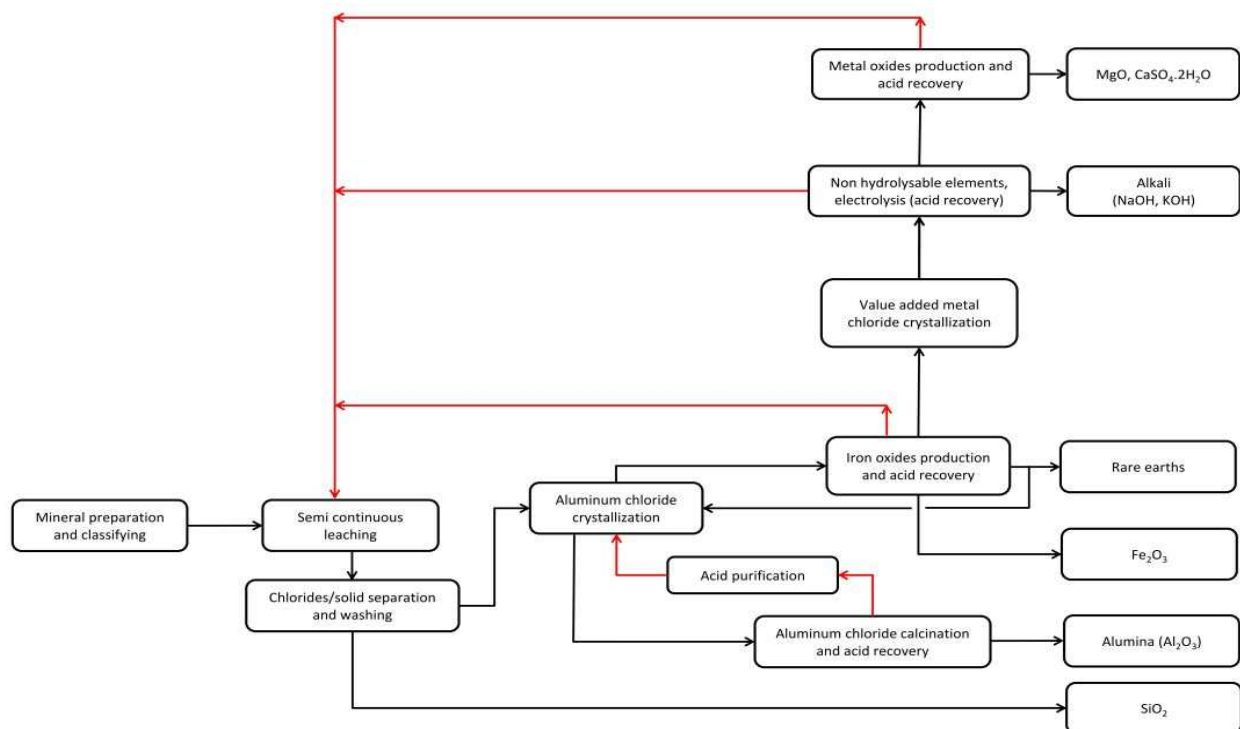
The processes begin with the pre-treatment of feedstock(s) followed by their leaching in hydrochloric acid. The efficiency with which the feedstock(s) are dissolved is an important determinant in the suitability of the feedstock with the processes. Minerals contained in suitable feedstock(s) are dissolved 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.

Individual chlorides are then selectively crystallized, 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



### Patents & Patent Applications

The Company's proprietary processes and technologies differ from the rest of the industry's and are either internationally patented or patent pending. During 2014, 4 additional patents were granted and the international application for one family was dropped since it was redundant. As a result, the Company's intellectual property portfolio now contains 15 intellectual property families, and the Company owns 100% of the intellectual property rights to 15 patents and 98 pending patent applications in 11 different countries through the international Patent Cooperation Treaty (PCT) process administered by the World Intellectual Property Organization (WIPO). The first intellectual property family is patented in Australia, Canada, China, Japan, Russia and in the United States. In 2014, the Company filed 40 national entry phases in various countries, 1 International patent application, 3 divisional applications in Canada and 4 US provisional applications.

### Origins of the Orbite Processes

In 2006 and 2007, the Centre d'études des procédés chimiques du Québec (CÉPROCQ) conducted research under a development contract from Orbite aimed at finalizing, through lab scale test work, Orbite's preliminary alumina extraction process for the pilot scale facility design. On the strength of these developments, and financial assistance from the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP), Québec's Ministry of Economic Development, Innovation and Export Trade (MDEIE) and other government and para-government organizations, Orbite implemented a pilot plant in order to pave the way for commercial exploitation of its Grande-Vallée site.

In 2007, following tabletop laboratory experiments, a laboratory-scale pilot line was developed and operated to produce batches of both metallurgical and ultra-pure alumina. Samples were sent for evaluation to potential clients in each market, and were determined to be of excellent quality.

The presence of REE values within the Grande-Vallée alumina deposit was discovered at the end of 2010 when spent acid utilized in Orbite's proprietary extraction process was analysed after the alumina and other components had been precipitated. An unexpectedly rich accumulation of REE+RM (Rare Earth Elements and Rare Metals), present in the form of chlorides, was found upon analysis at levels sufficient for their individual extraction as oxides or as a mixed cake.

### *Pilot Plant*

In 2009, Orbite determined that it needed a pilot production plant to confirm its proprietary processes' technological viability and to demonstrate its innovative processes to produce alumina from clays. In September 2009, Orbite announced it purchased a plant located at Cap-Chat to house its pilot plant for transformation of clay into alumina, which plant was suited for the Company's operations. The plant located in the industrial park of Cap-Chat, Québec, at 80 Louis Landry Street, occupied an area of approximately 2,600 m<sup>2</sup>. The total consideration for the building was \$325,000, and the acquisition was completed in November 2009.

Between spring 2009 and fall of 2009, Orbite prepared and completed the preliminary installation study phase for the pilot plant. The engineering consulting firm Seneca Inc produced the process design. In September 2010, Orbite announced that it had successfully completed the third and final design phase of its pilot project and was entering into its implementation phase, the final phase before operations.

In October 2010, Orbite obtained the required construction permit to implement its pilot project. Issued by the municipality of Cap-Chat, the permit allows for the possibility to simultaneously set up the technological process and other equipment related to the project, including necessary modifications to the facilities. The permit was granted following approval of drawings and specifications by the relevant local and provincial authorities.

In October 2010, following the approval of a bulk sampling campaign by the Minister of Natural Resources and Wildlife ("MRNF") for claim CDC 84890 at Grande-Vallée, Orbite extracted 400 metric tons of material for its pilot plant in Cap-Chat.

Following removal of the previous plant equipment and installation of its alumina extraction pilot plant equipment during 2010, the pilot plant facility began initial testing on January 15, 2011.

All metallurgical test works conducted at the Cap-Chat pilot plant were done using clays sourced from the Company's Grande-Vallée aluminous clay deposit, located approximately 20 km south of the community of Grande-Vallée. Approximately 400 tonnes of clay in four distinct families (about 100 tonnes per family) were extracted, as part of a bulk sample, and transported to the Cap-Chat pilot plant and stored on site in 4 independent lots. The clays were submitted to a hydrometallurgical and chemical treatment based on high pressure hydrochloric acid leaching followed by ion precipitation and calcination to produce smelter grade and high purity alumina products.

All leaching tests done at the pilot plant used a collection of clays from four clay families at approximately 850 kg of clay per lot, the number of pilot runs being approximately 38 using exclusively the 4 clay families. The runs have demonstrated that for all families, the extraction rates of alumina were similar, all being over 90%.

In February 2011, Orbite announced the production of a tonne of alumina at the pilot plant. Intermittent production of smelter-grade alumina and ongoing optimization and testing continued throughout the remainder of the pilot plant operation.

Smelter grade alumina ( $\text{Al}_2\text{O}_3$ ) (greater than 98.35 wt.%  $\text{Al}_2\text{O}_3$ ) was produced at the pilot plant. Two samples of alumina produced by Orbite in May and July 2011 were analyzed and indicated alumina content of 98.5 wt.% and 98.8 wt.%  $\text{Al}_2\text{O}_3$ . In May 2011, an independent engineering firm (Seneca) coordinated the production of metal aluminum on a lab scale from this pilot plant sample of metallurgical grade alumina. The test was done in the INRS laboratory ([www.inrs.ca](http://www.inrs.ca)) located in Varennes, Québec by Professor Lionel Roué. A second sample of the metallurgical grade alumina produced at the Cap-Chat pilot plant was sent to SINTEF (report on the independent testing laboratory located in Norway, dated June 22, 2011) to produce a demonstration aluminum ingot of 1915 grams. According to the SINTEF report: "There were no processing problems and the aluminum produced was of excellent quality." These results demonstrated that alumina produced at the Cap-Chat pilot plant is suitable for the synthesis of aluminum metal using lab scale electrochemical cells.

Orbite reviewed the last 14 leachate production batches at the Cap-Chat pilot plant in June and July 2011. Each production lot of leachate was with only one family of clays (out of the 4 stored on site). These production lots resulted in a 90% extraction of the alumina content from the clay. Some of these production lots resulted in more than 95% extraction of the alumina contained in the clay. The aluminum content of the leachate produced at the pilot plant of Cap-Chat was analyzed by Orbite and independently verified by Maxxam (an independent laboratory [www.maxxam.ca](http://www.maxxam.ca)) to validate the analytical method. The values obtained were then used to calculate the alumina extraction yield for the entire batch.

A further 3,000 tonnes of clay was extracted in September/October 2011 from the Grande-Vallée site in order to pursue testing and provide samples to potential customers /partners.

On March 8, 2012, the Company announced it had completed the Cap-Chat facility pilot phase and the end of pilot plant operations, and announced its intention to proceed with the conversion of the Cap-Chat facility into a HPA plant.

### **3.2 Specialty products — High Purity Alumina**

#### *HPA Market Overview*

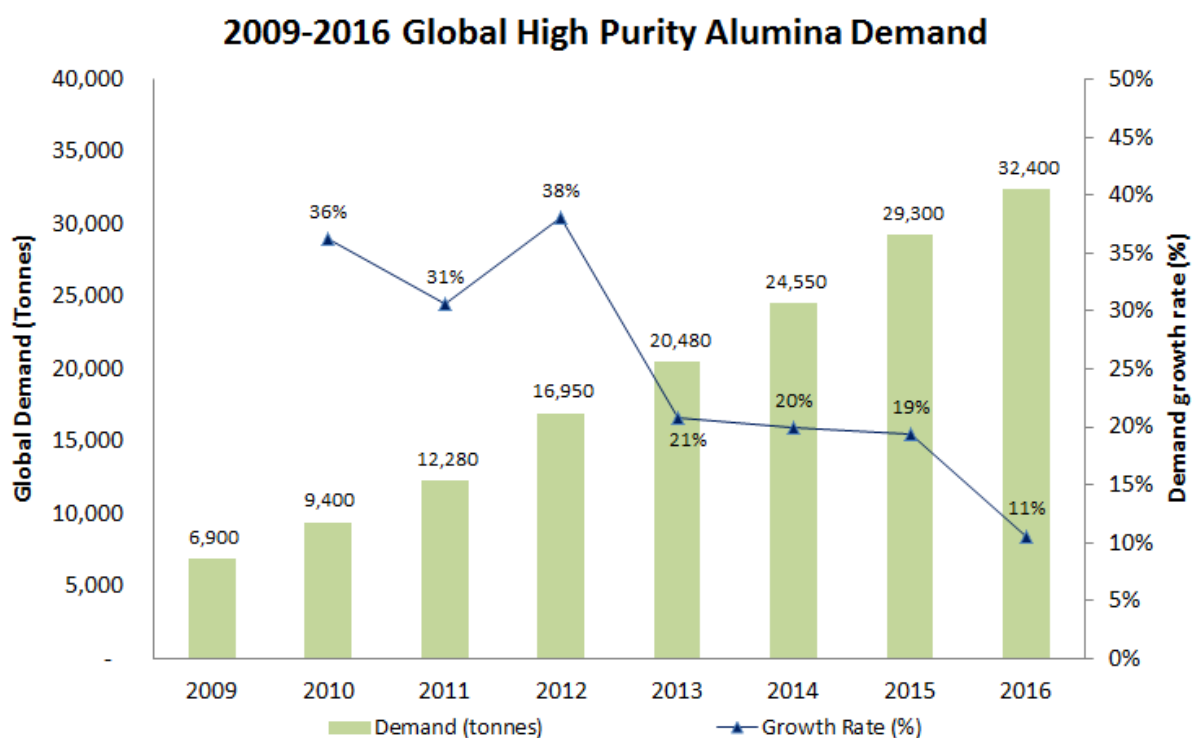
High-purity alumina (HPA) is a very small but high-value segment of the global alumina market. HPA is defined as having a purity level of at least 99.9% (3N) but more typically of 99.99% (4N) up to purities of 99.999% (5N). High-purity alumina is used primarily to manufacture industrial sapphire substrates 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 2014 was estimated at approximately 25,000 tonnes and is expected to grow at a compounded annual growth rate of 15% through the next years according the graph below.



*Source: 2012 Deep Research Report on Global and China High Purity Alumina Industry, QY Research*

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. Other recent new entrants include a new joint venture between Posco M-Tech and KC Corporation (a Korean based alumina producer), which was announced in early 2013 and could begin production in 2015 or later.

The Company has been in direct contact with approximately 100 potential HPA users in various fields of application and geography. It has collected technical specifications and commercial information on HPA currently used by these potential customers, as well as on development grades of HPA in order to advance the qualification process of its HPA with these potential customers. Representative samples for the Cap-Chat plant will be shipped to prospective customers as they become available.

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 \$15/kg to US \$25/kg for 4N HPA, US\$20/kg to US \$30/kg for 4N5 and greater than US\$30/kg for 5N+.

| Country         | Company                              | HPA Production (tonnes) |               |               | Purity Capability | Product Types                    | Regional Focus                       |
|-----------------|--------------------------------------|-------------------------|---------------|---------------|-------------------|----------------------------------|--------------------------------------|
|                 |                                      | 2014                    | 2015          | 2016          |                   |                                  |                                      |
| Japan/Korea     | Sumitomo Chemical                    | 3,020                   | 3,800         | 4,400         | 4N5               | Various                          | Korea, Global                        |
| S. Africa/N. Am | 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          | BAIKOWSKI                            | 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                        |
| Korea           | 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           | SINOMATERIAL RisingTech              | 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        |                   |                                  |                                      |
|                 | <b>Total</b>                         | <b>27,760</b>           | <b>34,340</b> | <b>39,620</b> |                   |                                  |                                      |

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



### *2014 Operating and Construction Overview – HPA Plant*

Orbite owns an alumina production facility in Cap-Chat, in the Gaspé Peninsula of the Province of Québec. On March 8, 2012, the Company ceased operations of its alumina pilot plant with the intention to convert the 2,600 m<sup>2</sup> facility into a full-scale 5,900 m<sup>2</sup> high-purity production plant, designed to produce alumina at a 99.99% ("4N") and greater purity.

A first phase of construction of the HPA Plant commenced in June 2012 and commissioning began in December 2012. The construction and commissioning were subsequently halted in 2013 as the Company focused its efforts towards securing additional financing.

In early 2014, the Company, now under new management, initiated a comprehensive design review and detailed engineering with its partner, Seneca, as well as project management and control activities with Groupe Alphard. Operating conditions for the HPA purification steps were optimized through a series of tests at Orbite's Technology Development Center ("TDC"). The selected operating conditions were then tested during the second quarter at full commercial scale at the HPA plant in Cap-Chat with results in line with the ones observed at TDC. From there, the design basis was established; P&IDs (Piping & Instrumentation Diagrams) review was completed and issued for detailed design by Seneca. In parallel, Orbite initiated project management and control activities with Alphard to develop the project capital cost estimate and schedule.

After a thorough technical and commercial assessment of several offers, the Company entered into a supply agreement with Outotec Oy and Outotec Canada for the supply of the calcination system and auxiliaries equipment.

On July 14, 2014, Orbite announced that the calcinator equipment ordered from Outotec in Germany had arrived in Québec. The shipment, representing approximately 50% of the total investment in the calcination system, included a combination of refractory and solids handling devices, as well as monitoring and control instrumentation.

On the engineering front, Seneca advanced further the detailed engineering, integrating the findings of the HAZOP (hazard and operability review), as well as the latest information from the equipment suppliers.

The Company also initiated the tender process for construction, refractory installation & curing, as well as for vessel fabrication.

In August, the Company reinitiated construction operations at its HPA production plant and took delivery of the refractory materials from Outotec. The mechanical installation of the Outotec decomposer and calciner was completed in October 2014 and was to be followed by refractory installation.

On October 29, 2014, Orbite announced that, following quality control testing by Orbite's TDC, non-conformities had been identified with some of the refractory materials supplied by Outotec which could have led to mechanical integrity problems with the refractory lining during operations, specifically, the non-conformities were found in the mortar and the castables supplied. Orbite announced commercial production was to commence later than originally anticipated, in the second quarter of 2015.

Orbite then identified and tested replacement materials that could be used to replace the defective materials, with no detrimental impact on product quality.

The initially supplied non-conforming mortar was replaced with a new mortar formulation, sourced from Outotec, and arrived in Canada in December, 2014, as planned. The non-conforming castable

material was not replaced by an Outotec product, but by an alternative proprietary material, sourced from a third party supplier, and tested and approved by Orbite's TDC.

Some of the components of this new castable are sourced from a European manufacturer. Orbite was informed by its supplier that, contrary to earlier communicated timelines, the components from Europe were not available until the end of February 2015, leading to commencement of refractory system installation at the end of March, 2015.

Consequently, the Company announced on December 12, 2014 that the commencement of commercial production at the HPA facility was deferred by one quarter to the third quarter of 2015. The Company recently received updated refractory installation bids from three specialized contractors, and Orbite has selected RHI Canada Inc. as its contractor.

The Company has also received and is presently evaluating bids for the mechanical and piping installation from 5 specialized contractors, and bids from 3 contractors for the electrical and instrumentation installation. Orbite expects to award these contracts shortly.

On February 16, 2015, Orbite announced that the Europe-sourced components of the new castable material for the refractory system at the Company's HPA plant in Cap-Chat had arrived in the port of Montreal. The refractory installation will start as announced at the end of March.

The phased development plan for the HPA Plant is as follows:

- **Phase 1** – Three Tonnes per day of HPA

Commencement of commercial production is expected in the third quarter of 2015.

- **Phase 2A** – Five Tonnes per day of HPA

Preliminary engineering is underway and expected to be completed in the first half of 2015, with a decision to proceed with plant expansion to be taken during the second half of 2015.

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

Preliminary engineering for the conversion of the HPA Plant's alumina extraction unit to a demonstration facility for multi-feedstocks, including aluminous clays, red mud, fly-ash and mine tailings using its chlorine technology is planned to be completed by the end of 2015. Conversion to chloride technology along with the addition of a scandium and gallium extraction unit is expected to commence in 2016, with completion tentatively expected for the second half of 2016.

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

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

Monetization (FAM) technologies.

#### *Construction Cost Updates*

Orbite had originally estimated project costs at \$31.0 million, based upon cost estimates prepared by two external engineering firms, to complete the plant construction work undertaken in 2012, and also based on the then contemplated plant design. This estimate was subsequently scaled back to \$28.5 million after excluding some of the construction work related to the front end (extraction section) of the HPA Plant.

The engineering review, conducted throughout 2014, and the subsequent detailed engineering has shown that the original design of the 2012 HPA Plant was inadequate to deliver at three tonnes per day capacity. Consequently, the facility was redesigned, and certain installed equipment and piping will be replaced to meet capacity and longevity specifications. As a result, to avoid duplication of capital costs related to engineering and equipment, a write-off of \$1.8 million was recognized under HPA plant operations during the fourth quarter of the 2014 financial year.

Accordingly, Orbite announced on December 12, 2014 that it was increasing its project budget to approximately \$42 million (inclusive of a \$3 million contingency provision), representing an increase in total plant cost from \$105.9 million (or \$75.9 million net of anticipated refundable investment tax credits of \$30 million) to \$117 million (or \$87 million net of anticipated refundable investment tax credits of \$30 million).

The incremental costs were due to the following:

- management decided to maximize the heating capacity in the Outotec calcination system in order to increase the ultimate calcinator capacity to five tonnes per day, resulting in higher than originally budgeted system costs. This increase in capacity could not have been retrofitted at a later date, and committing to this change now significantly reduces costs associated with subsequent capacity increases;
- engineering costs will be higher than forecasted, related to the additional work needed;
- the project delay resulting from the non-conforming refractory supply will lead to increased project management costs;
- some of the work originally excluded from the front end of the plant has been reinstated in the project;
- certain equipment and piping, planned to be reused, will be replaced;
- the refractory solution selected will require additional installation work, in part related to the replacement of some preinstalled castables in certain piping sections of the decomposer and calcinator; and
- costs for specialty piping and equipment were higher than forecasted.

The table below sets forth the main components of the projected total external capital cost for the construction and commissioning of the HPA Plant (at a production capacity of three tonnes per day), exclusive of the extraction unit.

| <b>Item</b>  | <b>Estimate</b>       |
|--|-----------------------|
|  | <b>(in thousands)</b> |
| Engineering and Project Management                   | \$9,430               |
| Material and Equipment, including Calcination System | \$18,500              |
| Labour   | \$10,420              |
| Contingencies  | \$3,000               |
| Critical Spare Parts & Specialty Tools               | \$750                 |
| Total  | \$42,010              |

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

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.

#### *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. Changes to such environmental legislation, including material increases in mining royalties or public hearing requirements may have a material adverse effect on the mining activities of the Company. Any environmental legislation that is expected to have a material adverse effect on the financial conditions and ongoing operations of the SGA Plant or the Company's mining activities will be discussed in a feasibility study that may be conducted in the future.

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 November 16, 2012 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 December 3, 2012 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).

Subsequent to Orbite's comprehensive review of engineering, the Company selected additional process equipment as well as air purification equipment for its HPA production facility in order to enhance the production process. These changes required new certificates of authorizations under Articles 22 and 48 of the Environment Quality Act (Québec) which applications were filed in December 2014.

Filed during this permitting process, in order to support the Company's demands, are a Noise Study performed by Genivar Inc. dated November 9, 2012 in which no special concerns were identified, an Air Dispersion Study issued by Roche Ltée on December 16th, 2014 with no specific actions required and an Acute Toxicity test performed by Maxxam Analytics on November 2012 to facilitate the evaluate of the water treatment specifications.

### **3.3 Waste Monetization — Red Mud**

#### *Overview*

Red mud is generated as a by-product of alumina production using the industry-standard Bayer process. Red mud contains alumina, silica, iron, rare metals and other valuable elements, but with no viable means to remediate or extract value from this waste. Red mud is typically stockpiled in open-air tailings ponds, although in some cases it has been disposed of in the ocean, and represents a long-term environmental liability for the entire aluminum industry. According to the International Aluminum Institute ("IAI"), there are over 100 existing alumina refineries in the world and approximately 30 closed sites totaling an estimated global stockpile of over 3 billion tonnes of red mud at sites in Europe, Asia, North and South America. Over 120 million additional tonnes are produced annually, with less than 5% being re-utilized. The Company's HPA facility, scheduled to commence commercial production in Q3 2015 will, once converted to the chloride based process, serve as an industrial scale technology demonstration facility for Orbite's waste monetization initiatives, including red mud and fly ash. The subsequent step will be the scale-up to an industrial prototype, with a capacity to process 100,000 to 200,000 tonnes per annum of feedstock. Following successful completion of this prototype, the Company intends to build a full-scale plant with a capacity to process 500,000 to 1,000,000 tonnes of feedstock per annum. The Company should then be in a position to begin licensing its technology on a global scale. Such plants would process third-party stockpiles of red mud, producing alumina and other high-value products, returning only a small residue to the stockpile of less than 10% of the original volume.

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

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

world under a technology license from Orbite.

The Company and Veolia are working on achieving specific milestones in 2015 that include the ownership and funding structure of the first demonstration scale RMM plant, assignment of tasks, preliminary engineering and establishing a construction timetable and project plan.

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

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

The Company's HPA facility, scheduled to begin commercial production in Q3 2015 will, once converted to the chloride based process, serve as an industrial scale technology demonstration facility for Orbite's waste monetization projects, including red mud and fly ash. The Company should then be in a position to propose constructing Fly Ash Monetization plants (the "FAM Plant") based on its chloride based technology, with first an industrial scale prototype (100,000-200,000 tonnes per annum feedstock consumption capacity), and a full-scale plant subsequently. Such plants would process third-party stockpiles of fly ash, producing alumina and other high-value products.

#### *Agreements*

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

### **3.5 Commodity Minerals — Smelter-Grade Alumina**

#### *Overview*

The Company has proposed constructing and operating a smelter-grade alumina ("SGA") production plant (the "SGA Plant") processing aluminous clay mined from the Company's Grande-Vallée deposit, which is situated in the Gaspé Peninsula of the Province of Québec. The basic engineering design of the SGA Plant, based on the Company's proprietary processes, has been completed and the plant design follows the parameters of the Preliminary Economic Assessment ("PEA") Technical Report dated May 30, 2012,

prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”).

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

The PEA estimated that the Grande-Vallée deposit contains an Indicated Mineral Resource of 1.04 billion tonnes of aluminous clay grading 23.37%  $\text{Al}_2\text{O}_3$ , 52.62%  $\text{SiO}_2$ , 8.42%  $\text{Fe}_2\text{O}_3$ , 1.64%  $\text{MgO}$ , and 6.90% as mixed oxides, as well as 563 ppm in REE+RM. The effective date of this mineral resource estimate is November 23, 2011. The PEA estimated that an SGA plant processing 2.5 million tonnes per year of aluminous clay from the Grande-Vallée deposit, could achieve an annual production of 540,000 tonnes of smelter-grade alumina and other by-products, including 189,298 tonnes of hematite, 1.2 million tonnes of silica, and approximately 48 tonnes scandium oxide, 76 tonnes gallium oxide, and 851 tonnes of heavy and light rare earth oxides. The alumina was determined to be the primary product whereas the production of silica, hematite, magnesium, mixed oxides, REE and RM should be considered as by-products. The capital costs were estimated at \$500 million and the annual operating costs at \$113 million. As per NI 43-101, a Preliminary Feasibility Study or a Feasibility Study is required to demonstrate the economic merit of Mineral Resources and their conversion to Mineral Reserves. At the time of this document, no such study has been completed and therefore the Grande-Vallée deposit currently has no Mineral Reserves.

The PEA economic conclusions were originally calculated using August 2011 market prices. Since then, the market prices of alumina, rare earth oxides and rare metal oxides have decreased significantly (in some cases, over 50%), and as such the conclusions of the PEA under Scenario 1 (alumina and hematite) and Scenario 2 (alumina and all by-products) are not representative of the current financial viability of the Company’s SGA project. We urge readers to review the “Sensitivity Analysis” sections provided in the Preliminary Economic Assessment, including Tables 22-5 and 22-6, which provided adjusted financial conclusions for Scenario 2 reflecting different assumptions for market prices, including a “Low-Case” which reflected the market prices effective as at November 23, 2011 (see Sedar filing dated May 30, 2012). The following table provides a comparison of the estimated revenues and Net Present Value (NPV) between the Low-Case, High Case scenarios and the market prices in effect on March 4, 2015, for Scenario 2 using a 10% discount rate (pre-tax), in Canadian currency. As revenues, capital and operational expenditures in the PEA disclosure were provided in Canadian currency, and considering most sales and some equipment purchase and construction costs are likely to be in US currency, and in order to reflect more accurate market conditions, the NPV disclosure provided in Canadian currency was updated as to reflect the CAN/US average exchange rate of 1.2314 CA\$/USD which is the average rate from Jan 1, 2015 to March 4, 2015 (Source: Bank of Canada website: [www.bankofcanada.ca](http://www.bankofcanada.ca)).

| Case                         | Alumina Price<br>(C\$/tonne) | Hematite<br>Price<br>(C\$/tonne) | Silica Price<br>(C\$/tonne) | Magnesium<br>Oxide Price<br>(C\$/tonne) | REO/RMO<br>Average Basket<br>Price (C\$/kg) | Alumina<br>Revenues<br>(Million C\$) | REO/RMO<br>Revenues<br>(Million C\$) <sup>(2)</sup> | Total Annual<br>Revenues<br>(Million C\$) | Annual Gross<br>Margin (Million<br>C\$) | Capex<br>(Million C\$) | IRR  | Payback<br>(Years) | NPV @ 10%<br>(Million C\$) |
|------------------------------|------------------------------|----------------------------------|-----------------------------|---|---|--------------------------------------|---|---|---|------------------------|------|--------------------|----------------------------|
| High-Case                    | \$425                        | \$200                            | \$25                        | \$400                                   | \$479                                       | \$230                                | \$393   | \$702                                     | \$572                                   | \$500                  | 114% | 0.9                | \$4,782                    |
| Low-Case                     | \$325                        | \$125                            | \$10                        | \$292                                   | \$168                                       | \$176                                | \$138   | \$358                                     | \$237                                   | \$500                  | 48%  | 2.1                | \$1,690                    |
| March 4, 2015 <sup>(1)</sup> | \$380                        | \$93                             | \$39                        | \$628                                   | \$171                                       | \$205                                | \$140   | \$429                                     | \$281                                   | \$616                  | 46%  | 2.2                | \$1,984                    |

**Notes:**

(1) Prices (In USD) extracted from the following sources: Alumina: Three-month London Metal Exchange contract prices as of March 4, 2015 is \$1,803/tonne X 17.1% = US\$308.31. Hematite: The conservative price is based on selling the entire production for iron ore production (steel manufacturing) not taking into account any volume sold in the magnets or other special applications that do command much higher prices. The current iron ore price is US\$67.39/tonne-62% Fe (www.indexmundi.com-last available). Our Fe<sub>2</sub>O<sub>3</sub> is 99.5% pure and therefore does contain 69.55% of Fe. US\$73.13 X 69.55% / 62% = US\$75.59 that was used in the NPV calculation. Silica: The recent silica prices show an average of US\$32 per tonne (www.indmin.com) that was used in the NPV calculation. Magnesium and other oxides: Regarding "MgO and other oxides", the MgO prices used was US\$510/tonne and US\$5/tonne was used for the "other oxides". Current MgO price is found on (www.indmin.com). An average price of US\$510/tonne is showed for the latest transactions on calcined MgO-94% & 96% purity and therefore was used to update the results. Other oxide (Ca, K, Na) price estimate was left at US\$5/tonne. Rare earths and rare metals RE/RM: Current prices were extracted from the "Metal Page" website (www.metal-pages.com). Regarding Scandium oxide, the conservative price of US\$1,500/kg was used. The average exchange rate from Jan 1, 2015 to March 4, 2015 (1.2314 CAD\$/USD) was used to convert prices, annual revenues and estimated CAPEX in CAD\$.

(2) In the PEA base case (High-Case), the following rare earths and rare metals prices per kg were used for the NPV calculations: Ga (as metal)= US\$900, Sc<sub>2</sub>O<sub>3</sub>= US\$3,095, Y<sub>2</sub>O<sub>3</sub>= US\$180, La<sub>2</sub>O<sub>3</sub>= US\$143, CeO<sub>2</sub>= US\$150, Pr<sub>5</sub>O<sub>11</sub>= US\$275, Nd<sub>2</sub>O<sub>3</sub>= US\$400, Sm<sub>2</sub>O<sub>3</sub>= US\$129, Eu<sub>2</sub>O<sub>3</sub>= US\$650, Gd<sub>2</sub>O<sub>3</sub>= US\$203, Tb<sub>2</sub>O<sub>3</sub>= US\$4,332, Dy<sub>2</sub>O<sub>3</sub>= US\$600. For March 4, 2015, the following average prices (USD/kg - FOB China) were extracted from Metal Pages web site (www.metal-pages.com): Ga (as metal)= \$222.50, Y<sub>2</sub>O<sub>3</sub>= \$12.90, La<sub>2</sub>O<sub>3</sub>= \$4.55, CeO<sub>2</sub>= \$4.50, Pr<sub>5</sub>O<sub>11</sub>= \$117.00, Nd<sub>2</sub>O<sub>3</sub>= \$58.00, Sm<sub>2</sub>O<sub>3</sub>= \$5.15, Eu<sub>2</sub>O<sub>3</sub>= \$705.00, Gd<sub>2</sub>O<sub>3</sub>= \$46.50, Tb<sub>2</sub>O<sub>3</sub>= \$615.00, Dy<sub>2</sub>O<sub>3</sub>= \$340.00. A conservative price of \$1,500 per kg was used for the Sc<sub>2</sub>O<sub>3</sub>. The average exchange rate from Jan 1, 2015 to March 4, 2015 (1.2314 CAD\$/USD) was used to convert REO/RMO Revenues in CAD\$.

### *Feasibility Study for first SGA Plant*

Following the completion of its HPA facility, which will serve as an industrial-scale technology demonstration facility, the Company intends to begin negotiations with potential partners, including Glencore, regarding the establishment of a joint-venture for its SGA initiative, with such negotiations including discussions on raising the required funding. Discussions are expected to include the establishment of corporate and project milestones, project funding requirements and the completion of a NI 43-101 compliant Feasibility Study Technical Report (the "Feasibility Study"), subject to securing sufficient funding for the study. Timing of the Feasibility Study will be established upon the establishment of a joint venture with a partner.

The Feasibility Study is expected to be based on the parameters of the PEA with aluminous clay expected to be mined from the Company's Grande-Vallée deposit. Several SGA plant sites are being considered and final selection could depend, in part, on the selection of a joint-venture partner(s). Permitting for the Grande-Vallée mine site and the SGA plant is expected to move ahead in parallel to the Feasibility Study. A project development timeline will be established as part of the Feasibility Study.

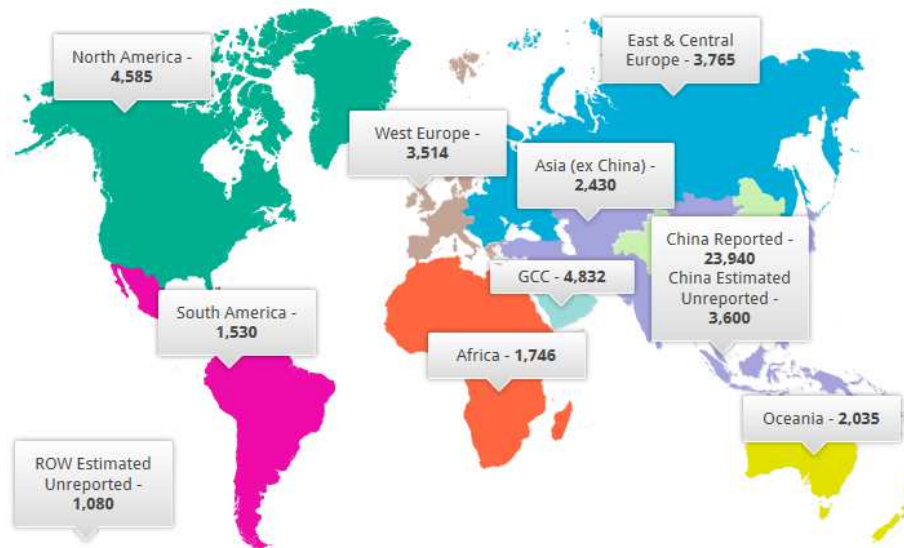
Orbite estimates the costs related to the completion of the Feasibility Study at approximately \$30 million, of which approximately \$11.6 million has been incurred as of the date of this MD&A, and costs related to the completion of the detailed engineering at approximately \$43 million, of which none have been incurred as of the date of this MD&A. These costs estimates are subject to ongoing internal assessments and could be revised at any time as the project progresses.



### Smelter-Grade Alumina Markets

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 2014 was 108 million tonnes of SGA resulting in the production of 53 million tonnes of aluminum metal. Regional breakdown is shown below.

#### 2014 Aluminum production by region



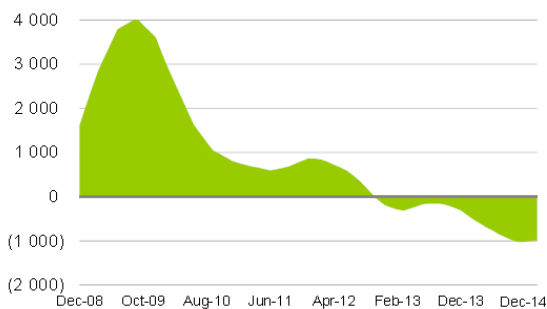
Source: International Aluminium Institute

China is currently the largest producer and consumer of aluminum as a result of its significant growth. Regionally, Québec is the 3rd largest aluminum-producing region after China and Russia. There are 8 smelters in Québec, 2 in up-state New York, and 3 in Iceland.

Aluminum supply has been in surplus between 2008 and 2013. Since 2013, the market has been more balanced showing, ex-China, a slight deficit in 2014 as outlined below. For 2015, Alcoa foresees a primary aluminum consumption increasing by 7% worldwide and 4% ex-China over 2014. The conversion of SGA into aluminum is energy intensive, requiring abundant electricity. Therefore many aluminum smelters are situated in northern latitudes where inexpensive hydro-electricity is available (Québec, Siberia, Northern Europe, etc.). SGA represented approximately 34% of aluminum production costs in 2013.

#### Production less demand (quarterly annualized)

1 000 mt primary aluminium

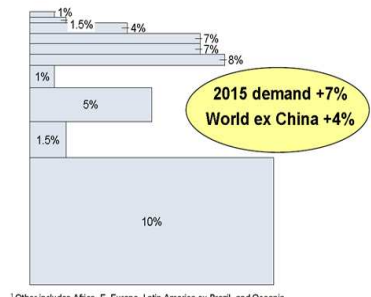


Source Hydro

#### 2015 Primary aluminum consumption growth rate by region

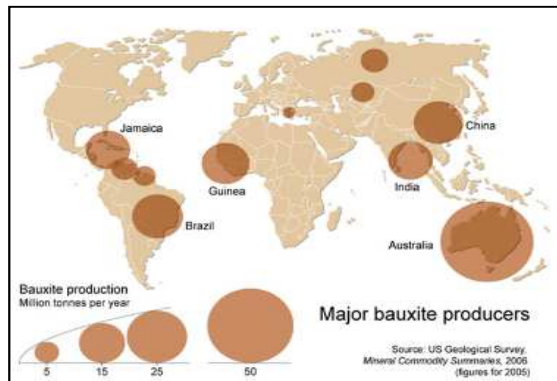


Source: Alcoa



<sup>1</sup> Other includes Africa, E. Europe, Latin America ex Brazil, and Oceania

GA 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).



| Regions       | Aluminum Production | Bauxite Reserves |
|---------------|---------------------|------------------|
| China         | 51%                 | 3%               |
| North America | 13%                 | <1%              |
| Russia & CIS  | 9%                  | 1%               |
| Other Regions | 27%                 | 95%              |

#### *Energy Requirements of the SGA Plant and Constraints of the Gaspé Region*

Energy supply represents one of the key elements of the proposed SGA Plant, as with all mining, chemical and hydrometallurgical projects. For the purpose of the PEA, electrical power, which is readily available in the mining site vicinity, and natural gas, which is not readily available in the mining site vicinity, has been used as the reference energy sources. Due to the considerable heat energy required by the SGA Plant, the importance of the access to natural gas is not negligible. As a result, the final location of the SGA Plant will be greatly influenced by the availability of low-cost energy, including fossil fuels.

At the time of this document, to our knowledge, there is no natural gas in the Gaspésie area, which has been identified or classified as reserves under National Instrument 51-101 - *Standards of Disclosure for Oil and Gas Activities*. There can be no assurance that the Company will have access to natural gas in the mining site vicinity, or at prices assumed in the PEA, and failure to secure such access could have a material adverse impact on the proposed SGA Plant economics. As a result, the Company may decide to select an alternative location for the SGA Plant in proximity to existing natural gas and other infrastructures, in which case the clay would require additional transportation to this site.

If no natural gas is available at the SGA plant site, (a) the Company would have to use alternative fossil fuels (biomass, light oil from the area, biomethanisation, bunker C, etc.) to satisfy the minimum heat requirements of the calcination stage of the process (these will be further evaluated as part of the feasibility study), and (b) the impact on the project could be expected to represent an increase of up to 50% in fossil fuel costs (\$6.00/GJ). If such an increase were fully allocated to the alumina production (excluding the hematite and other by-products), this could result in an increase of up to 27% in the unit operating cost of alumina prior to considering the impact of the by-product revenues. The development of an alternate scenario using an appropriate fuel source, available in sufficient quantity near the SGA plant site, will be considered in a feasibility study in case of the unavailability of natural gas. The PEA capital costs included

\$8 million for a 20km natural gas pipeline and all related infrastructure. This amount is also reasonable for the infrastructure required for using an alternative fuel source. This figure will be validated in a feasibility study once the fuel source is selected.

Should natural gas, or an alternative source of energy that is competitively priced to natural gas, not be available, the economics of the SGA Plant project could be materially and adversely impacted or compromised. The PEA used the September 2011 Henry Hub Index price of US\$3.90 per million BTU as the reference for natural gas prices, resulting in an assumption of C\$4.00/GJ.

The electrical infrastructure capital investments in the PEA assumed capital costs of \$35 million (\$18 million for a 120 kV transmission line, \$5 million for Murdochville substation, \$12 million plant site substation) and also presented 3 other different scenarios. Scenarios 1, 2 and 4 involve the installation of an electrical transmission line to be able to connect to the Hydro-Québec electrical network. Scenario 3 involves the installation of a used cogeneration plant for \$8 million. The capital cost used for the PEA in scenario 1, involves a 120kV power line from Murdochville substation to mine site. An independent Audit Report (see section titled "Previous Technical Reports") concluded on March 27, 2012 that the capital costs of \$35 million used in scenario 1 and the other electrical connection scenarios appeared reasonable based on the information available. A third party evaluation of scenario 4 proposed a price of \$37 million for a 230kV transmission line as opposed to \$18 million for the 120 kV one, although this is not used in the PEA.

#### *Offtake Agreement with Glencore International AG*

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

#### *Memorandum of Understanding with UC RUSAL*

On March 28, 2012, the Company announced the signing of a non-binding Memorandum of Understanding ("MOU") with UC RUSAL, pursuant to which the parties intended to invest into a joint-venture for the construction and operation of an SGA plant. Despite extensive and lengthy negotiations, the parties were unable to agree on terms satisfactory to Orbite. As a consequence, thereof, the Company announced it had terminated the MOU.

#### *Memorandum of Understanding with NALCO*

On June 27, 2012, the Company announced the signing of a non-binding Memorandum of Understanding ("MOU") with National Aluminum Corporation Limited ("Nalco") Asia's largest integrated aluminum complex, pursuant to which Orbite's technology would be evaluated on Nalco's ores, namely Gibbsite, Boehmite and also on Nalco's red mud residue left after alumina has been extracted from bauxite using the Bayer process. Orbite has let this agreement expire in 2014 but continues ongoing discussions with Nalco to evaluate a potential collaboration. The expiration of the MOU with Nalco and further discussions with them do not involve or have any impact on the HPA plant.

### 3.6 Technology Development Center

On March 15, 2012, the Company announced the inauguration of a new 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 calcinators installed in 2012.

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 our 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 we will be bring to market, and what applications we will pursue. The TDC is playing a key role in product customization, enabling us 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.



### 3.7 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 74 mineral claims totaling approximately 41 km<sup>2</sup> as well as one mining lease of 98.5 ha at a site near Grande-Vallée, Québec. This is the site of the Grande-Vallée aluminous clay deposit with

a 1.04 billion tonnes Indicated Mineral Resource.

As of December 31<sup>st</sup> 2014, Orbite also owns 100% of 161 mineral claims covering approximately 134 km<sup>2</sup> at sites near Rimouski and Cap-Chat, Québec. These claims cover a portion of the regional aluminous clay "Original Formation" which hosts the Grande-Vallée deposit.

During 2014, 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. As a result, an amount of \$89,643 was written-off and expensed.

#### *Nova Scotia*

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

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

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

### **3.8 Other Properties**

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, is a 3798. hectare property with 75 claims. During Q1 2013, the Company completed a 400 km line airborne VTEM geophysical survey on the Le Tac property with the goal of identifying new copper and gold exploration targets. The results of this survey were summarised in a report submitted to the Company in Q3 2013. The property remains non-core and no major exploration work is planned at this time.

PRIVAT, which is situated 50 km north of Rouyn-Noranda in the Abitibi region, is a 86 hectare property with 2 claims. Previous exploration work has identified four sectors with gold mineralization. No work was done on PRIVAT given that the focus shifted to the Grande-Vallée property.

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.

### **3.9 Patents & Patent Applications**

Orbite has developed various technologies that constitute a patent portfolio that comprises 15 different patent families. The various families include technologies for extracting alumina from aluminous ores as well as technologies related to the field of rare metals and rare earth elements extraction. Orbite has also developed processes for preparing hematite, methods for separating iron ions from aluminum ions, processes for preparing alumina and various other products, processes for treating red mud and processes for treating fly ashes. Orbite has further developed processes for preparing titanium oxide and various other products, processes for treating various materials, and methods for purifying aluminum ions. In addition to smelter grade alumina, the Orbite processes also yield high-purity alumina, high purity hematite as well as rare earth elements, rare metals and various other metals.

The intellectual property portfolio is protected by provisional filings under the Patent Cooperation Treaty ("PCT") administered by WIPO which takes approximately 30 months to complete and provides coverage worldwide until the filing in individual countries at the national phase.

During 2014, 4 additional patents were granted. As a result, the Company's intellectual property portfolio contains 15 intellectual property families, and the Company owns 100% of the intellectual property rights to 15 patents and 98 pending patent applications in 11 different countries through the international Patent Cooperation Treaty (PCT) process administered by the World Intellectual Property Organization (WIPO). The first intellectual property family is patented in Australia, Canada, China, Japan, Russia and in the United States. In 2014, the Company filed 40 national entry phases in various countries, 1 International patent application, 3 divisional applications in Canada and 4 US provisional applications.

On January 8 and March 13, 2015, Orbite announced that the Canadian Intellectual Property Office and the United States Patent and Trademark Office issued a notice of allowance for patent application for patent application No. 2,857,574 (CAN) and No. 14/371,364 (US), pertaining to *Processes for Treating Red Mud*. Orbite also filed national phase entries in various countries and used the Patent Prosecution Highway, where allowed, to accelerate patent application examination and patent issuance. The US and Canadian Red Mud patent applications were treated under this accelerated process.

### **3.10 Financing Activities**

During its last three (3) financial years, Orbite has completed a number of financings, which were essential to build its HPA facility, maintain activities on its mining claims, mainly the Grande-Vallée property, and to sustain its working capital needs.

*Year ended December 31, 2012*

#### **Debenture Offering**

On December 13, 2012, the Company completed a brokered private placement of secured convertible debentures (the "Debentures") in the amount of \$25 million, secured against (i) the Company's 2012 and 2013 refundable investment tax credits resulting from manufacturing equipment related to the Company's HPA facility, expected to represent no less than \$25 million (the "Québec Tax Credits"), and (ii) the

immovable comprising the Company's HPA Plant building (excluding the equipment) in Cap-Chat, Québec. The Company is required to deposit the amount of the Québec Tax Credits (up to \$25 million in aggregate) into a segregated account maintained by the Company on behalf of holders of the Debentures within five (5) business days of receipt or credit against taxes otherwise payable up to an amount equal to the then outstanding principal amount of the Debentures.

The issue price of the Debentures was \$1,000 per Debenture, bearing interest at a rate of 8% per annum, calculated from the date of issue, to be paid quarterly in arrears, and maturing on December 13, 2017 ("Maturity Date"). The Debentures are convertible, in whole at the option of the holders thereof, at any time prior to the Maturity Date into Common Shares at a conversion rate of initially \$3.50 per Common Share with respect to the outstanding principal amount of the Debentures, which shall be approximately 285.714 Common Shares delivered upon conversion per \$1,000 principal amount of Debentures, as adjusted from time to time pursuant to the provisions of the Trust Indenture (the "Conversion Rate").

Upon the occurrence of a change of control (a "Change of Control") involving the acquisition of voting control or direction of more than 66⅔% of the Common Shares, the Company will be required to make an offer (the "Offer") to redeem on the closing of the transaction that constitutes the Change of Control (the "Change of Control Purchase Date"), all of the Debentures outstanding at a price equal to 110% of the principal amount thereof plus accrued and unpaid interest, if any, to, but excluding the Change of Control Purchase Date.

In addition to the Offer and subject to regulatory approval, in the event of a Change of Control where the consideration is or can be received wholly or partially in cash (being 10% or more in cash), holders of the Debentures will be offered an alternative offer pursuant to which they may elect to convert the principal amount of their Debentures (in its entirety only) into Common Shares at a conversion price equal to the lesser of (a) the Conversion Rate, and (b) the market price of the Common Share at the time of conversion less the maximum permitted discount to such market price under TSX policies, subject to a minimum conversion price of no less than \$1.75 per Common Share.

If 90% or more of the aggregate principal amount of the Debentures outstanding on the date of the giving of notice of the Change of Control have been tendered to the Company pursuant to the Offer, the Company will have the right to redeem all the remaining Debentures at the same price.

At any time after December 13, 2014, the Company may, at its option, redeem all or any portion of the Debentures outstanding on giving thirty (30) days prior written notice to the holders of the Debentures. The Debentures shall be redeemable at the principal amount of their Debentures plus accrued and unpaid interest, payable in cash. On such date of redemption (the "Redemption Date"), the Common Share purchase warrants that have been issued concurrently with the Debentures shall be exercisable from the Redemption Date up to and until the Maturity Date and the holders of Debentures shall receive certificates evidencing such number of Common Share purchase warrants to purchase Common Shares equal to the nearest whole number obtained by rounding down after applying the following formula:

$$A * B$$

– Where –

"A" means the number of Common Shares issuable per \$1,000 principal amount of the Debentures under the Conversion Rate.

"B" means the number of tranches of \$1,000 of principal amount of the Debentures redeemed pursuant to the Trust Indenture, rounded down to the nearest whole number.

The Company may offer and a holder surrendering Debentures for conversion may agree, in lieu of delivery of some or all of the Common Shares otherwise issuable upon notice of conversion of any Debentures, to receive an agreed amount of cash, or cash and Common Shares, to be delivered per Debenture in lieu of Common Shares.

In case of (i) any reclassification, recapitalization or other change of Common Shares issuable upon conversion of the Debentures; (ii) any statutory share exchange, consolidation, amalgamation, arrangement, merger or other combination to which the Company is a party other than a merger in which the Company is the continuing Company and which does not result in any reclassification of, or a change (other than as a result of a subdivision or combination) in outstanding Common Shares; or (iii) any sale or conveyance of all or substantially all the property and assets of the Company, directly or indirectly, to any person, then the Company and any such successor, purchasing or transferee Company or entity, as the case may be, shall, as a condition precedent to such reclassification, recapitalization, change, statutory share exchange, consolidation, amalgamation, arrangement, merger, combination, sale or conveyance, execute and deliver a supplemental indenture providing that a holder of Debentures may convert such Debentures into the kind and amount of shares, other securities, property and assets (including cash) receivable upon such reclassification, recapitalization, change, statutory share exchange, consolidation, amalgamation, arrangement, merger, combination, sale or conveyance by such holder of the number of Common Shares deliverable upon conversion of such Debentures immediately preceding such reclassification, recapitalization, change, statutory share exchange, consolidation, amalgamation, arrangement, merger, combination, sale or conveyance (assuming such holder of Debentures did not exercise any right of election as to the kind or amount of shares, other securities, property and assets, including cash, receivable upon such transaction, and provided that if the kind or amount of shares, other securities, property or assets receivable upon such transaction is not the same for each Common Share in respect of which such rights of election shall not have been exercised, then the kind and amount shall be deemed to be the kind and amount receivable per Common Share by a plurality of the non-electing shares). If, in the case of any such reclassification, recapitalization, change, statutory share exchange, consolidation, amalgamation, arrangement, merger, combination, sale or conveyance, the shares, other securities, property or assets (including cash) receivable thereupon by a holder of Common Shares include shares, other securities, property or assets of a person other than the successor, purchasing or transferee Company, as the case may be, in such reclassification, recapitalization, change, statutory share exchange, consolidation, amalgamation, arrangement, merger, combination, sale or conveyance, then such supplemental indenture shall also be executed by such other person and shall contain such additional provisions to protect the interests of the holders of the Debentures as the board of directors of the Company shall reasonably consider necessary by reason of the foregoing. The term "Offer" shall mean and include tender offers, takeover bids, issuer bids and exchange offers, all references to "purchases" of Common Shares in Offers (and all similar references) shall mean and include the purchase of Common Shares in tender offers and the acquisition of Common Shares pursuant to takeover bids, issuer bids and exchange offers, and all references to "tendered Common Shares" (and all similar references) shall mean and include Common Shares tendered in both tender offers, takeover bids, issuer bids and exchange offers.

#### Unit Offering

In December 2012, the Company completed a brokered private placement of units for an aggregate amount of \$5,000,000. Each unit was priced at \$5,000 and was comprised of 1,156 class "A" shares issued on a flow-through basis at \$3.25 each and 478 non flow-through class "A" shares at \$2.60 each. Orbite intended to use the net proceeds for Canadian Exploration Expenses (within the meaning of the Income Tax Act (Canada)) at its Grande-Vallée, Cap-Chat, Rimouski and Chaswood (Nova Scotia) properties and for general corporate purposes. From the \$3,750,000 of funds raised on a flow-through basis, only



\$933,000 was spent as Canadian Exploration Expenses in 2013. The Company opted strategically to affect the balance of such funds to working capital purposes instead of exploration expenses, and consequently, intends to reimburse the purchasers of such flow-through securities an aggregate sum of \$1,667,000 representing taxes incurred by such purchasers as a consequence of the Company's decision.

*Year ended December 31, 2013*

#### Prospectus Offering

On December 10, 2013, Orbite completed a prospectus offering (the "December Prospectus") of units in the aggregate amount of \$16,000,000 units (the "Units"). Each Unit consists of \$1,000 principal amount of 7.5% convertible unsecured unsubordinated debentures (the "Debentures") and share purchase warrants (a "Warrant") of the Company equivalent to 35% of the number of Common Shares into which the Debentures are convertible. Each full Warrant entitles the holder to purchase one Class A share at the price of \$0.48 (which is equal to a 20% premium over the conversion price) for a period of 36 months following issuance. The Debentures have a 5 year term and will bear interest at a rate of 7.5% per annum payable semi-annually in arrears on May 31 and November 30 of each year (the "Interest"). Each Debenture will be convertible into Class A shares of the Company (the "Common Shares") at the option of the holder at any time at a conversion price of \$0.40 per Common Share (the "Conversion Price"). Holders who convert their Debentures will receive accrued and unpaid interest to the date of conversion in addition to a make-whole interest payment equal to the interest amount that such holder would have received if such holder had held the Debentures until the maturity date (the "Make-Whole Amount"). Such Make-Whole Amount shall be reduced by 1% for each 1% that the five (5) day Volume Weighted Average Price of the Common Shares on the Toronto Stock Exchange at time of conversion exceeds the Conversion Price. The Interest may be paid, at the sole option of the Company, in cash or in Common Shares whereas the Make-Whole Amount (if any) will be paid in Common Shares.

The Debentures are listing for trading on the Toronto Stock Exchange under the symbol ORT.DB.A.

#### Subscription Commitment

On November 8, 2013, Orbite announced the execution of a binding commitment by Crede Capital Group, LLC ("Crede"), a U.S. based institutional investor, providing for the future subscription of \$40 million, via subscription rights (the "Subscription Rights") in additional units.

On March 10, 2014, the Company issued 10,000 Series X Subscription Rights and 30,000 series Y subscription rights to Crede at a price of \$0.0001 per Subscription Right on a private placement basis. The Series X Subscription Rights will become exercisable the earlier of (i) the date of qualification of the underlying units by prospectus which date shall not be earlier than April 10, 2014 and (ii) July 11, 2014, and the Series Y Subscription Rights will first become exercisable on October 10, 2014. Once exercisable, the Series X Subscription Rights shall entitle Crede to purchase \$10M of units of the Company (the "Units") and the Series Y Subscription Rights shall entitle Crede to purchase up to \$30M of Units, each Unit consisting of \$1,000 principal amount of 7.5% convertible unsecured debenture (a "Debenture") and the number of warrants (the "Warrants") of the Company which is equivalent to 45% of the number of shares into which the Debenture is convertible. The Debentures will mature five years from issuance and will bear interest at a rate of 7.5% per annum (the "Interest"). Each Debenture will be convertible, at the option of the holder, at any time prior to the maturity date, into class A shares of the Company ("Shares") at a conversion price equal to the five-day volume weighted average trading price of the Shares on the day preceding the date on which the Subscription Right becomes exercisable (the "Conversion Price"). Upon conversion, the holder shall also be entitled to Shares equal to the additional interest such holder would have received if it had held the Debenture until maturity divided by the market price of the Shares on the date falling two

trading days prior to the date of conversion, in addition to accrued and unpaid Interest from the date of the latest Interest payment to the date of conversion, in cash or in Shares at the Company's option. Each Warrant shall entitle the holder to purchase one Share for a period of three years from its issuance at the Conversion Price plus a 20% premium.

The obligations of Crede under the Subscription Rights are subject to several conditions, including obtaining certain regulatory approvals, including TSX approval, and approval of the Company's shareholders prior to the exercise of the Series Y Subscription Rights.

The Subscription Rights are exercisable by Crede and by the Company. The Subscription Rights are initially exercisable by Crede during a period of 15 calendar days following the date upon which they become exercisable. If they are not exercised during such period, the Company will have a period of 15 calendar days to exercise such Subscription Rights, failing which such Subscription Rights will expire.

The Series X Subscription Rights were exercised by Crede on July 11, 2014 (see "*3.10 Financing Activities – Year ended December 31, 2014 – Series X Subscription Rights*"). The underlying Debentures are be direct obligations of the Company and will not be secured by any mortgage, pledge, hypothec or other charge. The Indenture will not restrict the Company from incurring additional indebtedness for borrowed money or from mortgaging, pledging or charging its assets to secure any indebtedness.

*Year ended December 31, 2014*

#### Series X Subscription Rights

On March 11, 2014, the Company issued series X subscription rights to Crede (the "Series X Subscription Rights"), requiring Crede to purchase \$10,000,000 of units of the Company, such units comprised of 7.5% convertible debentures and warrants. On, July 11, 2014, Crede exercised its Series X Subscription Rights and purchased units of the Company consisting of \$10,000,000 principal amount of convertible unsecured debentures (the "Debentures") and 13,000,000 warrants (the "Warrants") of the Company. The Debentures will mature five years from issuance, namely July 11, 2019 and bear interest at a rate of 7.5% per annum (the "Interest"). Each Debenture is convertible, at the option of the holder, at any time prior to the maturity date, into class A shares of the Company ("Shares") at a conversion price of \$0.50 per Share (the "Conversion Price"), representing the 5 day VWAP at time of the conditional exercise of the Series X Subscription Rights. Upon conversion, the holder shall also be entitled to Shares equal to the additional interest such holder would have received if it had held the Debenture until maturity divided by the market price of the Shares prior to the date of conversion (the "Make-Whole Amount"), in addition to accrued and unpaid Interest, in cash or in Shares at the Company's discretion. Each Warrant entitles the holder to purchase one Share for a period of three (3) years from its issuance at a price of \$0.60 per share (equivalent to the Conversion Price plus a 20% premium). The Debentures are direct obligations of the Company and are not secured by any mortgage, pledge, hypothec or other charge. The Debentures are transferable, and may be presented for conversion, at the principal offices of the Computershare in Montreal, Québec. The Debentures are non-voting securities of the Company. The Warrants are non-voting securities of the Company and may not be exercised if their exercise would result in the holder holding over 9.9% of the outstanding Common Shares.

In connection with the placement, the regulatory authorities required certain changes to the initial terms of the Subscription Rights, namely that the maximum number of Shares issuable upon conversion of the Debentures on account of the principal amount and the Make-Whole Amount not exceed the principal amount of the Debentures converted, divided by the Conversion Price less 25%. The parties further agreed

that the Make-Whole Amount would not be reduced by 1% for each 1% that the current market price of the Shares at the time of conversion exceeds the Conversion Price and that the number of Warrants would correspond to 65% of the number of Shares into which the principal amount of Debentures is convertible.

#### Series Y Subscription Rights

On March 10, 2014, the Company issued the Series Y Subscription Rights to Crede. Once exercisable, the Series Y Subscription Rights shall entitle or require, as the case may be, Crede to purchase up to an aggregate of \$30,000,000 of Units over a certain period of time up to December 10, 2015 based on the aggregate dollar value of the outstanding publicly traded Common Shares, each Unit consisting of \$1,000 principal amount of 7.5% convertible unsecured debenture (a "Series Y Debenture") and a number of warrants (the "Series Y Warrants") of the Company which is equivalent to 45% of the number of Common Shares into which the Debenture is convertible. The Series Y Debentures will mature five years from issuance and will bear interest at a rate of 7.5% per annum. Each Series Y Debenture will be convertible, at the option of the holder, at any time prior to the maturity date, into Common Shares at a conversion price equal to the five-day volume weighted average trading price of the Common Shares on the day preceding the date on which the Series Y Subscription Right first becomes exercisable (the "Conversion Price"). Upon conversion, the holder shall also be entitled to a number of Common Shares equal to the additional interest such holder would have received if it had held the Series Y Debentures until maturity (the "Make-Whole Amount") divided by the market price of the Common Shares on the date falling two trading days prior to the date of conversion, in addition to accrued and unpaid interest from the date of the latest interest payment to the date of conversion, payable in cash or in Common Shares at the Company's option. The Make-Whole Amount shall be reduced by 1% for each 1% that the volume weighted average trading price of the Common Shares on the TSX for the five consecutive trading days preceding the date of the notice of conversion exceeds the Conversion Price. Each Series Y Warrant shall entitle the holder to purchase one Common Share for a period of three years from its issuance at the Conversion Price plus a 20% premium. The obligations of Crede under the Subscription Rights are subject to several conditions, including obtaining certain regulatory approvals, including TSX approval, approval of the Company's shareholders and the absence of a material adverse change affecting the Company between the time of issuance of the Series Y Subscription Rights and the issuance of the underlying Series Y Debentures and Series Y Warrants.

The Series Y Subscription Rights will be initially exercisable for Units in a principal amount equal to the lesser of \$10 million or 20% of the aggregate dollar value of the publicly traded Common Shares, as sourced from Bloomberg, during the preceding four month calendar period (the "Traded Equity Value"). The Series Y Subscription Rights are exercisable in additional tranches as follows: when the Traded Equity Value (calculated on a rolling four month period) reaches a level that is five times or more the principal amount of the last Units issued pursuant to the preceding exercise of Series Y Subscription Rights, the Series Y Subscription Rights will be exercisable by Crede within 15 calendar days thereafter (and another 15 calendar days thereafter by the Company if unexercised in full by Crede) for Units in a principal amount equal to the lesser of \$10 million or 20% of such Traded Equity Value. This cycle will continue until the sooner of all Series Y Subscription Rights are exercised or 24 months following the Closing Date, upon which all remaining Series Y Subscription Rights shall expire. Notwithstanding the foregoing, the holder may at its sole discretion accelerate the exercise of tranches of the Series Y Subscription Rights in whole or in part, provided that each tranche shall not exceed \$10 million in any given four month period.

On November 10, 2014, the Company announced amendments to the terms of its Series Y Subscription Rights issued to Crede. The Company and Crede mutually agreed to amend the terms of the Series Y Subscription 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.

A special meeting of shareholders for such purpose has been convened and subsequently postponed, and is expected to be held on April 27, 2015.

#### Private Placement – Investissement Québec

On May 27, 2014, Orbite announced the completion of a private placement offering of \$10,000,000 with Ressources Québec ("RQ"), a subsidiary of Investissement Québec. As part of the financing, Ressources Québec purchased 35,714,286 units of the Company at a price of \$0.28 per unit, each unit being 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.

### **3.11 Government Contributions**

On January 30, 2014, Orbite announced it was granted a 4M\$ non-interest bearing repayable financial contribution from Canada Economic Development for Québec regions to be used for the purchase and installation of the alumina calcinator, a key element in Orbite's high purity alumina production facility. 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 May 27, 2014, Orbite announced the completion of a private placement offering with Ressources Québec ("RQ"), a subsidiary of Investissement Québec. As part of the financing, Ressources Québec purchased 35,714,286 units of the Company at a price of \$0.28 per unit, each unit being 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.

On January 14, 2015, Orbite announced it had received from Investissement Québec a \$3.025 million bridge loan, collateralized against the Company's investment tax credits receivable for the year 2014, estimated at \$4.0 million. The loan, repayable by June 30, 2016, will carry an interest rate of 3.5% over the prevailing prime lending rate, which currently stands at 3%. Interest is payable monthly and the loan is subject to other customary terms and conditions.

On February 16, 2015, the Company announced it was selected to receive up to \$4.5M in non-dilutive funding from Sustainable Development Technology Canada to be applied towards Orbite's technology development, demonstration and commercialization related to the processing of red mud. The funding is subject to satisfactory financial commitment by an industrial partner, fulfillment of project milestones, usual due diligence and other customary conditions. Orbite is presently in negotiations with Veolia and others on this.

During the year ended December 31, 2014, the Corporation received \$16.3 million related to its 2012 and 2013 Quebec Investment Tax Credits. The funds were due to the Corporation in relation to equipment

purchased for manufacturing and processing in the Gaspé region during the 2012 and 2013 financial years. The funds received have been deposited in a segregated account and serve as security for the convertible debentures issued in 2012.

The Company also receives research & development financial grants from the National Research Council of Canada.

The Company is entitled to receive R&D tax credits and refundable investment tax credits resulting from the purchase of equipment.

### 3.12 Employees

As at December 31, 2014, the Company employed 50 full time employees, of which approximately 23 were assigned to the HPA Plant in Cap-Chat, Québec.

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. Starting February 25, 2013, in collaboration with the Haute-Gaspésie Township (MRC) and the city of Cap-Chat, the Company started offering a technical training program with the intent of training industrial process operators for eventual employment at the HPA plant. 8 graduates of the 16-month technical training program, which consists of 1,485 hours of full time studies and training, were subsequently hired and are currently employed by the Company.

## 4 DESCRIPTION OF THE GRANDE-VALLÉE MINERAL PROPERTY

The following description has been summarized from the Technical Report and is based on and subject to all the assumptions, qualifications and procedures contained herein, and which are not fully described herein. Readers should consult the Technical Report to obtain further particulars regarding the proposed SGA Plant project. The full text of the Technical Report is available on SEDAR under the Company's profile, which can be accessed at [www.sedar.com](http://www.sedar.com).

### *Previous Technical Reports*

The Company acquired a 100% interest in mineral claims in 2005 located near Grande-Vallée, in the Gaspé region of the Province of Québec. Initially, the property was composed of 12 map-designated claims covering a total surface area of 676.5 hectares. The claims associated with the property were acquired from Poly-Vein Exploration Inc. ("**Poly-Vein**") in consideration for 500,000 Common Shares of Orbite that were issued over a two-year period. In addition, the Company agreed to pay Poly-Vein 3% of the net profit interest resulting from production. Orbite can buy back this interest after a 5-year production period for a lump sum payment of \$500,000. At the time, Orbite had the obligation to invest at least \$100,000 in research and exploration works over a 16-month period, which obligation has been fulfilled.

On August 22, 2008, Orbite released its first technical report compiling the exploration works undertaken in respect of its aluminous clay property (the "**August 2008 Technical Report**"). The report was prepared by Henri-Louis Jacob, a qualified person and geologist. The exploration program undertaken by the Company included the cartography of altered claystone zones, through stripping and trenching, as well as drilling to establish the depth of the claystone units. Three claystone zones, believed to be separated, were localized. Only one zone (part of the Marin sector) was evaluated through trenches and drilling. Exploration delimited the zone down to a depth of 100 meters.

Following the summer of 2008, Orbite undertook further exploration on the entire property. In September 2009, the Company released a revised NI 43-101 technical report prepared by Jean-Guy Levaque, eng., a

qualified person, compiling the exploration works undertaken for the entire Marin Sector as well as trenching in the Madeleine and Simoneau sectors (the “**2009 Technical Report**”).

The 2010 fieldwork on the aluminous clay property was all performed in the Marin Sector completing the works done in 2009. With more than 5300 meters of drilling, it was possible to ascertain that the Marin sector was made of only one folded deposit, comprised of altered claystone on top of claystone with a large area of high grade and low-grade mudstone. By that time, the Company had ventured that the mudstone would be viable.

In March of 2011, the “2010 Field Work 43-101 Technical Report” was prepared by Jean-Guy Levaque, Eng., which report was amended on August 21, 2011 (the “**2011 Amended 43-101 Technical Report**”) and was co-signed by Raymond Simoneau, Eng., MBA, employed by the engineering consulting firm Seneca Inc., who drafted the content of the Chapter relating to tests and metallurgical treatments testing conducted at the pilot plant on which the 2011 Amended 43-101 Technical Report was partly based. The chemical average of the claystone drill samples were 24.74%  $\text{Al}_2\text{O}_3$ , showing homogeneity while the average for mudstone is 23.13%  $\text{Al}_2\text{O}_3$ . The volumes related to the latter average vary from 400 to 500 million cubic meters. Using the results obtained by the pilot plant, and a density of 2.6 metric tons per cubic meter, the tonnage varies from 800 million to 1 billion metric tons, which are characterized as Indicated Mineral Resources insofar as it relates to alumina, hematite, silica, magnesium and other oxides.

On January 12, 2012, the Company released an initial Preliminary Economic Assessment (scoping) study (the “Initial PEA”) in connection with the proposed SGA Plant. On February 10, 2012, the Autorité des marchés financiers (the “AMF”) advised the Company in writing that it considered portions of the Initial PEA to be non-compliant with the requirements of NI 43-101 and required that a revised NI 43-101 compliant report be filed no later than February 24, 2012. This included disclosures related to the CAPEX associated with the energy scenarios. On March 27, 2012, an independent audit report authored by Roche Ltd., Consulting Group and geologist Alex Knox, M.Sc., was issued (the “Audit Report”), 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. The Audit Report concluded that the foregoing should have only a minor impact, if any, on the overall conclusions of the Initial PEA. A copy of the Audit Report is available on the Company’s website, [www.orbitealuminae.com](http://www.orbitealuminae.com).

The Company filed, on May 30, 2012, an amended, restated and fully NI 43-101 compliant PEA Technical Report (the “**PEA**”), which is incorporated by reference in this document, addressing the deficiencies identified in the Audit Report.

The PEA also provided the following “best practice” recommendations to the Company:

- mining industry standards procedures should be applied and splits of all core should be kept – the Company has since adopted such industry procedure and now keeps all splits of all cores not otherwise sent for analyses. The Company has reappropriated all existing splits of all cores from its 2007-2012 drilling campaigns.
- an independent QA-QC protocol should be established and strictly followed – the Company has developed and implemented, with the assistance of qualified persons, an independent QA-QC protocol which consists of analysing splits, analyzing reference samples with and without reference elements, and introducing on a regular basis reference samples from CANMET.
- location and speciation of the REE within the clays – the Company has not yet completed location and speciation REE related work but expects to begin such work at a later stage of its contemplated SGA feasibility study.

- additional work should be performed on the Marin sector in order to have an even better understanding of the ROE and RMO behavior within that sector – during the 2012 drilling campaign, the Company completed 34 drill holes on the Marin sector of its Grande-Valle property. Following the postponement of certain feasibility related activities, no interpretation of such results has been completed. The latest drilling results were provided in early January 2013. However, pursuant to an internal non-independent analysis, the Company completed a preliminary review of 1216 samples of clay and 187 samples of mudstone from 34 drilling holes from its 2012 drilling campaign, of which 16 out of the 34 holes were located in the Mining Lease sector while the 18 other holes were located nearby the Company's mining lease. All were located in the Orignal formation of the Marin sector. The samples are all half drill cores of an individual length of 3m. They were analysed by ALS Laboratories in Vancouver via their ME-MS81 and ME-4ACD81 protocols. The results of the 2012 drilling campaign are presented in Section 4.6 "Drilling Campaigns".

#### **4.1. Project Description and Location**

The Grande-Vallée property is located in the Gaspé peninsula located 32 km northeast of Murdochville and 20 km south of Grande-Vallée, Québec. More specifically, the property is within the southeast quarter of the Denoué Township and the northern part of the Champoux and LeFrançois townships.

This property is divided into 3 sectors: to the west, the Simoneau Sector, in the middle, the Madeleine Sector and to the east, the Marin Sector. It is this last sector that has seen the vast majority of fieldwork, especially in the last 2 years of exploration. The property lies within NTS map sheet 22H03 and the Marin Sector centered on the coordinates listed in following table:





### *Mining Claims and Titles*

All titles are in the form of mining claims and all claims have been duly registered with the MRNF. Orbite holds 100% of the rights in its mining claims. In Québec, Orbite owns 100% of 74 mineral claims totaling approximately 41 km<sup>2</sup> as well as one mining lease of 98.5 ha at a site near Grande-Vallée, Québec. This is the site of the Grande-Vallée aluminous clay deposit with a 1.04 billion tonnes Indicated Mineral Resource.

As of December 31<sup>st</sup> 2014, Orbite also owns 100% of 161 mineral claims covering approximately 133 km<sup>2</sup> at sites near Rimouski and Cap-Chat, Québec. These claims cover a portion of the regional aluminous clay "Original Formation" which hosts the Grande-Vallée deposit.

### *Mining Lease*

On September 4, 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, the lease is a step in supporting the feasibility study currently underway for Orbite's smelter-grade alumina (SGA) production plant as well as for the high-purity alumina (HPA) operations.

The 98.5-acre mining lease allows for a renewable 20-year period of mining on approximately 70 million tonnes of aluminous clay, which is in line with Orbite's PEA. Unless otherwise exempted by the *Ministère des Ressources naturelles et de la Faune du Québec*, exploration work on the property must be initiated by the Company no less than four (4) years from issuance of the mining lease.

### *Royalties and Other Agreements*

Pursuant to an agreement with Poly-Vein, the original holder of mining rights on CDC 84880 to 84891, Orbite undertook to pay a royalty of 3% on the net profit interest (before taxes and amortization) resulting from production derived from these claims. Orbite may repurchase this royalty interest for \$500,000 after a 5-year period of operation.

### *Environmental Reports and Permits*

#### *A- Mining operations*

Orbite envisages the extraction and processing of the aluminous shale clay located within its claims in Grande-Vallée region for commercial purposes. The project will be considered to be an open pit type mine given that the ultimate goal is to produce smelter grade alumina.

According to current laws and regulations, the project would be subject to obtaining in advance a Certificate of Authorizations ("**CoA**") pursuant to the Québec Environmental Quality Act (the "**QEQA**"). The project's activities must therefore be in compliance with the applicable laws and regulations in force by the various levels of government. At the federal level, the project could be subject to the Canadian Environmental Assessment Act, 2012, as well as the Metal Mining Effluent Regulations (MMER). The information gathered for the CoA would therefore be sufficient for the Federal Government's requirements. Based on the absence of fish habitat on the Marin Sector to be exploited, it is unlikely that the Federal Government (Fisheries and Oceans Canada) will have a permission trigger on the project itself unless other specific and singular infrastructures requirements, like port upgrades, and the SGA Plant are directly associated with the project.

At the Québec provincial level, the project must meet the requirements of the QEQA as well as the *Mining Act* (Québec). Since the project would appear to be an open pit mining operation, the application for a CoA would have to meet the requirements of Directive 019 of the mining industry,

which specifies the Ministry of Sustainable Development, Environment and Parks of Québec (the “MDDEP”) expectations’ for this type of project. The current legislation also provides for multiple trigger mechanisms which could be applicable to the SGA Plant project, and which may trigger the obligation to conduct an environmental impact assessment. In addition to the foregoing, CoA would have to be obtained from the MDDEP pursuant to the QEQA.

Orbite’s mining lease is adjacent to a wildlife habitat, specifically the confinement area of the white-tailed deer present along the Madeleine River, and no specific mining operations conditions should be required. At the time of this document, no mining activity is currently contemplated on said confinement area.

#### *Environmental Characterization Study of the Project Area*

Multiple studies, prepared by Roche Groupe Conseil and Genivar Inc. from 2008 and 2012, have addressed multiple environmental and biological components of the Grande-Vallée property. These analyses were necessary in order to properly identify the environmental and biological elements of the area and better understand the project area’s environmental baseline. In summary, the studies did not identify any particular concern that could compromise the SGA Plant project.

Within those studies, different environmental and biological components of the property were evaluated and identified for the conduct of the mining operations as a whole and having an area of approximately 32 km<sup>2</sup>. The studies also evaluated environmental components of an expanded study area having an area of 1,017 km<sup>2</sup>, mainly for the purposes of the anthropological components of the study. The environmental components studied were the following: topography, geology, quality of underground water, air quality, local hydrology, surface water quality, water sediment quality, flora, wildlife, climate and archaeological and historical resources.

References are made in the studies of two rivers crossing the property, one of which is a controlled harvesting zone and also identifies a containment area for the white-tailed deer located within the limits of the study area but all outside the confines of the mining lease.

The studies demonstrate that the quality of the surface water of the watercourses located within the limits of the property is typical of natural waters found in this region. Also, it is noted that two species of fish having a special status can be found within the limits of the study area. Those species are the American eel and the Atlantic salmon.

Areas having a potential for prior occupation by First Nations have been identified in the study area. Before performing any development work, it is suggested to survey the site in order to confirm or infirm such theoretical potential.

In summary, the studies have not identified any material constraints, which could jeopardize the project. Nevertheless, it should be noted that any work encroaching on the area identified as a containment area for the white-tailed deer should be the object of a prior authorization issued by the Ministry of Natural Resources since such area constitutes a “wildlife habitat” within the meaning of the *Regulation respecting Wildlife Habitats* and the *Act concerning the Preservation and Development of Wildlife* (collectively the “**Regulation on Wildlife Habitats**”). However, the studies mention that it is unlikely that this zone be affected by the present project. Certain restrictions may be imposed regarding the harvesting period, required to clear the mining area, in order to minimize the impact on some migratory bird species. Furthermore, the management of surface water associated with the project will require further data and analysis regarding its potential impact on surrounding rivers.

For work carried out since 2007 (cutting and bulldozing), a forestry permit (*permis d'intervention en milieu forestier*) was issued by the MRNF (Gaspésie division) in Gaspé. All works were done in conformity with the guidelines. Whenever commercial grade trees are to be cut, permission is obtained, measurements are made, fees are paid and the wood is delivered to the sawmill. When a culvert needs to be replaced, plans are prepared by an authorized engineering firm, approved by the authorities, and work is carried out pursuant to the strict procedures of the MRNF.

In December of 2010, the MRNF authorized Orbite to extract a bulk sample required for metallurgical processing at its Cap-Chat pilot plant. The approval allowed Orbite to extract a maximum volume of 400 tonnes of claystone in bulk from its Grande-Vallée site. In relation with the bulk sampling carried out, Orbite also received the authorization to cut the tree growth from the MRNF of Gaspé, as well as a non-subjection notice from the MDDEP.

#### *B- Proposed SGA Production Plant*

The Company contemplates building and operating the SGA Plant in the Province of Québec. Energy supply represents one of the key elements of the proposed SGA Plant, as with all mining, chemical and hydrometallurgical projects. The final location of the SGA Plant will be greatly influenced by the availability of low-cost energy. The location of the SGA Plant can influence the requirement or the type of environmental assessment study and the public hearing regarding the SGA portion. The SGA Plant could be viewed independently from the mining operations and infrastructures required to deliver the minerals and thus limit the trigger mechanisms.

As considered in the PEA, the SGA Plant, at the federal level, may be subject to the Canadian Environmental Assessment Act. However, in order for this legislation to be enforced on a privately run project on land not under federal jurisdiction, one of the triggers specified in this legislation must be in place. The most likely trigger for the project at hand would be a Fisheries and Oceans Canada permit to be issued for the disturbance of a fish habitat. Recent studies done by a professional independent consulting firm (Roche, September 2011) have confirmed the absence of fish habitat on the mine and possible Gaspésie plant site. Streams flowing on the property have many obstacles that fish cannot go through, up into the selected site from the Madeleine River or the Grande-Vallée River unless other specific and singular infrastructures requirements, like port upgrades, and the mining activities are directly associated with the SGA Plant.

The province of Québec requires that such a project comply with the QEQA. The SGA Plant's activities are currently planned to produce less than 7,000 tonnes per day. In December 2013, the Government of Québec adopted a new mining legislation which will force all mining operations with daily capacity of more than 2 000 tonnes per day to undergo enquiry by the Environmental Public Consultation Bureau. This is likely to affect the original scheduling of the SGA project and will have to be taken into consideration by the future Feasibility Study. In addition, even though the site's activities affect on-site rivers, which flow into the Saint Lawrence River, they are not expected to affect watercourses having a watershed surface area greater than 25 km<sup>2</sup>. Other potential triggers are under review. Certificates of Authorization will nonetheless have to be obtained from the MDDEP under the QEQA.

#### **4.2. Accessibility, Climate, Local Resources, Infrastructure and Physiography**

##### *Access to Property and Transport*

The Grande-Vallée property is located 32 km northeast of Murdochville and 20 km south of Grande-Vallée, Québec. It is accessible by the G-103 over 12 kilometers of paved road and 8 kilometers of gravel. The western part is accessible four (4) kilometers further south. The property is serviced by a network of ill-

maintained forest roads and is for the most part unsuitable for traditional road vehicles. Access via 4X4 type vehicles is recommended.

There are a few sparsely spaced inhabitants on the paved part of the road. G-103 is mostly used for pulp wood transport and for hunting during the appropriate season.

Grande-Vallée has a port facility with a 500-foot long wharf, allowing for the docking of self-loading barges of 1000 tonnes and of larger sea going vessels.

#### *Topography, Elevation and Vegetation*

The Grande-Vallée property is located in the Gaspé physiographic plateau. Its topography is characterized by steep hills with summits of between 235 and 500 meters above sea level. The Madeleine River runs from north to south in the vicinity of the property. The surface of the property is covered by overburden of various thicknesses from 1 to 10 meters. The forest was heavily exploited resulting, in many areas of the property consisting of a sparse re-growth of birch, poplar, alder, pine and spruce trees.

The topography of the Marin Sector is characterized by a few summits culminating at 450 meters above sea level ("ASL"). Generally, the elevation goes from 100 to 400 meters with steep slopes between 15 and 30%. The western part is crossed from south to north by the Madeleine River, with a valley at 100 meters ASL and 750 meters wide, and the eastern part, crossed, also from south to north, by the Grande-Vallée River at 100 meters ASL and 450 meters wide. Between these two rivers, the property is criss-crossed by a series of non-perennial brooks, the main reason for the absence of fish life in the sectors.

The fauna and flora in the territory include a forest made up of 95% coniferous trees with the balsam fir being the most abundant. Other tree species like larch and pine, and, as the sector has been lumbered, birches and alders, are also present. The fauna is rich in birds (ducks, Canada geese, snow geese, snowy owls, eagles, falcons, etc.) and locally the mammals are those characteristic of Canada such as the black bear, the white-tail deer and the moose) which has a density of 4.16 moose per 10 km<sup>2</sup>. The main reason for this abundance is the lack of predators. The aquatic fauna is mainly represented by salmon and river and brook trout.

A portion of the site in question, corresponding to the Madeleine River Valley, forms part of a white-tailed deer habitat, making it a designated wildlife habitat as defined in the Regulation on Wildlife Habitats. Activities susceptible to modify a biological, physical or chemical component of a wildlife habitat are prohibited by the *Act Respecting the Conservation and Development of Wildlife* (Québec). An authorization to proceed with such an activity may still be obtained from the MRNF. The Regulation on Wildlife Habitats prescribes the conditions under which certain activities may be carried out.

#### *Length of the Operating Season.*

Subsequent studies will be required to determine what will be the length of the operating season in view of the existing climate in this region, but the Company expects 9 to 10 months of mining and stockpiling followed by a 2 to 3 month suspension of mine operations due to the heavy snows of winter weather.

#### *Availabilities of Power, Water, Mining Personnel and other Resources*

The property is criss-crossed by numerous streams and, in the Madeleine and Simoneau sectors; they flow into the Madeleine River. In the Marin sector, half go to the Madeleine River and the other half to the Grande Vallée River. The mining claims are on Crown property, the only activity carried out is moose hunting, and there are no power lines on the property. A power line of 69 kilovolts is located approximately 4 kilometers from the Grande-Vallée property. The non-specialized work force would come from the coastal fishing villages as well as from Murdochville, a former mining town. Subsequent studies will be required to

determine the availability of sources of power and other resources, but Orbite believes such water and power sources are sufficient for the contemplated mining activities.

#### **4.3 History – Grande-Vallée Property**

##### *Prior Ownership*

The part of the property situated east of the Madeleine River was owned by Poly-Vein and the *Conseil de développement économique de Murdochville* (CDEM) from 2000 to 2002. The property held 4 research permits for research into surface minerals, which led to the discovery of red argillite outcrops along the east side of the Madeleine River. Samples taken from this area revealed relatively high levels of alumina. These 4 research permits were therefore transformed into mining claims (12 cells bearing the numbers 84880 to 84891). They were transferred by Poly-Vein to Orbite in July 2005.

##### *Prior Work undertaken by Poly-Vein*

The first works were carried out in June 2000 in the eastern part of the property by Poly-Vein: 6 specimens of 15 kilograms were taken and 3 composites revealed levels of  $\text{Al}_2\text{O}_3$  varying between 22.3% and 22.6%. In July of 2000, RW Turner, geologist, conducted a geological cartography and surface sampling of the property. Surface sample analysis allowed Turner to determine 3 zones in the future Marin sector. These zones were labeled A, B and C.

In July 2001, Poly-Vein drilled a hole in each zone, 23.46 meters in zone A, 23.16 meters in zone B and 43.28 meters in zone C. The conclusion was that the altered claystone was a surficial phenomenon of less than 4 meters and that the basal claystone had  $\text{Al}_2\text{O}_3$  content.

#### **4.4 Proposed SGA Production Plant**

##### *Regional Geology*

The Grande-Vallée region is situated in the Cambro-Ordovician terrains of the geological province of the Appalachians, which occupies a 30-kilometre stretch along the northern Gaspé peninsula and is bordered on the north by the St-Lawrence River, and to the south by the Silurian-Devonian rocks of the Connecticut Valley-Gaspé synclinorium.

The Cambrian-Ordovician rocks of the region can be divided into 8 major lithostratigraphic units divided into parallel strips separated by overlapping faults. These units spanning from north to south are composed of the following:

Cloridorme Formation (Upper Ordovician): consists of a sequence of turbidite composed mainly of claystone silicate and mudstone, interbedded with lithic wacke formations and carbonate silicate;

Deslandes Formation (Upper Ordovician): consists of a unit of chert and mudstone covered with a turbidite sequence consisting of arenite, calcarenite and calcilutite and calcareous claystone;

Tourelle Formation (Middle Ordovician): consists of sandstone and of greenish gray siltstone interbedded mudstone or mudshale;

Rivière Ouelle Formation (Lower to Middle Ordovician): consists mainly of mudstone and / or mudshales, rhythmic green and black and greenish-gray mudshale;

Trois Pistoles Group (Upper Cambrian to Lower Ordovician): consists of a monotonous sequence of mudstones inter-bedded with quartz of arenites and calcareous conglomerates;

L'Original Formation (Middle Cambrian): consists of a blend of mudstone and massive reddish-brown and olive green siltstone;

Shickshock Group (Precambrian to Lower Cambrian): composed mainly of volcanic rocks; and

Romieu Formation (Middle Cambrian to lower Ordovician): consists of claystone and calcareous calcilutite.

The rocks of the area are folded and faulted. Generally, the rock formations are oriented east to west and dip to the South, in the same manner as the regional cleavage.

#### *Local Geology*

The property covers most of the outcropping of the Cambro-Ordovician L'Original Formation. This formation is on the southern half of the Trois-Pistoles Group, both being inserted in the Rivière-Ouelle Formation along an east-west axis. The aluminous rocks are mostly red claystones, either banded or in lenses, inter-bedded with different sequences of reddish, purplish or gray-greenish mudstones or siltstones. These claystones are very fine grained and, fissile and weather very easily into a broken mass of various size fragments called unconsolidated weathered claystones. According to the INRS sampling campaign, those surficial claystones have a high alumina content of more than 23%  $\text{Al}_2\text{O}_3$  while the other surrounding clay-bearing rock have generally less than 18%.

### **4.5 Mineralization – Grande-Vallée Property**

The L'Original Formation and hence the Grande-Vallée alumina deposit is bounded at its top by the shale and quartzite of Trois-Pistoles Group, to the bottom by a tectonic contact which continues to the north limit, to the south by a tectonic contact and the shales of Trois-Pistoles.

The extraordinary chemical homogeneity, where ever the Claystone Unit has been intersected by drilling, of the continuous sampling of the drill core has returned narrow range of value between 24 and 26%  $\text{Al}_2\text{O}_3$ , and the mudstone unit between 17 and 22 %  $\text{Al}_2\text{O}_3$ . Similar chemical homogeneity exists for the other major elements  $\text{SiO}_2$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{MgO}$  and others. No mineralogical or speciation studies have been done by Orbite or any third party to determine the location and form of the REE and RM values in the Grande-Vallée Claystone and Mudstone Units of the L'Original Formation.

It is most likely that the REE were inherited from the source of the sediments now comprising the L'Original Formation. The method of transportation to the site of deposition could have been as dissolved, complexed REE ions or as REE adsorbed on the clay mineral formed by weathering in the source area and transported in suspension to the site of deposition.

### **4.6 Exploration and Drilling Campaigns**

#### *Overview*

Orbite's property is divided in 3 sectors: to the West, the Simoneau Sector, in the middle, the Madeleine Sector and to the East, the Marin Sector. A total of 20,743 meters have been drilled on the Grande-Vallée Property. Five major drilling campaigns were performed on the property. The program through the years was principally aimed at evaluating and confirming the resources' distribution and homogeneity. It is noteworthy to mention that previous campaigns concentrated solely on the claystone, since, at that time, it was the only material susceptible to produce alumina. In the fall of 2008, the Company demonstrated, with

lab test work, that a possible cut-off could be as low as 18%  $\text{Al}_2\text{O}_3$ . Ever since, the exploration and drilling activities have included the mudstone.

| Year  | Company                  | # Holes      | Total Length (meters) |
|-------|--------------------------|--------------|-----------------------|
| 2007  | Forages Pelletier        | 40           | 3,222                 |
| 2008  | Forages Perfomax         | 12           | 1,779                 |
| 2009  | Forages Express, La Baie | 4            | 993                   |
| 2010  | Forages Dibar            | 27           | 4,346                 |
| 2011  | Forages Dibar            | 44           | 4,572                 |
| 2012* | Forages Dibar            | 34           | 5,831                 |
| 2013  | None                     | None         | ---                   |
| 2014  | None                     | None         | ---                   |
|       |                          | <b>TOTAL</b> | <b>20,743</b>         |

\* The objective of the 2012 drill campaign was to increase the drilling density within the mining lease area and to verify some structural features such as the positioning of a main fault system bordering the northern limit of the proposed mining pit.

#### *Exploration & Drilling from 2005 to 2007*

A lithogeochemical and brook sampling was carried out by the National Institute of Scientific Research (the "NISR") in November 2005 on the part of the property situated to the east of the Madeleine River (claims CDC 84840 to 84891). In total, 88 altered claystone samples and shales were taken for analysis in 20-meter intervals in the section bordering the main forest road across this property. Three bulk samples of approximately 25 kilograms were also taken from the Marin sector for the purposes of detailed mineralogical characterization.

Research conducted by the NISR on samples of claystone consisted of: atomic plasma spectrometry, X-ray diffractions, thermo-gravitational analysis; mineralogical determinations based on infrared spectroscopy; electronic microscopy, and electronic microprobe.

The chemical composition of the fragmentary shale was characterized by relatively elevated alumina and iron contents relative to the surrounding lithological units, which are composed of red, green or occasionally black shale. The chemical analyses performed on the red fragmentary shale revealed average  $\text{Al}_2\text{O}_3$  content of 23.36% and 8.95% iron as  $\text{Fe}_2\text{O}_3$ . For other shales, the average content of  $\text{Al}_2\text{O}_3$  and  $\text{Fe}_2\text{O}_3$  respectively ranged between 17.17% and 20.74%, and 6.88% and 8.38%. According to the NISR, the red shale's composition is unusual for this region of Québec, and is characterized by an elevated degree of alteration. Mineralogical analyses also indicate phases containing high levels of  $\text{Al}_2\text{O}_3$  (up to 41%  $\text{Al}_2\text{O}_3$ ) and relatively low  $\text{K}_2\text{O}$ , indicating the presence of kaolinite in the matrix.

From 2005 to 2007 prospecting was conducted and has allowed the identification of five zones with red clay deposits or fragmentary shale, associated with units of red shale of the Original Formation. At the time these zones were identified with the letters A, B and C (Marin Sector). From July 2007 to December 2007, Orbite conducted exploration work including prospecting on the western part of the site, as well as excavations and trenches for the purposes of sampling, as well as drilling in the part of Zone A which is within the site. These activities allowed for the identification of two new zones.

The analysis results indicated that the red shale, of which the bedrock in Zone A is composed, have a chemical composition very similar to the non-consolidated fragmentary shale. The shale had  $\text{Al}_2\text{O}_3$  content

between 22.6% and 25.6%, and  $\text{Fe}_2\text{O}_3$  content between 7.98% and 10.4%. Other lithologies are composed of shale (mudstones or siltstones) having somewhat lower  $\text{Al}_2\text{O}_3$  content (between 20% and 22%).

The purpose of the 2007 exploration campaign, led by independent geologist Henri-Louis Jacob, Eng., was to evaluate the available high alumina rock volume on the property both qualitatively and quantitatively. The work consisted of a) mapping the reddish clay deposits over the whole property, b) stripping and trenching to delineate the claystone units associated with the above-mentioned deposits, and c) drilling to verify the vertical continuity, to sample and quantify the potential of the high alumina rock. In the eventuality of a surface operation, the deposits would be widespread and tens of meters thick.

#### *Exploration & Drilling in 2008*

From 2008 to 2010, further exploration work was undertaken to obtain a better knowledge of the behaviour of the rocks in view of future exploitation of the deposit.

In 2008, the Company was very active on the Grande-Vallée property with the results confirming the previously defined geological environment. The 2008 exploration program, led by J-G Levaque Eng., aimed at following: i) continuing the evaluation of the Marin sector, left open on two sides the previous year, ii) being more systematic in the evaluation of the Madeleine and Simoneau sectors, and iii) redoing a volume calculation of the potential of the Marin sector based on a possible pit design, given topographical, environmental and geological constraints. The work required was therefore a) a series of bulldozer opened lines on a 500 meter grid over the three sectors, b) back hoe dug pits on those lines (except for Simoneau due to lack of time), c) 2000 meters of diamond drilling over the whole Marin sector and d) the drawing of a series of plans and sections for the approximate calculation of the volume of extractible claystones in the Marin sector.

There were 4 kilometers of bulldozed lines in the Simoneau sector, 6.2 kilometers of lines and 161 exploration pits done in the Madeleine sector and, finally, 5.7 kilometers of lines, 64 pits and 1791 meters of drilling in the Marin sector. Over the whole area, structural studies that included RQD (rock quality designation) analyses and an environmental characterization study were completed.

The exploration program identified three distinct sectors, Marin in the east, Madeleine in the middle and Simoneau in the west. The Madeleine and Simoneau sectors underwent a thorough mapping campaign of every forest roads and the sampling of the main lithologies associated with the L'Original Formation. In the Marin sector, only the Southern part, formerly identified by Turner (2000-2001), was worked on through digging, trenching and drilling to verify size and uniformity. For this purpose, some fifty 1 to 3 meters deep holes were dug on 30 to 50 meter intervals on a 100 meter grid. Also, a 100 meters trench was dug in the central part of the study area.

Forty shallow 45° diamond drill holes, on a 50 by 100 meter grid, were completed; they allowed the delineation of some 40 million tonnes at a 100 meter depth of good claystones with average compositions of between 23% and 26%  $\text{Al}_2\text{O}_3$ .

The results for the Marin sector gave an estimated result of one hundred million tonnes of good claystones, plus or minus 25%. This number was derived from hypothetical contacts between formations at depth and minimal wastage during the operation. Given the fact that the waste was actually mostly due to mudstones, if these were to be included into the calculation, the quantity would actually soar by three to four times. The results of this work were published in "Compilation des travaux techniques effectués sur la propriété de Grande-Vallée durant l'année 2008", a report by Mr. Jean-Guy Levaque, Eng. – February 2009.



### *Exploration & Drilling in 2009 and 2010*

In 2009 and 2010, some 5,339 meters of drilling was done and 1,180 samples assayed for  $\text{Al}_2\text{O}_3$  and other elements with the purpose of increasing and classifying the resources in the Marin Sector. During the 2009 exploration program led by J-G Levaque Eng., the consulting firm, Viasat Geotechnologies Inc., conducted a lithological analysis of the Marin sector through the interpretation of satellite imagery. Unfortunately the drilling program was abandoned less than one quarter of the way through due to a combination of a severe drought and a breach of contract by the drilling firm.

In 2009, the Company performed a relatively small amount of drilling and the few data collected were included in the work of 2010 and reported in 2010 Field work, Grande-Vallée Property, NI 43-101 Technical Report, dated March 31, 2011 and amended August 21, 2011, prepared for Exploration Orbite VSPA Inc. (now Orbite Aluminae Inc.) by Mr. Jean-Guy Levaque.

The 2010 exploration program confirmed Orbite was able to use their innovative process for alumina recovery to extract alumina from the mudstone, thus dramatically increasing the quantity of material available to process from the Marin Sector. This allowed for the possibility of increasing the opening of the open pit and lowering its floor. The consulting firm was able to finalize their geological model. With the help of some 4346 meters of drilling added to the 993 m. of the previous year, a new preliminary geometrical design was drawn and a volume of 400 to 500 million cubic meters was estimated with a density of 2.6, indicating 800 to 1000 million metric tonnes of material. In early 2011, in order to achieve the treatment trials, more than 400 tonnes of material from the site were extracted and transported to the Cap-Chat pilot plant. This 400 tonnes collection contains four families of clay found at the site such as 50 tonnes of black clay, 50 tonnes of green clay found on the periphery of the site, 200 tonnes of healthy clay that form the essential of the site and 100 tonnes of degraded clay found on the surface of the healthy clay. The essential part of the clay collected is from the healthy and degraded family.

The diamond drill sample chemical analysis was done in the ALS Chemex Val d'Or office under the direction of Richard Deschambault. The drilling was done by Forages Dibar of Ste-Anne-des-Monts. Michel Rheault and Guillaume Matton of VIASAT GeoTechnologies were responsible for the geological interpretation, and Guy Galarneau, technician was responsible for the preliminary GPS survey of all the drill holes, the core handling, the preliminary logging, and the production of all the required field maps.

All the samples came from drill core and were prepared as follows: Once the core boxes were at the core shack, all the boxes were sequenced from start to end of the hole. The geologist then logs the core in its entirety. From the onset of a geological formation under study, a sampling tag is put every three meters until the end of the hole. Afterwards, each three-meter section is bagged with its own tag. Then all the bags are put in a larger container and shipped to the analytical laboratory.

ALS Chemex supplied the following "Drill Core Sample Preparation Technique" by way of sample preparation and analysis: Upon receipt of the samples, they were classified in numerical order and a new 8-digit number was assigned to each, preceded by the code letters of the preparation laboratory. This number identified the samples and provided a reference for the lab personnel. Those sample numbers were then transferred by optical reader (bar code) and each sample was weighed. The samples were dried, if required. Through subsequent grinding stages, each sample was reduced to 70% passing 2 mm. Using a Jones riffle, a representative 250 grams fraction was taken from the sample. The unused remaining portion was returned to the bag and stored for future reference. The representative sample was pulverized to 85% passing 200 meshes with a ring pulveriser. The sample was then transferred to a marked bag and sent to the laboratory for analysis.

In terms of quality control, once every shift, a sifting test is performed to verify that the 70%- passing-2mm-at-the-grinder norm as well as the 84%-passing-200-mesh-at-the-pulveriser norm are in strict adherence.

The crushers and grinders are cleaned with compressed air between each sample and a neutral media is run through between each series of sample. The disks and bowl of the pulveriser are hand cleaned to recuperate the entire sample and compressed air is used in between each sample to complete the cleaning of bowl and disks.

The quality applied by the chemical laboratory seems to be of sufficient adequacy to determine with sufficient precision, the chemical composition of both the claystone and mudstone, particularly their alumina content range. Further verification methods may be necessary in the future if for instance, the extraction process were to be jeopardized by certain critical levels of components in the claystone or undesirable elements outside those that were already analyzed.

As was done in previous years, the whole core was sent to the laboratory for chemical analysis after being systematically logged and photographed. All non-sampled cores were regrouped by three-meter lengths and bagged to keep their integrity. Whereas analysis conducted in 2008 for 345 samples of claystones yielded the following results: an average  $\text{Al}_2\text{O}_3$  content of 24.76% with a standard deviation of 0.51, and a variation coefficient of 0.02, the 2010 analysis for 651 samples (which include the 2009 results) yielded the following results: an average  $\text{Al}_2\text{O}_3$  content of 24.74% with a standard deviation of 0.73 and a variation of 0.03.

The  $\text{Al}_2\text{O}_3$  campaigns in 2008 and 2010 for both mudstone and claystone were very similar. The three-meter length, being the physical support of the vast majority of samples, was chosen as the preferred length and whatever exceptions were weighted. The following table shows the comparison between the samples of the year 2008, the years 2009 and 2010 and the sum of the three, for Mudstone, Claystone and the two materials.

|                                   | Mudstone |       |          | Claystone |       |          | Total |       |          |
|-----------------------------------|----------|-------|----------|-----------|-------|----------|-------|-------|----------|
|                                   | 2008     | 09-10 | 08-09-10 | 2008      | 09-10 | 08-09-10 | 2008  | 09-10 | 08-09-10 |
| Number                            | 86       | 528   | 614      | 345       | 651   | 996      | 431   | 1179  | 1610     |
| Average $\text{Al}_2\text{O}_3$ % | 20.83    | 20.36 | 20.43    | 24.76     | 24.74 | 24.74    | 23.98 | 22.77 | 23.09    |
| Std. deviation                    | 1.08     | 0.57  | 1.17     | 0.51      | 0.73  | 0.66     | 1.71  | 2.37  | 2.28     |

It is rather evident that, for Claystone and Mudstone, 2008 and 2009-2010 are similar. For the sum of the 3 years, the small bias is due to the fact that, in 2008, there were only very few Mudstone samples analyzed.

Redoing a similar exercise with the totality of the samples, it can be noticed that the averages corresponding to different cut-off are well grouped together, a supplementary proof for the homogeneity of the material. The Pilot Plant operations having suggested that the new cut-off should be 18%  $\text{Al}_2\text{O}_3$ , the following table yields an average of 23.13%  $\text{Al}_2\text{O}_3$  for the totality of the samples analyzed

| Al <sub>2</sub> O <sub>3</sub> cut-off grade | Average | Al <sub>2</sub> O <sub>3</sub> cut-off grade | Average |
|--|---------|--|---------|
| 16.00  | 23.08   | 21.00  | 24.35   |
| 16.50  | 23.10   | 21.50  | 24.48   |
| 17.00  | 23.11   | 22.00  | 24.59   |
| 17.50  | 23.11   | 22.50  | 24.68   |
| 18.00  | 23.13   | 23.00  | 24.74   |
| 18.50  | 23.16   | 23.50  | 24.83   |
| 19.00  | 23.29   | 24.00  | 24.91   |
| 19.50  | 23.48   | 24.50  | 25.08   |
| 20.00  | 23.69   | 25.00  | 25.42   |
| 20.50  | 23.83   |  |         |

A NI 43-101 compliant Technical Report (published in March 2011 and amended in August 2011) reporting the work done in 2009 and 2010 indicates that the clay deposit at the Marin deposit contained (using a density estimate of 2.6 tonnes per cubic meter), 800 million to 1 billion tonnes of Indicated Mineral Resources. Contrary to the methods used in the August 2008 Technical Report, no cut-off grade was used to eliminate samples in the 2010 field studies due to the greater emphasis on mudstone. Rather, only drill core from sandstones and quartzite was kept.

#### *Exploration & Drilling in 2011*

Finally, the 2011 exploration drilling was mostly oriented to the better definition of the geological model in order to be ready to launch a mathematical model using reputable software (Gemcom). It also added to the confidence level on the homogeneity of both the claystone and the mudstone as well as for specific elements (resources) such as rare earths and rare metals.

In 2011, Orbite completed additional diamond drilling (2,718 meters in 28 drill holes) and sampling in the Grande-Vallée property, which included a program of 16 holes totalling 663 meters and 180 samples drilled in the Marin Sector, in order to identify the variability of the REO/RMO content throughout the various clays. One of the program's objectives was to better understand the geological contact dips between the Orignal formation and the surrounding Rivière Ouelle formation.

The remaining work evaluated the continuity of the alumina and other by-product resources (Fe, Mg, Si, etc.). Recovery of the structural integrity of the core is known to be very difficult since the beginning of the property exploration work. The systematic RQD done on the 2008 and 2009 core as well as the sporadic one done in 2010 provided an average of 15%. It is the nature of the argillite itself (very friable) that prevented the keeping of core sample, especially split ones, and the reason (such a low RQD) the whole core was always sent for analysis to external independent labs. The actual recovery of material varied quite a bit and was mostly affected by the location of holes as well as the lithology. The results from the drill program of 2010-2011 confirmed the grades defined in former drill programs and met the target set by Orbite.

The Audit Report indicated that only part of the 2007 drill core has been kept and stored. None of the drill core from the 2008 to 2011 was available for review since it had been sent entirely to the laboratory for assay. This was reported in the PEA. However, the Audit Report concluded that in the case of Grande Vallée and considering the relative homogeneity and continuity of the alumina mineralization, as defined by

drilling, the non-standard sampling procedure followed to date should have only a minor impact, if any, and that mining industry standard procedures should be applied in the future and splits of all core should be kept.

*Additional sampling for the 2007 and 2011 and the 2008 to 2010 drilling campaigns*

In February 2012, ALS Minerals laboratory in Vancouver completed an assay for REE and RM comprising 110 pulp samples from 3m-long core samples available from the 2011 drilling campaign, and 98 pulp samples from 15 cm long cores available from the 2007 drilling campaign. All of the above samples were taken from the proposed site of the Company's future mining operations, related to its aluminous clay deposit at Grande-Vallée, and had already been assayed for alumina, hematite, silica, and other oxides.

The table entitled "Summary of Drilling Campaigns at Grande-Vallée" provided under subsection "Exploration & Drilling in 2012" provides an overview of the average grades for alumina ( $\text{Al}_2\text{O}_3$ ), iron ( $\text{Fe}_2\text{O}_3$ ), silica ( $\text{SiO}_2$ ), magnesium oxide ( $\text{MgO}$ ), REE and certain RM from the three above-mentioned series of samples. The REE are subdivided into light rare earths (LREE) and heavy rare earths (HREE).

These results support the consistency as well as the close association of REE and RM with the alumina in the aluminous clay over the general area of the proposed future operations site in the Marin Sector within the Company's deposit site at Grande-Vallée. The assay results for certain REE and RM in the drill holes in the Simoneau Sector, located more than 13 km West of the Marin Sector, in the same geological horizon of aluminous clay in the L'Orignal Formation, further point to a strong continuity and homogeneity between these two sectors.

In March and April 2012, as part of its program to evaluate rare earth oxides and rare metal oxides, the Company announced the results of REO and RMO concentrations in the drilling samples from its 2008 to 2010 drilling campaigns. Following the release of the PEA, the Company conducted additional analyses of Grande-Vallée samples from previous drilling campaigns. The ensuing study focused on more than 1,088 analysis results from 34 drill holes covering an area of approximately 3,000 metres east-to-west and 1,200 metres north-to-south.

The results of this supplementary analysis are presented below:

|           | Clay horizon                   |                      |                                  |                                  | Mudstone horizon               |                      |                                  |                                  |
|-----------|--------------------------------|----------------------|----------------------------------|----------------------------------|--------------------------------|----------------------|----------------------------------|----------------------------------|
| Year      | $\text{Al}_2\text{O}_3$<br>(%) | REO (total)<br>(ppm) | $\text{Sc}_2\text{O}_3$<br>(ppm) | $\text{Ga}_2\text{O}_3$<br>(ppm) | $\text{Al}_2\text{O}_3$<br>(%) | REO (total)<br>(ppm) | $\text{Sc}_2\text{O}_3$<br>(ppm) | $\text{Ga}_2\text{O}_3$<br>(ppm) |
| 2008      | 24.45                          | 501.2                | 23.4                             | 45.3                             | 21.01                          | 396.0                | 22.3                             | 38.1                             |
| 2009-2010 | 24.81                          | 502.0                | 24.4                             | 45.4                             | 20.38                          | 403.2                | 22.4                             | 39.2                             |

For comparative purposes, the REO and RMO results obtained from samples from its 2008 to 2010 drilling campaigns, and obtained from the limited sampling of its 2011 drilling campaigns are reproduced below.

|                        | Clay horizon                          |                      |   |   | Mudstone horizon                      |                      |   |   |
|------------------------|---------------------------------------|----------------------|---|---|---------------------------------------|----------------------|---|---|
| Area                   | Al <sub>2</sub> O <sub>3</sub><br>(%) | REO (total)<br>(ppm) | Sc <sub>2</sub> O <sub>3</sub><br>(ppm) | Ga <sub>2</sub> O <sub>3</sub><br>(ppm) | Al <sub>2</sub> O <sub>3</sub><br>(%) | REO (total)<br>(ppm) | Sc <sub>2</sub> O <sub>3</sub><br>(ppm) | Ga <sub>2</sub> O <sub>3</sub><br>(ppm) |
| 2011<br>(Marin)        | 24.31                                 | 515.0                | 26.1                                    | 44.9                                    | 19.86                                 | 417.8                | 25.9                                    | 37.9                                    |
| 2011<br>(Simoneau)     | 24.80                                 | 504.8                | 27.3                                    | 45.2                                    |                                       |                      |   |   |
| 2007 & 2011<br>(Marin) | 24.2                                  | 487.6                | 24.2                                    | 45.4                                    |                                       |                      |   |   |

All of the values in the two tables above represent the arithmetic means of the analytical results for each clay and mudstone horizon. All analyses have been based on samples with concentrations higher than 18% Al<sub>2</sub>O<sub>3</sub>, i.e. the cut-off grade used in the evaluation of the resources in the PEA. The samples were assayed according to the ME-MS81 protocols for rare earth elements and Ga and according to the ME-4ACD81 protocols for Sc at the ALS Minerals laboratory in Vancouver, British Columbia, with the detailed procedures available at [www.alsglobal.com/minerals.aspx](http://www.alsglobal.com/minerals.aspx). In addition to the quality control program using duplicates and reference standards provided by the laboratory ALS Minerals, Orbite has adopted its own QA/QC program that adheres to best industry practices. Out of the samples analyzed, a 7.5% sub-group was randomly chosen and sent to a separate laboratory for comparative analysis. The results of this verification indicate that the average content of the total REO and RMO of the sub-group varies by less than 1% compared to the average REO and RMO content of all samples combined.

For all of the groups discussed, the percentage of heavy REO compared to the total REO (heavy REO/REO) varies from 21% to 22% for groups in the clay horizon and is 23.1% for those in the mudstone horizon. The heavy REO are defined by elements Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, and Y, without taking into consideration the 0.5% of Sc content.

A comparison between the average oxide values in the tables above show considerable similarities, further demonstrating the chemical homogeneity of the Grande-Vallée aluminous clay deposit. Whether part of the limited 2011 drilling campaigns in the Marin sector, the more widespread drilling campaigns conducted between 2008 and 2010, or the drilling samples from the Simoneau sector more than 13 km west of Marin, the total REO values and the RMO values are virtually identical.

The plotting of the combined REO values, the individual REO values, and the RMO values based on Al<sub>2</sub>O<sub>3</sub> demonstrates the strong correlation of these oxides with the alumina values in both the clay and mudstone horizons. The single exception is Sc<sub>2</sub>O<sub>3</sub>, which reveals a consistent value in most samples without, however, correlating to the alumina values.

### *Exploration & Drilling in 2012*

During 2012, 34 holes were drilled for a total of 5,831 meters with the objective to increase drilling density in the Marin sector. Of the 34 drill holes, 16 were drilled within the Mining Lease and the other 18 within the periphery of the Mining Lease, and all having been drilled within the Original Formation. All the drill cores were cut into 3 meter lengths, with one half analyzed at ALS Minerals laboratories in Vancouver using their ME-MS81 protocol for 38 major elements including 12 rare earth elements and rare metals, and with their ME-4ACD81 protocol which is mainly for scandium. Assay results were delivered to the Company in the beginning of January 2013. Given the deferral of certain activities related to the Feasibility

Study, no interpretation of the assay results were completed as of the date hereof. A preliminary analysis of the assays was completed of the claystone and mudstone samples from the 2012 drilling campaign, which is compared against the previous drilling campaigns (see below).

#### Summary of Drilling Campaigns at Grande-Vallée

| Oxides, Rare Earths, Rare Metals          | Average Grade                              |   |   |  |                     |          |
|---|--|---|---|--|---------------------|----------|
|   | 1 <sup>st</sup> Series Marin Sector (2011) | 2 <sup>nd</sup> Series Simoneau Sector (2011) | 3 <sup>rd</sup> Series Marin Sector (2007 & 2011) | 1 <sup>st</sup> Series Marin Sector (2011) | Marin Sector (2012) |          |
| Oxide Elements %                          | Claystone                                  |   |   | Mudstone                                   | Claystone           | Mudstone |
| Al <sub>2</sub> O <sub>3</sub> - Alumina  | 24.3                                       | 24.8  | 24.2  | 19.9                                       | 24.1                | 19.9     |
| Fe <sub>2</sub> O <sub>3</sub> - Hematite | 8.5  | 8.8   | 8.7   | 7.9  | 8.9                 | 8.2      |
| SiO <sub>2</sub> - Silica                 | 50.9                                       | 51.3  | 50.5  | 56.5                                       | 51.8                | 56.5     |
| MgO - Magnesium Oxide                     | 1.5  | 1.7   | 1.6   | 2.1  | 1.5                 | 2        |
| Light Rare Earths ppm                     |  |   |   |  |                     |          |
| La - Lanthanum                            | 78.9                                       | 74.5  | 74.2  | 66.9                                       | 75.6                | 60.2     |
| Ce - Cerium                               | 159.2                                      | 162.4   | 151.4   | 129.1                                      | 154                 | 119.8    |
| Pr - Praseodymium                         | 19.8                                       | 20  | 18.8  | 15.8                                       | 19.1                | 15       |
| Nd - Neodymium                            | 74.7                                       | 71.2  | 71.3  | 58.3                                       | 72.2                | 57.2     |
| Sm - Samarium                             | 14.1                                       | 13.9  | 14  | 11   | 14                  | 10.9     |
| Eu - Europium                             | 2.6  | 2.4   | 2.5   | 2.1  | 2.7                 | 2.1      |
| Gd - Gadolinium                           | 11.2                                       | 10.7  | 11.2  | 9  | 11.9                | 9.3      |
| Heavy Rare Earths ppm                     |  |   |   |  |                     |          |
| Tb - Terbium                              | 1.6  | 1.6   | 1.7   | 1.4  | 1.8                 | 1.4      |
| Dy - Dysprosium                           | 9.9  | 9.4   | 9.6   | 8.1  | 10.1                | 8        |
| Ho - Holmium                              | 2  | 1.8   | 1.8   | 1.6  | 1.9                 | 1.6      |
| Er - Erbium                               | 5.2  | 5   | 5.2   | 4.5  | 5.4                 | 4.5      |
| Tu - Thulium                              | n/a  | n/a   | n/a   | n/a  | n/a                 | n/a      |
| Yb - Ytterbium                            | 4.8  | 4.5   | 4.6   | 4.1  | 4.8                 | 4.2      |
| Lu - Lutetium                             | 0.7  | 0.7   | 0.7   | 0.6  | 0.7                 | 0.6      |
| Y - Yttrium                               | 51   | 49.3  | 46.5  | 43.6                                       | 50.2                | 41.3     |
| Rare Metals ppm                           |  |   |   |  |                     |          |
| Sc - Scandium                             | 16.1                                       | 17.8  | 15.8  | 17   | 15.7                | 15.4     |
| Ga - Gallium                              | 33.4                                       | 33.6  | 33.8  | 28.4                                       | 34.2                | 29.2     |
| Hf - Hafnium                              | 5.3  | n/a   | 5   | 5.7  | 5.6                 | 6.8      |

#### Exploration & Drilling in 2013 and 2014

No exploration work was completed on the Marin sector of the Grande-Vallée property during 2013 and 2014. Following the 2012 geophysical survey on the Madeleine and Simoneau Sectors of the Grande Vallée property, a compilation and mapping update of those areas has been presented in two internal reports dated September 2013 and December 2013 respectively. The September report produced an integration of all topographical and satellite coverage of the Simoneau, Madeleine and Marin sectors whereas the December report produced an updated geological review of reconnaissance and drilling work done in 2011 and 2012 on the Madeleine and Simoneau sectors further integrating the topographical/satellite interpretation work. The geological report recommends six 200m long drill holes in the Madeleine sector and further hydrogeological work in the Simoneau sector due to the abundant presence of surface water circulating in various brooks.

General geological reconnaissance of the "Original Formation" resumed in the Lévis to Rimouski region early in Q2 2013 and was completed towards the end of Q2 2013. This short 2013 field season has allowed

field verification of the best alumina rich clay areas of the "Original Formation" which have been identified in the internal 2012 field work report submitted to Orbite on May 3<sup>rd</sup> 2013. The report outlined specific areas of the Original Formation which could become at a later date the object of intensive drilling in order to build a substantial clay resource given its strong resemblance in geology, homogeneity and alumina content. The 2013 field work also allowed Orbite to identify, and eventually retain, only those claims that may be of interest in the future. Three such areas are currently the object of further interest. They are called St-Damase and St-Octave, both located in areas close to the town of Mont-Joli, and, Cap Chat which is located south of the town of Cap Chat where Orbite is completing the HPA plant. To that effect, and since December 2013, Orbite has started the process of not renewing a substantially large number of claims in the Levis to Rimouski area (in the order of 880 claims), recognizing that these claims do not show any potential as an aluminous clay resource. By the end of December 2014, that group of three properties has now been reduced to a total of 161 claims.

A research program in cooperation with the "Institut National de Recherche Scientifique – INRS" was initiated over the Rimouski – Cap Chat Original Formation by executing a geophysical tomography survey. The objective was to test a new approach to better define the individual aluminous shale strata, which could become targets for future investigative work. The geophysical work extended from May to July 2013 with a final internal report submitted to Orbite on November 10, 2013. The survey consisted of ten 2600m long lines in a NO-SE direction separated 300 to 700m from each other totaling altogether 28.6 km over an specific area called St-Damase about 25 km East of the town of Mont-Joli. The survey ran over 35 contiguous claims. The tomography survey showed a clear definition of the higher conductivity characteristics of the alumina-rich clay Original Formation over most sub-areas of the survey. Vertical enhancement of individual resistivity/conductivity profiles points to the presence of the Original Formation extending from surface down to depths of more than 500m. The St-Damase area is being retained for further investigation by trenching and drilling at a later date.

In Nova Scotia (Chaswood property), the 2013 refraction seismic survey completed in September 2013 by Canadian Seabed Research (CSR) produced some useful results towards increasing our understanding of the size and shape of Cretaceous silica sand and kaolin clay deposits on the Chaswood Property in Nova Scotia. With this new data, Orbite internally revised a previous volume/mass model and determined that the previously modeled target area of Carbonaceous rock has increased by close to 10% from a previous estimate made prior to Orbite entering into an earn-in agreement with Al Nova. In addition, a reanalysis of two mud fractions of representative core samples taken on the property revealed that alumina grades increase linearly with decreasing grain size. An unprocessed clay yields 22-24% alumina, but a <25 $\mu$  (fine silt+clay) separate would yield 28-30% alumina grade and this separate fraction constitutes ~80% of the unprocessed clay volume. An air flotation process like that used to beneficiate lower grade kaolin deposits in the US could possibly be used to remove coarser quartz (>25  $\mu$ ) from the clay facies and is comparable in cost to standard bedrock ore drying and milling processes. The final geophysical report dated February 13, 2014 was delivered to Orbite. From the results of the geophysical survey, a 5000 to 7000m drilling campaign has been planned but has since been postponed to a later date prior to the execution of a preliminary economic assessment (PEA). The postponement of the drilling campaign, had thus lead to Orbite spending about only half of its \$1.0M exploration commitment on the Chaswood property. The Company is currently in discussion with the owner of the claims to resolve this issue.

Also on the Chaswood property, a one-year environmental baseline survey of local waterways and water sources was initiated in April 2013 and completed in March 2014. A final report was submitted to Orbite in March 2014. The report contains the analytical results of the baseline assays program without any interpretation since the results have not yet been compared to data from the national grid.. More interpretation and field work would be required prior to the execution of a PEA.

During Q1 2013, the Company completed a 400 km line airborne VTEM geophysical survey on its Le Tac property, which is located 12 km southeast of Desmaraisville in the Abitibi region of Québec, with the goal of identifying new copper and gold exploration targets. The results of this survey were summarised in a report submitted to the Company in Q3 2013. The property remains non-core and no major exploration work is planned at this time.

#### 4.7 Mineral Resource and Mineral Reserve Estimates

The PEA estimated that the aluminous clay deposit at the Grande-Vallée property contains (assuming density of 2.6 metric tonnes per cubic meter) a tonnage of 1.04 billion tonnes of aluminous clay classified as Indicated Mineral Resource. A Preliminary Feasibility Study or a Feasibility Study is required to demonstrate the economic merit of Mineral Resources and their conversion to Mineral Reserves. At the time of this document, no such study has been completed and therefore the Grande-Vallée deposit currently has no Mineral Reserves.

The PEA determined that alumina was the primary product whereas the production of silica, hematite, magnesium, mixed oxides, REE and RM should be considered as by-products. The average grade considers all analyses that have at least 18%  $\text{Al}_2\text{O}_3$ , and a density of 2.6g/cm<sup>3</sup>. The effective date of these mineral resources estimate is November 23, 2011.

**Table of Grades Estimate Following 2011 Exploration Work**

| Grande-Vallée NI 43-101 Compliant 1.04 billion tonnes Indicated Resource   |        |   |         |
|--|--------|---|---------|
| SiO <sub>2</sub> (Silica)  | 52.62% | Ga <sub>2</sub> O <sub>3</sub> (Gallium)      | 43 ppm  |
| Al <sub>2</sub> O <sub>3</sub> (Alumina)   | 23.37% | Sc <sub>2</sub> O <sub>3</sub> (Scandium)     | 28 ppm  |
| Fe <sub>2</sub> O <sub>3</sub> (Hematite)  | 8.42%  | Y <sub>2</sub> O <sub>3</sub> (Yttrium)       | 49 ppm  |
| CaO (Calcium)  | 0.48%  | La <sub>2</sub> O <sub>3</sub> (Lanthanum)    | 76 ppm  |
| MgO (Magnesium)  | 1.64%  | Ce <sub>2</sub> O <sub>3</sub> (Cerium)       | 152 ppm |
| Na <sub>2</sub> O (Sodium)   | 1.06%  | Pr <sub>2</sub> O <sub>3</sub> (Praseodymium) | 19 ppm  |
| K <sub>2</sub> O (Potassium)   | 2.86%  | Nd <sub>2</sub> O <sub>3</sub> (Neodymium)    | 71 ppm  |
| MnO (Manganese)  | 0.16%  | Sm <sub>2</sub> O <sub>3</sub> (Samarium)     | 11 ppm  |
| Cr <sub>2</sub> O <sub>3</sub> (Chromium)  | 0.01%  | Eu <sub>2</sub> O <sub>3</sub> (Europium)     | 2 ppm   |
| TiO <sub>2</sub> (Titanium)  | 0.85%  | Gd <sub>2</sub> O <sub>3</sub> (Gadolinium)   | 13 ppm  |
| P <sub>2</sub> O <sub>5</sub> (Phosphate)  | 0.14%  | Tb <sub>2</sub> O <sub>3</sub> (Terbium)      | 1.5 ppm |
| SrO (Strontium)  | 0.02%  | Dy <sub>2</sub> O <sub>3</sub> (Dysprosium)   | 9 ppm   |
| BaO (Barium)   | 0.05%  | Other Contained REO                           | 88 ppm  |
| V <sub>2</sub> O <sub>5</sub> (Vanadium)   | 0.03%  | Total RM & REO                                | 563 ppm |
| H <sub>2</sub> O (LOI)   | 6.50%  | Other Elements                                | 1.79%   |
| Notes: Contents are in oxide form. CIM definitions were followed for mineral resources. The resource Effective date is Nov 23, 2011. Assumes a cut-off of 18% $\text{Al}_2\text{O}_3$ and a density of 2.6g/cm <sup>3</sup> . Amounts may not add due to rounding. Mineral resources have no demonstrated economic viability. There is no certainty that all or part of the mineral resources will be converted to reserves. |        |   |         |



### *Approach*

The geometric method of half-distance of sections was used, given the hypothesis of geological formation continuity. This method yields a certain level of uncertainty due to the assumption that the bedding is regular and in a straight line between sections. This uncertainty translates into a variation of volume of +or- 20%.

### *Geometric Model*

The geometric model was based on six North-South sections, namely sections 337000, 337700, 338000, 338500, 339000 and 339500, all in the NAD27 system.

It was then decided that the lowest pit level would be the level of the neighbouring Madeleine River, i.e. 100 meters ASL. From this “floor”, the North wall would be the contact between the L’Original formation and the Three Pistoles Group; to the South, the wall goes up 60 ° in the Three Pistoles, thus responsible for the bulk of the waste. The floor “day lighted” in the overburden in the East and rapidly closed in the West to respect the protection zone of the Madeleine River.

The senior geologist (a Qualified Person within the meaning of NI 43-101) who constructed the geologic and resource model estimation cautions that mineral resources have not demonstrated economic viability. In addition, there is no certainty that all or part of the mineral resources will be converted into reserves.

### *REE+RM Grades*

Statistical analysis of the alumina grade data from the five drilling programs (2007-2011) suggests that the alumina grade within the Claystone Unit portions of the deposit is extremely homogeneous, over the entire drilled portions of the Grand Vallée deposit. This is reflected by the particularly narrow spread of the analytical data on histograms as well as by the very similar average alumina grades of the sampling of the Claystone Unit on a year-by-year basis. This consistency of alumina grade is probably related to the consistency in the clay content of the Claystone Unit. This assumption is also valid for the Mudstone Unit.

Claystone and Mudstone Units of the Grande Vallée deposit are chemically homogeneous. Even considering the limited analytical data available, this homogeneity can be extended to the REE+RM content. The PEA confirmed it seems geologically reasonable to estimate that the REE+RM grade of the Claystone Unit would be in the 480-500 ppm range and 400-410 ppm to the Mudstone unit.

### *Other Relevant Data and Information*

The shape used to calculate the resources is simulating a potential pit. As for the slopes in Claystone, the 2008 report recommendations still stand as proof the numerous RQD verifications done in 2010. The Northern slopes follow the geological contact. The Southern slopes are either on a geological contact or go up 60° in shale. The Eastern and Western slopes are at 30° in Claystone if they do not day light in the topography. The maximum depth of the pit is 100 meters ASL to coincide with the level of the Madeleine River and the access is from the Grande Vallée river side. The pit bottom has a 5° slope to force drainage to the East and the waste extraction is kept to a minimum.

## **4.8 Metallurgical Testing and Mineral Processing**

This section summarizes the description of the processes of testing since the commissioning of the pilot plant. All metallurgical test works conducted at the Cap-Chat SGA pilot plant were done using clays extracted using bulk samples from Orbite’s project site.

A total of about 400 tonnes of clays in four distinct families (about 100 tonnes per family) were collected and transported at the Cap-Chat pilot plant and stored on site in 4 independent lots. Orbite uses a

hydrometallurgical treatment based on high pressure hydrochloric acid leaching followed by ion precipitation and calcination to produce a smelter grade alumina. All leaching tests done at the pilot plant used a collection of clays from the four families at approximately 850 kg of clay per lot. The number of pilot runs was approximately 38 using exclusively the 4 clay families. The runs have demonstrated that for all families, the extraction rates of alumina were similar, all being over 90 %. A total of approximately 100 tonnes of clay was processed at the pilot plant on 38 production lots.

From January 2011 to March 2012, approximately 40 production lots of leachate using 850 kg of clay per lot were produced at the pilot plant. All production lots were done using a dedicated family of clay collected from the 400 tonne samples at the pilot plant site. The results of these production batches confirm the laboratory scale results generated previously at the CEPROCQ laboratory.

Testing on the families of the clays stored on the pilot plant site was performed using the fundamentals of the Canadian Patent no. 2711013.

#### *Production Process*

Orbite aims to use its innovative and proprietary processes for producing alumina from aluminous claystone, which results in a higher yield and lower operating costs than the industry standard processes. Orbite was successful in demonstrating that its processes work on a laboratory scale and tests at its SGA pilot plant in Cap-Chat achieved production rates of 1 tonne per day of alumina within the targeted operational parameters.

The first step for producing a lixiviate lot at the pilot plant is the sieving, crushing and grinding of the clay. The grinding step ensures the increase of the clay's surface area to ensure an efficient leaching step.

The acid leaching can dissolve all the soluble fractions of the clay in an acidic medium except for the silica that is insoluble. This leaching step is done at high pressure and at high temperature in a concentrated acid medium (hydrochloric about 6 Molar). The residence time of the leaching is a few hours and adjusted to optimize the aluminum recovery targets. Leaching breaks the structure of the clay and releases iron (a mixture of  $\text{Fe}_2^+$  and  $\text{Fe}_3^+$ ) and aluminum ions ( $\text{Al}_3^+$ ), which must then be separated. The slurry leachate is then filtered to separate the insolubles including all of the silica contained in the clay. This silica is then washed, neutralized and directed to the pilot plant pit.

The separation of iron from aluminum salts in the leachate is done by selective precipitation by manipulating the pH of the leachate using a controlled injection of a base such as sodium hydroxide. The leachate is quickly brought to a high pH ( $\text{pH} > 10$ ), which allows the selective precipitation of iron and other ions in the form of insoluble hydroxide. This precipitate is then filtered and washed several times in order to recover the aluminum soluble salts. This precipitate containing among others iron hydroxides is then neutralized and sent to the pit. There is presently an internal project to develop ways to produce and sell the iron as hematite.

The supernatant from the iron precipitation step loaded with soluble aluminum ions is then acidified to pH 3-4 in order to precipitate the aluminum hydroxide insoluble. The slurry is then filtered and washed to isolate a wet aluminum hydroxide cake. The supernatant free of aluminum ions is then rejected to the pit.

The smelter-grade alumina is then obtained by drying and calcining the aluminum hydroxide cake at high temperature.

Orbite reviewed the last 14 leachate production batches documented at the Cap-Chat pilot plant in June and July 2011. Each production lot of leachate was prepared from clay stored on the Cap-Chat site. All lots were prepared with only one family of clays (out of the 4 stored on site). These production lots presented about 90% extraction of the alumina content from the clay. The pilot plant has allowed the variation study

definition of several parameters such as operating ratio acid / clay, temperature, pressure, residence time, agitation and product recycling to better understand the kinetics of the reaction. Some of these production lots presented more than 95% extraction of the alumina contained in the clay.

The aluminum content of the leachate produced at the pilot plant of Cap-Chat was analyzed by Orbite and corroborated by Maxxam (an independent laboratory [www.maxxam.ca](http://www.maxxam.ca)) to validate the analytical method. The values obtained were then used to calculate the alumina extraction yield for the entire batch runs.

Two samples of alumina produced in May and July 2011 were analyzed by Orbite. The results of the analysis of these two samples indicated alumina content of 98.5 wt.% and 98.8 wt.%  $\text{Al}_2\text{O}_3$ .

Seneca Inc. then coordinated in May 2011 the production of metal aluminum on a lab scale from one pilot plant sample of smelter grade alumina. The test was done in the INRS laboratory (Institut National de la recherche scientifique, [www.inrs.ca](http://www.inrs.ca)) located in Varennes Québec by Professor Lionel Roué. He used a micro lab scale electrochemical cell with a nominal capacity of approximately 14 grams of smelted aluminum per batch. Six batches of aluminum totalling 72 g were produced presenting electrochemical potentials similar to those normally obtained from commercial aluminum cells, indicating a very encouraging result.

A second sample of the smelter grade alumina produced at the Cap-Chat pilot plant was sent to SINTEF (independent testing laboratory located in Norway, report dated June 22, 2011) to produce a demonstration aluminum ingot of 1915 grams. According to SINTEF's report: "there were no processing problems and the aluminum produced was of excellent quality."

These results demonstrated that alumina produced at the Cap-Chat pilot plant is suitable for the synthesis of aluminum metal using lab scale electrochemical cells.

The alumina content of these clays ranged from 17 to 23 wt.% and iron content varied from 7-8 wt.%. All clay families tested were taken out of the 400 t sample at the Cap-Chat site. The results confirm a minimum extraction yield of alumina of 90% after 5 hours of leaching.

#### **4.9 Mining Operations – Grande-Vallée Property**

##### *Mining*

There are no material mining activities by the Company as of the date of this document.

The mining of Orbite's Grande-Vallée deposit is expected to follow the standard practice of an open-pit shovel/truck operation without the conventional drilling and blasting required in a hard rock open pit mine. It has been shown in the mining of approximately 3,400 tonnes of bulk sample that the clay can be mined without the need to drill and blast. The Grande-Vallée mine is expected to operate in a load and haul cycle, using trucks and excavators, and supported by a fleet of auxiliary equipment. The run-of-mine (RoM) clay will be loaded by hydraulic excavators and delivered by trucks to the primary sizer/crusher. The crushed clay will be transferred to a conveyor and conveyed to the clay storage bin. Waste rock material will be hauled to the waste disposal area located to the South of the pit.

### **5 RISK FACTORS**

In the course of its business and affairs, the Company faces, amongst others, the following risk factors:

#### **Risks Associated With Our Business**

*We will need to raise capital to continue our growth.*

Orbite is a development-stage company, with one main short-term project and multiple future projects, each with different funding requirements, has limited financial resources, and has no recurring cash flows from its operations. We will require additional funding in the future. 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 short-term 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 and SGA as well as other by-products. Further, debt financing could lead to a diversion of cash flow to satisfy debt-servicing obligations, create restrictions on business operations and require the grant of security interests over corporate assets. 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.

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

The completion of construction and commissioning of our HPA Plant, the completion of our contemplated SGA feasibility study and the building and operation of the SGA Plant 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.

*The Company is dependent on a single principal asset*

Orbite's principal asset is its HPA Plant which has not yet begun production on a commercial scale as contemplated by Orbite and described herein. 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.

*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 construction of and optimizing its HPA Plant. Further, Orbite has not yet commercialized its product.

*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.

*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.

*New Markets*

The success of our business will depend, in part, on the establishment of new markets by us or third parties for alumina and rare earth products that may be in low demand. Although 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 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.

*Alumina, rare earth and metal oxide prices and PEA disclosure*

Our revenues, if any, are expected to be in large part derived from the extraction and sale of alumina and rare earth and metal oxide by-products such as gallium and scandium. Alumina and rare earth and metal oxides prices are volatile, have historically fluctuated widely and are affected by numerous factors beyond our control, including: international, economic and political trends; expectations of inflation; currency exchange fluctuations; interest rates; global or regional consumptive patterns; speculative activities; and increased worldwide production levels due to new extraction developments and improved extraction and production methods. The development of new alumina refineries and aluminum smelters, and increased production by new or existing alumina and aluminum producers may create oversupply or overcapacity, which could reduce future prices of alumina, alumina-based chemicals and aluminum, thereby adversely affecting Orbite’s prospects and financial position. Moreover, demand for alumina, alumina-based

chemicals and aluminum, has been supported by the industrialization and urbanization of China and other developing countries. A decline in the rate of economic growth of these developing countries or in other parts of the world, or a reduction in demand for these products, could adversely affect Orbite's future financial performance. These factors may affect the price of alumina and rare earth and metal oxides, and, therefore, the economic viability of any of our current or future exploration projects cannot accurately be predicted. Future significant price declines in the market value of alumina and rare earth and metal oxides could cause continued development of, and eventually commercial production (if any) from, the Grande-Vallée property to be rendered uneconomic. Depending on the price of alumina and rare earth and metal oxides, we could be forced to discontinue exploration or development activities and may lose our interest in, or may be forced to sell, the Grande-Vallée property. There is no assurance that even if commercial quantities of alumina and rare earth and metal oxides and other base and precious metals are produced, a profitable market will exist for them.

Preliminary economic assessment of the viability of the Company's proposed SGA production plant supposes the availability of natural gas as the reference energy source. Natural gas is not currently readily available in the mining site vicinity. Consequently, should natural gas or an alternative source of energy which pricing is competitive to natural gas not be available, the SGA Plant project contemplated to be based in the Grande-Vallée region could be materially and adversely impacted and compromised.

#### *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 SGA production facilities, and mines may not prove to be accurate. Production of alumina and rare earths and metal oxides by-products is a capital-intensive business. Our plans for our HPA and projected SGA production facilities require significant capital expenditures. Capital and operating costs are estimated based on the interpretation of geological data, preliminary studies, preliminary economic assessments, anticipated climatic conditions and a number of other factors. Any of the following events could affect the accuracy of such estimates: unanticipated changes in grade and tonnage of ore to be mined and processed; incorrect data on which engineering assumptions are made; efficiency of our proprietary process, availability of fossil fuels at market prices, delay in construction schedules; unanticipated transportation costs; accuracy of major equipment and construction cost estimates; labour negotiations; 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.

#### *Production*

Our proprietary alumina and by-products extraction processes are novel, untested on a commercial scale and the results may be uncertain and subject to significant variations. There can be no assurance that our proprietary processes will be efficient or commercially viable or that any such alumina or by-products production which is attempted will be profitable.

#### *Exploration and Mining Risks*

Mineral exploration is highly speculative and involves a high degree of risk, which evens a combination of careful evaluation, experience and knowledge may not be able to avoid. Most exploration efforts are not successful in that they do not result in the discovery of mineralization of sufficient quantity or quality to be profitably mined. There is no assurance that ores will be discovered by the Company in quantities sufficient

to warrant mining operations. There is also no assurance that the mining properties of the Company will be brought into commercial production. These risk factors include market fluctuations, the proximity and production capacity of mining facilities and processing equipment, possible claims of native peoples and government regulations, including regulations relating to prices, royalties, allowable production, import and export of minerals, environmental protection and the protection of agricultural territory. The effect of these factors cannot be accurately predicted. In addition, the mining of minerals involves numerous hazards, including but not limited to, variations in grade, deposit size, density and other geological problems, hydrological conditions, metallurgical and other processing problems, mechanical equipment performance problems, the unavailability of materials and equipment including fuel, labor force disruptions, unanticipated transportation costs, unanticipated regulatory changes, unanticipated or significant changes in the costs of supplies and adverse weather conditions.

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

#### *Environmental and Other Regulatory Requirements*

All phases of mining and exploration operations are subject to government regulation including regulations pertaining to environmental protection. Environmental legislation is becoming stricter, with increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and heightened responsibility for companies and their officers, directors and employees. There can be no assurance that possible future changes in environmental regulation, mining laws including increased governmental royalty requirements will not adversely affect the Company's operations. As well, environmental hazards may exist on a property in which the Company holds an interest, that were caused by previous or existing owners or operators of the properties and of which the Company is not aware at present. Operations at the Company's mines are subject to strict environmental and other regulatory requirements, including requirements relating to the production, handling and disposal of hazardous materials, pollution controls, health and safety and the protection of wildlife. The Company may be required to incur substantial capital expenditures in order to comply with these requirements. Any failure to comply with the requirements could result in substantial fines, delays in production, or the withdrawal of the Company's mining licenses.

Government approvals and permits are required to be maintained in connection with the Company's mining 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 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. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may be liable for civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permitting requirements, or more stringent application of existing laws, may have a material adverse impact 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.

#### *Mineral Resource Estimates*

The Company's reported mineral resources are only estimates. No assurance can be given that the estimated mineral resources will be recovered or that they will be recovered at the rates estimated. Mineral resources estimates are based on limited sampling, and, consequently, are uncertain because the samples may not be representative. Mineral resource estimates may require revision (either up or down) based on actual production experience. Market fluctuations in the price of metals, as well as increased production costs or reduced recovery rates, may render certain mineral resources uneconomic and may ultimately result in a restatement of estimated resources and/or reserves. Moreover, short-term operating factors relating to the mineral resources may adversely affect the Company's financial results in any particular accounting period.

#### *Title to Properties*

Although the Company has taken reasonable measures to ensure proper title to its properties, there is no guarantee that title to any of its properties will not be challenged or impugned. Third parties may have valid claims underlying portions of the Company's interests.

#### *Industry Conditions*

Mineral resource exploration and development involves a high degree of risk that even a combination of careful assessment, experience and know-how cannot eliminate. Few properties that undergo prospecting ever generate a producing mine. Substantial sums may be required to establish reserves, develop metallurgical processes and build mining and processing facilities at a given site. The Company's growth depends on the implementation of our mining plan and the commissioning of our HPA production facility at Cap-Chat, Québec. In addition, the Company will be adversely affected if it does not successfully implement new technologies and scale its proprietary process to commercial levels. There can be no assurance that the exploration and development programs planned by the Company will result in a profitable mining operation. The economic life of a mineral deposit depends on a number of factors, some of which relate to the particular characteristics of the deposit, particularly its size, grade and proximity to infrastructure, as well as the cyclical nature of metal prices and government regulations, including those regarding prices, royalties, production limits, importation and exportation of minerals, and environmental protection. The impact of such factors cannot be precisely assessed, but may prevent the Company from providing an adequate return on investment.

#### *Competition*

The global aluminum and alumina markets are dominated by a small number of large vertically integrated companies, including Rio Tinto Alcan, Alcoa, Chalco, RUSAL, Hydro Aluminium, Alumina Limited and BHP Billiton. These companies 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-products 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. The competitive position of the Company depends upon its ability to obtain sufficient funding and to explore, acquire and develop new and existing mineral-resource properties or 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 quality and size of an ore body, cost of production and operation generally, and proximity to market. The Company also competes with other mining companies for skilled geologists and other technical personnel. In addition, the market for alumina and rare earth and metal oxide by-products is limited and the Company will compete with other mining 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.

#### *Permits and Licenses*

The operations of the Company require licenses and permits from various governmental authorities. There can be no assurance that the Company will be able to obtain all necessary licenses and permits that may be required to carry out further exploration, development and mining operations at its projects, or that the conditions of such are affordable.

#### *Absence of feasibility studies*

No pre-feasibility 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”, a “pre-feasibility study” or a “feasibility study” within the meaning of NI 43-101. In addition, 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 SGA Plant projects will be completed as expected or that the estimated capital costs will be sufficient to achieve the design capacity or the product purities and characteristics, or that the respective plants will provide a return on investment or be profitable.

#### *Access to Raw Materials and Inputs for Production*

Production of alumina and rare earth and metal oxide by-products depends upon access to power, water, raw materials and other inputs. The viability of the Company’s SGA production facility will depend upon the availability of natural gas or comparable fossil fuels. Instability in natural gas and electrical supply and outages could delay production and increase the cost of our operations. Volatility in the price of raw materials used in the production of alumina and other rare earth minerals, disruptions in transportation services due to labour disputes or adverse weather, decrease in available water supply may have a material adverse effect on our financial condition or results of operations.

#### *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 and completion of commercial production of its HPA Plant, discussions regarding strategic partnerships, and the timing of the release of its SGA feasibility study. 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, SGA or any other product. 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.

#### *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.

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

The construction of a commercial production plant, the exploration for aluminous clay and the production of alumina and the refining, storage, transportation and marketing of alumina 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 site, equipment, the refinery and the environment as well as the interruption of construction and 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. As the HPA Plant continues to develop toward commercial operation, the Company will have to acquire additional insurance coverage. 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 last 12 months, our Common Shares have traded as low as \$0.19 and as high as \$0.70 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:

- changes in the demand for alumina, aluminum 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 construction of our projected SGA and other facilities and increased costs related to our HPA and projected SGA production facilities;
- short selling, manipulation of our Common shares and prohibited trades;
- unfounded rumours and collusion;
- under performance or other performance related issues affecting our HPA production facility;
- 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 Common Shares to provide additional financing in the future and the issuance of any such Common Shares may result in a reduction of the book value (on a per share basis) or market price of the outstanding Common Shares. If we do issue any such additional Common Shares, such issuance also will 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.

Further, shareholders may experience dilution of their shareholdings due to the exercise of convertible securities that were issued, may be issued or may become issuable to Crede pursuant to the Series Y Subscription Rights.

*Our Common Shares are classified as a “penny stock” under SEC 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 15c-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 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.

*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. Further to the refocusing of the Company's short term priorities on the construction and operation of the HPA Plant, the transitioning to an operating entity commercializing its technologies and Orbite's anticipated change of corporate name, Orbite understands that the TSX is taking the view that it must now meet the listing criteria applicable to technology companies rather than mining companies. Orbite understands from its discussions with the TSX that it meets all of the criteria save the requirement to have cash on hand sufficient to complete the construction of the HPA Plant and fund 12 months of operations. If Orbite is unable to raise sufficient funds in this connection or show its ability to reach such requirement within a reasonable period of time, 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.

The TSX may also 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.

*Risks that the Series Y Subscription Rights will not be exercised*

*The ability of the Company to exercise the Series Y Subscription Rights is subject to the creditworthiness of Crede*

The additional funds available to the Company by way of the exercise of the Series Y Subscription Rights are subject to the creditworthiness of Crede Capital Group ("Crede") and, upon any default on the part of Crede, the ability to successfully undertake and financially support timely legal proceedings in a foreign jurisdiction and enforce any judgment in this connection.

*The exercise by the Company of the Series Y Subscription Rights is subject to a number of conditions*

The completion of the exercise by the Company of the Series Y Subscription Rights is subject to satisfaction of the prescribed closing conditions, including regulatory approval from the TSX, the absence of a material adverse effect affecting the Company between the time the Series Y Subscription Rights were subscribed and the issuance date of the underlying debentures and warrants and shareholder approval. The exercise of the Series Y Subscription Rights is subject to shareholder approval under the rules of the TSX due to the potential dilution associated with the issuance of securities under such rights and the conversion price which could be below the authorized discount to market price. A shareholders' meeting has been called and subsequently postponed to April 27, 2015.

*The exercise of additional tranches of Series Y Subscription Rights is subject to the Company's value of traded Common Shares reaching certain thresholds*

The Series Y Subscription Rights are exercisable for a maximum of \$30 million. The Series Y Subscription Rights are initially exercisable in a principal amount equal to the lesser of \$10 million and 20% of the aggregate dollar value of the publicly traded Common Shares, as sourced from Bloomberg, during the four month calendar period preceding the initial exercise date (the "Traded Equity Value"). The Series Y Subscription Rights are exercisable in additional tranches as follows: when the Traded Equity Value (calculated on a rolling four month period) reaches a level that is five times or more the principal amount of the last Series Y Units issued pursuant to the preceding exercise of Series Y Subscription Rights, the Series Y Subscription Rights become exercisable by Crede within 15 calendar days thereafter (and within another 15 calendar days thereafter by the Company if unexercised by Crede) for Series Y Units in a principal amount equal to the lesser of \$10 million and 20% of such Traded Equity Value. This cycle will continue until the sooner of all Series Y Subscription Rights are exercised and December 10, 2015, upon which all remaining Series Y Subscription Rights shall expire. Notwithstanding the foregoing, Crede may at its sole discretion accelerate the exercise of tranches of the Series Y Subscription Rights in whole or in part, provided that each tranche shall not exceed \$10 million in any given four month period. The Traded Equity Value within the rolling four month periods until expiration of the Series Y Subscription Rights in December 2015 may not be sufficient to permit the exercise in full of the Series Y Subscription Rights.

## **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 have a maximum ten-year term with vesting period at the discretion of the Board of Directors. Prior to October 2011, options had a five-year term. Options are granted at an exercise price equal to 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.

As of March 31, 2015, the Company had 320,795,551 Class A Shares issued and outstanding. The Company also had 47,623,893 Share Purchase Warrants exercisable at a weighted average price of \$0.46 and expiring between December 2016 and July 2017. The Company also had 15,785,000 Common Share Purchase Options at a weighted average price of \$0.94. The Company could issue a further 7,142,857 Common Shares if the 2012 Convertible Debentures, and 1,303,750 Common Shares if the 2013 Debentures were fully converted at the option of the holders.

|  |                    |
|--|--------------------|
| Outstanding Class A Shares                   | 320,795,551        |
| Share purchase warrants                      | 47, 623,893        |
| Share options                                | 15,785,000         |
| Convertible debentures (2012)                | 7,142,857          |
| Convertible debentures (2013) <sup>(1)</sup> | 1,303,750          |
| <b>Fully Diluted</b>                         | <b>392,651,051</b> |

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

## 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).

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 on SEDAR at [www.sedar.com](http://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 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, 2014:

| MONTH          | LOW   | HIGH  | VOLUME     |
|----------------|-------|-------|------------|
| January 2014   | 0.33  | 0.395 | 33,089,618 |
| February 2014  | 0.36  | 0.42  | 21,824,655 |
| March 2014     | 0.19  | 0.41  | 72,528,878 |
| April 2014     | 0.25  | 0.30  | 16,020,281 |
| May 2014       | 0.25  | 0.35  | 24,962,201 |
| June 2014      | 0.33  | 0.50  | 46,165,738 |
| July 2014      | 0.465 | 0.67  | 76,196,461 |
| August 2014    | 0.385 | 0.52  | 20,397,144 |
| September 2014 | 0.40  | 0.48  | 18,205,900 |
| October 2014   | 0.34  | 0.465 | 20,932,189 |
| November 2014  | 0.35  | 0.385 | 9,318,075  |
| December 2014  | 0.21  | 0.355 | 24,764,531 |

## 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.

## 10 PRIOR SALES

For the 12 months ended December 31, 2014, Orbite issued the following Common Shares:

| <u>Date</u>                       | <u>Price per share (\$)</u> | <u>Number of shares</u> |
|-----------------------------------|-----------------------------|-------------------------|
| January 2, 2014 <sup>(1)</sup>    | 0.282                       | 89,057                  |
| January 6, 2014 <sup>(1)</sup>    | 0.283                       | 7,102,607               |
| January 6, 2014 <sup>(1)</sup>    | 0.283                       | 298,307                 |
| January 7, 2014 <sup>(1)</sup>    | 0.284                       | 35,395                  |
| January 9, 2014 <sup>(1)</sup>    | 0.285                       | 215,724                 |
| January 13, 2014 <sup>(1)</sup>   | 0.282                       | 71,313                  |
| January 17, 2014 <sup>(1)</sup>   | 0.284                       | 71,055                  |
| January 24, 2014 <sup>(1)</sup>   | 0.285                       | 35,353                  |
| January 27, 2014 <sup>(2)</sup>   | 0.100                       | 100,000                 |
| January 31, 2014 <sup>(1)</sup>   | 0.281                       | 68,404                  |
| February 3, 2014 <sup>(1)</sup>   | 0.280                       | 46,964                  |
| February 5, 2014 <sup>(1)</sup>   | 0.286                       | 77,714                  |
| February 6, 2014 <sup>(1)</sup>   | 0.290                       | 20,939,411              |
| February 19, 2014 <sup>(1)</sup>  | 0.292                       | 163,469                 |
| February 20, 2014 <sup>(1)</sup>  | 0.292                       | 173,904                 |
| February 21, 2014 <sup>(1)</sup>  | 0.292                       | 52,209                  |
| March 10, 2014 <sup>(2)</sup>     | 0.100                       | 500,000                 |
| March 21, 2014 <sup>(1)</sup>     | 0.290                       | 17,619                  |
| March 24, 2014 <sup>(2)</sup>     | 0.100                       | 300,000                 |
| March 24, 2014 <sup>(1)</sup>     | 0.291                       | 3,514                   |
| March 26, 2014 <sup>(1)</sup>     | 0.293                       | 87,202                  |
| March 27, 2014 <sup>(2)</sup>     | 0.100                       | 300,000                 |
| March 31, 2014 <sup>(1)</sup>     | 0.271                       | 15,070                  |
| May 27, 2014 <sup>(3)</sup>       | 0.280                       | 35,714,286              |
| June 2, 2014 <sup>(4)</sup>       | 0.300                       | 183,840                 |
| June 3, 2014 <sup>(2)</sup>       | 0.360                       | 1,000,000               |
| June 5, 2014 <sup>(1)</sup>       | 0.284                       | 35,211                  |
| June 6, 2014 <sup>(1)</sup>       | 0.286                       | 3,496,354               |
| June 10, 2014 <sup>(1)</sup>      | 0.290                       | 17,270                  |
| June 24, 2014 <sup>(2)</sup>      | 0.360                       | 750,000                 |
| June 26, 2014 <sup>(4)</sup>      | 0.301                       | 6,680                   |
| July 8, 2014 <sup>(5)</sup>       | 0.480                       | 218,750                 |
| July 8, 2014 <sup>(2)</sup>       | 0.360                       | 750,000                 |
| July 9, 2014 <sup>(5)</sup>       | 0.480                       | 105,000                 |
| July 10, 2014 <sup>(5)</sup>      | 0.480                       | 15,750                  |
| July 11, 2014 <sup>(5)</sup>      | 0.480                       | 493,750                 |
| July 23, 2014 <sup>(6)</sup>      | 0.375                       | 8,013,627               |
| August 7, 2014 <sup>(1)</sup>     | 0.347                       | 35,062                  |
| August 20, 2014 <sup>(1)</sup>    | 0.311                       | 32,704                  |
| September 11, 2014 <sup>(6)</sup> | 0.375                       | 8,092,495               |
| December 1, 2014 <sup>(4)</sup>   | 0.359                       | 379,896                 |
| December 8, 2014 <sup>(6)</sup>   | 0.375                       | 10,684,998              |

Notes:

- (1) Issued upon conversion of debentures, inclusive of accrued interest and make-whole amount.
- (2) Issued upon exercise of options.
- (3) Issued to RQ.
- (4) Issued in payment of interest under convertible debentures.
- (5) Issued upon exercise of warrants.
- (6) Issued to Crede upon conversion of Series X Debentures, inclusive of accrued interest and make-whole amount.

For the 12 months ended December 31, 2014, Orbite issued the following securities convertible into Common Shares:

| <u>Date</u>                       | <u>Price per share (\$)</u> | <u>Number of shares</u>   |
|-----------------------------------|-----------------------------|---------------------------|
| March 24, 2014 <sup>(1)</sup>     | 0.40                        | 6,307,500                 |
| May 27, 2014 <sup>(2)</sup>       | 0.33                        | 17,857,143 <sup>(3)</sup> |
| June 3, 2014 <sup>(1)</sup>       | 0.40                        | 200,000                   |
| July 11, 2014 <sup>(4)</sup>      | 0.50                        | 20,000,000 <sup>(5)</sup> |
| July 11, 2014 <sup>(6)</sup>      | 0.60                        | 13,000,000 <sup>(7)</sup> |
| July 11, 2014 <sup>(8)</sup>      | 0.60                        | 1,200,000 <sup>(9)</sup>  |
| September 13, 2014 <sup>(1)</sup> | 0.50                        | 20,000                    |

Notes:

- (1) Grant of options.
- (2) 35,714,286 RQ Warrants, each RQ Warrant exercisable for one half Common Share at a price of \$0.33.
- (3) Maximum number of Common Shares issuable upon full exercise of the RQ Warrants.
- (4) Series X Debentures issued by the Company upon exercise by Crede of the Series X Subscription Rights.
- (5) Maximum number of Common Shares issuable upon full conversion of the Series X Debentures, assuming that no amount of the Series X Make-Whole Amount is paid by the Company by way of Common Shares. A maximum of 26,666,666 Common Shares was issuable in payment of the Series X Make-Whole Amount depending on the applicable conversion price of the Series X Debentures.
- (6) Series X Warrants issued by the Company upon exercise by Crede of the Series X Subscription Rights.
- (7) Maximum number of Common Shares issuable upon full exercise of the Series X Warrants.
- (8) 1,200,000 share purchase warrants of the Company issued to the Brokers as finders' warrants pursuant to the exercise by Crede of the Series X Subscription Rights, each such finders' warrant exercisable for one Common Share at a price of \$0.60.
- (9) Maximum number of Common Shares issuable upon full exercise of the Finders' Warrants.

On March 10, 2014, the Company issued the Series Y Subscription Rights to Crede. See "Recent Developments – Amendment to the Series Y Subscription Rights". The Series Y Subscription Rights will be first exercisable by the Company for a period of 15 days starting on January 15, 2015. Once exercisable, the Series Y Subscription Rights shall entitle or require, as the case may be, Crede to purchase up to an aggregate of \$30,000,000 of Units over a certain period of time up to December 10, 2015 based on the aggregate dollar value of the outstanding publicly traded Common Shares, each Unit consisting of \$1,000 principal amount of 7.5% convertible unsecured debenture (a "**Series Y Debenture**") and a number of warrants (the "**Series Y Warrants**") of the Company which is equivalent to 45% of the number of Common Shares into which the Debenture is convertible. The Series Y Debentures will mature five years from issuance and will bear interest at a rate of 7.5% per annum. Each Series Y Debenture will be convertible, at the option of the holder, at any time prior to the maturity date, into Common Shares at a conversion price equal to the five-day volume weighted average trading price of the Common Shares on the day preceding the date on which the Series Y Subscription Right first becomes exercisable (the "**Conversion Price**"). Upon conversion, the holder shall also be entitled to a number of Common Shares equal to the additional interest such holder would have received if it had held the Series Y Debentures until maturity (the "**Make-Whole Amount**") divided by the market price of the Common Shares on the date falling two trading days prior to the date of conversion, in addition to accrued and unpaid interest from the date of the latest interest payment to the date of conversion, payable in cash or in Common Shares at the Company's option. The Make-Whole Amount shall be reduced by 1% for each 1% that the volume weighted average trading price of the Common Shares on the TSX for the five consecutive trading days preceding the date of the notice of conversion exceeds the Conversion Price. Each Series Y Warrant shall entitle the holder to purchase one Common Share for a period of three years from its issuance at the Conversion Price plus a 20% premium. The obligations of Crede under the Subscription Rights are subject to several conditions, including obtaining certain regulatory approvals, including TSX approval, approval of the Company's shareholders and the absence of a material adverse effect affecting the Company between the time of subscription of the Series Y Subscription Rights and the issuance of the underlying Series Y Debentures and Series Y Warrants.

## 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 (1)(2)<br>Toronto (Ontario)<br>Canada                      | Director   | Corporate Director   | 2013                                |
| Peter Alexander Crossgrove,<br>O.O. C.M. (1)<br>Toronto (Ontario)<br>Canada | Director   | Lead Director of Dundee REIT,<br>Executive Chairman of Excellon<br>Resources, and Co Chairman and<br>Lead Director of Detour Mines | 2013                                |
| Lionel Léveillé (2)<br>Candiac (Québec)<br>Canada                           | Director and Chairman of the<br>Board  | Senior Partner<br>Explorer Solutions Inc.  | 2006                                |
| Pierre B. Meunier<br>Montreal (Québec)<br>Canada                            | Director   | Lawyer (Fasken Martineau Dumoulin<br>LLP)  | 2008                                |
| Pascal Decary<br>Paris<br>France  | Director   | Senior Executive Vice-President of<br>Veolia Environmental Services  | 2013                                |
| Stéphane Bertrand (2)<br>Ile-Bizard (Québec)<br>Canada                      | Director   | President of SBCG  | 2009                                |
| Christian L. Van Houtte (1)<br>Outremont (Québec)<br>Canada                 | Director   | President of Van Houtte Conseil inc.   | 2009                                |
| Glenn R. Kelly<br>Montreal (Québec)<br>Canada                               | President and Chief Executive<br>Officer                                     | President and CEO of CO2 Solutions   | 2013                                |
| Jacques Bédard<br>Mirabel (Québec)<br>Canada                                | Vice-President, Finance<br>Chief Financial Officer<br>Secretary<br>Treasurer | Chief Financial Officer  | 2010                                |
| Yves Noël, Eng., MBA<br>Montreal (Québec) Canada                            | Vice-President Business<br>Development                                       | Vice-President Sales and Marketing<br>of Orbite Aluminae,<br>President of Canada Walter Surface<br>Technologies                    | 2011                                |
| Denis Arguin<br>Montreal (Québec)<br>Canada                                 | Vice-President of Engineering and<br>Operations                              | V-P Strategic and Technological<br>Business Development of Enerkem   | 2013                                |

(1) Members of the Audit Committee

(2) Members of the Corporate Governance and Human Resources 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 5,683,099 Common Shares of the Company, representing approximately 1.8% 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.

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, Denis Primeau, Stéphane Bertrand, Christian Van Houtte, Lionel Léveillé, Pierre Meunier and Yves Noël. 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 Bennett Environmental Inc. from October 1997 to August 2006, which issuer was subject to a management cease trade order on or about March 31, 2006 due to the late filing of its 2005 annual audited financial statements and its first quarter interim statements.

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, 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. 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.

As such, Pascal Decary, a director of the Company, is also an officer of Veolia Environnement which whom the Company is involved in ongoing commercial discussions.

## **12 INFORMATION ON THE AUDIT COMMITTEE**

### **1. Charter of the Audit Committee**

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

### **2. Composition of the Audit Committee**

The Audit Committee is currently composed of Claude Lamoureux, Peter Crossgrove and Christian Van Houtte. 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 or 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 Claude Lamoureux, Peter Crossgrove and Christian Van Houtte are all independent members of the audit committee as such terms are defined in NI 52-110.

### **3. Relevant Education and Experience**

**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. Peter Alexander Crossgrove’s** experience includes directorships at companies such as Barrick Gold, Eatons of Canada, Astro Dairy Products, Alcan Tire and Rubber Company, and Lake Shore Gold. He currently serves as Lead Director of Dundee REIT, Executive Chairman of Excellon Resources, and Co Chairman and Lead Director of Detour Mines. In addition to these companies he is director of Pelangio Mines, Lake Shore Gold, Nordex Explosives, Dundee Industrial REIT, and Blue Goose Cattle Company. Mr. Crossgrove holds a B.Comm. from Concordia University, an MBA from the University of Western Ontario, and a Ph.D. from the Sloan Fellow doctorate program at Harvard Business School. He has been

honoured with the distinctions of the Order of Ontario and the Order of Canada, as well as the Upper Canada Medal, the Queen's Golden Jubilee Medal and the Queen's Diamond Jubilee Medal. He is Chairman Emeritus of Cancer Care Ontario and an Honorary Board Member of the University Health Network and currently volunteers for the Canadian Partnership against Cancer.

**Mr. Christian L. Van Houtte**, M.A. (IR), ASC holds a Bachelor's degree in Commercial Science from the University of Ottawa, a Master's degree in Industrial Relations from the Université de Montréal, and an AMP Certificate from the Harvard Business School. He is also a graduate of the Collège des administrateurs de sociétés at Université Laval. President of Van Houtte Conseil Inc. since 2009, Mr. Van Houtte was President and CEO of the Aluminum Association of Canada for 18 years and was also Senior Vice-President of Aluminerie de Bécancour (ABI). He has held senior management positions with the Montreal Construction Association, Société de Développement de la Baie James, Canadair, and Northern Electric. He was also a consultant to the Commission of Inquiry on the Exercise of Union Freedom in the Construction Industry (Cliche Commission).

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

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

#### **5. 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 \$82,000 in audit fees for the fiscal year ended December 31, 2013 and \$87,000 for the fiscal year ended December 31, 2014.

##### **(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 \$77,300 audit 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 \$97,400 tax fees from its external auditors during the fiscal year ended December 31, 2013 mainly comprised of tax compliance services as well as providing management regular support and assistance in various tax audits and \$151,006 in 2014.

##### **(d) All Other Fees**

The Company incurred \$60,035 in other fees for forensic services related to construction cost of the HPA plant from its external auditors during the fiscal year ended December 31, 2013 and nil in 2014.

#### **6. 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, 2014, 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, 2014, the Company has also paid legal fees amounting to \$273,043 to the law firm of Fasken Martineau, where Pierre Meunier, a current director of the Company is a partner.

### **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, 2014, the Company did not enter into any material contracts, other than contracts entered into in the ordinary course of business:

- (a) Contribution Agreement between the Company and l'Agence du développement économique du Canada regarding the \$4 million non-interest bearing repayable financial contribution; and
- (b) Supply agreements between the Company and Outotec Canada and Outotec GmbH dated March 26, 2014.

### **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, 2014. 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.

Certain information of an economic, scientific or technical nature regarding the Grande-Vallée Property is included in this annual information form based upon the (i) 2008 and 2010 43-101 compliant Technical Reports issued on October 2008 (amended in August 2009) and February 2011 respectively, which reports were prepared by Jean-Guy Levaque Eng., and (ii) a technical report entitled "NI 43-101 Revised Technical

Report – Preliminary Economic Assessment on Orbite Aluminae Inc. Metallurgical Grade Alumina Project” dated January 12, 2012, amended and restated on May 30, 2012 (the “PEA”) which is incorporated by reference in this document. Rod Doran, P. Eng., André-Martin Bouchard, Eng., Guy Saucier, Eng., Michel Rheault, M.Sc., P. Geo, Ali Ben Ayad, PhD., Geo, Alex Knox, P. Geol, Pierre-Jean Lafleur, Eng. and Jean-Guy Levaque, Eng prepared the PEA collectively. Mr. Doran, Mr. Bouchard, Mr. Saucier, Mr. Rheault, Mr. Ayad, Mr. Knox, Mr. Lafleur and Mr. Levaque are “qualified persons” as such term is defined in NI 43-101 and are independent from the Company within the meaning of NI 43-101. To the knowledge of the Company, the qualified persons referred to above do not beneficially own, or exercise control or direction over, directly or indirectly class A shares of the Company. The aforementioned qualified persons are not currently expected to be elected, appointed or employed as directors or employees of the Company.

Economic, scientific or technical content disclosed in the Annual Information Form regarding the Grande-Vallée Property has been reviewed and approved by Marc Filion, Eng., Ph.D, MBA, who is a non-independent Qualified Person (QP) as defined by National Instrument 43-101. Mr. Filion holds 200,000 stock options, each such option allowing for the purchase of one (1) Class A share of the Company, and does not otherwise beneficially own, or exercise control or direction over, directly or indirectly other class A shares of the Company

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

## **18 ADDITIONAL INFORMATION**

Additional information relating to the Company may be found on SEDAR at [www.sedar.com](http://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 9, 2014 prepared in connection with the Company’s general and annual meeting of shareholders held on June 19, 2014.

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, 2014.

## **SCHEDULE “A”**

ORBITE ALUMINAE INC.

### **AUDIT COMMITTEE CHARTER**

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

##### **1.1 Audit Committee**

The purpose of the Audit Committee (the “Committee”) of Orbite Aluminae 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; and
- (v) 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 Aluminae Inc., its subsidiaries and their divisions. In this mandate, the word "Company" refers to Orbite Aluminae 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;
- (iii) 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:

- (i) 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;
- (ii) 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;
- (xii) 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
- (ii) 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 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.