

MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEAR ENDED DECEMBER 31, 2018

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#### TO OUR SHAREHOLDERS

The following management's discussion and analysis ("MD&A") of the operating results and financial condition of Verde Agritech Plc ("Verde", the "Group" or the "Company") and its subsidiaries covers the year ended December 31, 2018. The following discussion provides information that management believes is relevant to an assessment and understanding of the consolidated results of operations and financial condition. This MD&A should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2018. The audited consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") and their interpretations issued by the International Accounting Standards Board ("IASB"), as adopted by the European Union and with IFRS and their interpretations issued by the IASB. All amounts herein are expressed in Canadian Dollars unless otherwise stated, and the information is current to March 29, 2019.

Additional information relating to the Group is available under the Group's profile on SEDAR at <a href="https://www.sedar.com">www.sedar.com</a> and the Group's website at <a href="https://www.verdeagritech.com">www.verdeagritech.com</a>.

## FORWARD LOOKING STATEMENTS

This MD&A contains forward-looking statements. Although the Group believes that its expectations reflected in forward-looking information to be reasonable, such information involves known or unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Group or the Group's projects in Brazil to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such risk factors include, but are not limited to: general business, economic, competitive, political and social uncertainties; the actual results from current development activities; conclusions of economic evaluations; unexpected increases in capital or operating costs; changes in equity markets, inflation and changes in foreign currency exchange rates; changes in project parameters as plans continue to be refined; changes in labour costs; future prices of commodities; possible variations of mineral grade or recovery rates; accidents, labour disputes and other risks of the mineral exploration industry; political risks arising from operating in Brazil; delays in obtaining governmental consents, permits, licenses and registrations; approvals or financing; as well as those factors discussed in the section entitled "Risks" in this MD&A.

Although the Group has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The forward-looking information contained herein, unless stated otherwise, is made at the date of this MD&A and the Group takes no responsibility to update them or to revise them to reflect new events or circumstances, except as required by law.

# **GROUP OVERVIEW**

The principal activity of the Group is the production of innovative agri-tech products of high agronomic efficiency that foster sustainable, profitable and productive agriculture. Following the construction and successful start up of the processing plant in the second half of 2018, the Group announced commercial production on July 1, 2018 of Super Greensand® and remains focused on the expansion of the Cerrado Verde Project.

Cerrado Verde Project, located in the heart of Brazil's largest agricultural market, is the source of a naturally occurring potassium silicate rock from which the Group produces innovative solutions for crop nutrition, crop protection, soil improvement and increased sustainability.

The Group's ordinary shares trade on the Canadian Toronto Stock Exchange ("TSX") under the symbol "NPK" and the New York Open Transparent Connected Venture Market ("OTCQB") under the symbol "AMHPF".

# HIGHLIGHTS OF THE FOURTH QUARTER

Revenue for the quarter was \$692,000 of Super Greensand® for sales delivered during the quarter. Since declaring commercial production the Group earned revenue of \$1,358,000 and made a gross profit of \$291,000 from the sale of 29,648 tonnes of Super Greensand®.

In October, 2018, the Group acquired a property covering 38 ha, which comprises 8 Mt of inferred resources. A payment was made in the amount of R\$ 220,000. A second processing plant will be installed at this property.

In October 2018, the Group announced it had sold out of Super Greensand<sup>®</sup>. It also announced its expansion for 2019 which include continuing to use the existing processing plant to produce 200 thousand tonnes per year, and in parallel, start construction of a new processing facility capable of producing an added 600 thousand tonnes per annum. The total 800 thousand tonnes per annum capacity is expected to be reached by early 2020. Financing is expected to be a mix of accumulated cashflow and subsidized-debt from BNDES bank.

In November, 2018, the Group filed the environmental license on ANM to grants the mining permit for 233 thousand tonnes per year.

## SUBSEQUENT EVENTS

On February 26, 2019 the group announced a non-brokered private placement to raise up to C\$1 million (the "Placement") through the issuance of up to 1,666,666 units of securities ("Units") at a price of \$ 0.60 per Unit. Each Unit will be comprised of one ordinary share of the Company (an "Ordinary Share") and one-half of one Ordinary Share purchase warrant (a "Warrant"). Each whole Warrant will be exercisable to purchase an Ordinary Share at an exercise price of C\$1.00 until the second anniversary of the closing of the Placement. The Warrants will be unlisted.

The placement closed on March 13, 2019 raising C\$1.7 million issuing 2,820,114 unit of securities . It included inside investments from president & CEO Cristiano Veloso, who purchased 912,416 Units; CFO Felipe Paolucci who purchased 166,667 Units; and Director Michael St Aldwyn, who purchased 83,333 Units.

On March 4, 2019 the group was pleased to welcome Felipe Buscacio Paolucci as the Chief Financial Officer ("CFO"). Mr. Paolucci is an executive with over 15 years of experience in finance in multinational companies and over 9 years of experience in the agricultural business. Mr. Paolucci will be based in Belo Horizonte, Brazil, and will replace Mr. Tim Slater, who has acted as the Company's interim CFO for the past few years, based out of London, UK.

# **PROJECT OVERVIEW**

A summary of the Group's current projects are as follows:

#### **Cerrado Verde**

Summary of the Cerrado Verde Project

During 2008 the Group staked a large mineral occurrence of a potassium silicate rock, that is believed to be uniquely suited to Brazil's domestic fertilizer needs.

Throughout 2009-2014, the Group advanced and completed a large drilling program at Cerrado Verde, which has a strike length exceeding 100 km. Potassium mineralization was found from surface to a maximum depth of 80 m, rendering the deposit amenable to open pit mining. Cerrado Verde has an NI 43-101 Measured and Indicated Mineral Resource Estimate of 1.47 billion tonnes at a grade of 9.2%  $K_2O$  which includes a Measured Mineral Resource of 83 million tonnes with an average grade of 10.1%  $K_2O$ . Additionally, the Inferred Mineral Resource Estimate is 1.85 billion tonnes at a  $K_2O$  grade of 8.6%. The mineral resource was estimated from data collected from a total of 41,021m of reverse circulation drilling from 710 drill holes with a collar spacing ranging from 100m x 100m (measured resource) to 400m x 400m (inferred resource) and 1,717m of DC drilling from 25 drill holes.

The Group produces Super Greensand®. Super Greensand® is both a fertilizer and a soil conditioner. As a fertilizer it provides potassium, magnesium, silicon, iron and manganese. As a soil conditioner it increases the soil's capacity to retain water and nutrients. A 100% natural product, Super Greensand® is certified for use in organic agriculture.

The Group secured environmental licenses to mine 150,000 tonnes per annum and mining permits to mine 100,000 tonnes per annum.

In addition, The Group has been granted an environmental license to set up a mine with initial annual production capacity of 233,000 tonnes. The mining permit is pending.

In total, the Group is currently fully permitted to produce 100 thousand tonnes per annum and has applications pending for an additional 383 thousand tonnes per annum.

# Project Developments

In 2009, the Group focused its activities on the geological mapping of the area of the Cerrado Verde Project, bibliographic research, drilling, planning and development of new metallurgical processes for the economic exploitation of potassium silicate.

On February 7, 2011, the Group initiated a wide-spaced drilling program at Cerrado Verde aimed at producing an NI 43-101 compliant mineral resource estimate for the majority of the deposit, which has a strike length exceeding 100km. At the time, the Group had an Inferred Mineral Resource Estimate of 105.1 million tonnes grading 10.3%  $K_2O$ , using a cut-off of 7.5%  $K_2O$ . On the completion of some widely separated drill holes in May 2011, the Group reported on high grade potash drill intersections close to surface, including 10.3%  $K_2O$  at 62m, 10.4%  $K_2O$  at 46m and 11.0%  $K_2O$  at 36m depth. Drilling successfully extended the high-grade potassium mineralization in all new targets tested at Cerrado Verde and on August 3, 2011, the Group announced an updated mineral resource estimate for the Cerrado Verde Project for five out of thirteen targets (being Targets 4, 6, 7, 10 and 11). The estimate comprised an Indicated Mineral Resource of 74 million tonnes with an average grade of 9.22%  $K_2O$  and an Inferred Mineral Resource of 1.07 billion tonnes with an average grade of 9.37%  $K_2O$  (applying a 7.5%  $K_2O$  cut-off). Potassium mineralization was found from surface to a maximum depth of 80m, rendering the deposit amenable to open pit mining.

On February 28, 2012, the Group filed a technical report titled "NI 43-101 Preliminary Economic Assessment, Cerrado Verde Potash Project, Minas Gerais, Brazil" that released the details of an increased resource estimate for the Cerrado Verde Project composed of an Indicated Mineral Resource Estimate of 71 million tonnes with an average grade of 9.22% K<sub>2</sub>O and an

Inferred Mineral Resource Estimate of 2.76 billion tonnes with an average grade of 8.91%  $K_2O$  (applying a 7.5%  $K_2O$  cut-off). This resource estimate included Targets 1 to 7, 10 to 14, 16 and 17. The Funchal Norte Target became included with Target 7.

On August 28th, 2012, the Company submitted the Environmental Impact Assessment ("EIA") report for 233 thousand tonnes per year (Mine Pit 1). According to the Minas Gerais State Environmental Law, the project is classified as Class III, which allows for an expedited licensing process as the LP (preliminary permit) and the LI (construction permit) are issued simultaneously.

In October 2012, the Group completed its 2012 infill drilling campaign at the Cerrado Verde project site aimed at defining measured and indicated resources 15,080m in 252 reverse circulation ("RC") holes and 785m in 12 diamond core ("DC") holes were drilled at a spacing ranging from 200m by 200m to 100m by 100m. The objective of this program was to transform the inferred and indicated resources into indicated and measured categories.

Subsequently in March 2014, the Group announced the results and completion of additional drilling at the Cerrado Verde Project. Cerrado Verde now has an NI 43-101 Measured and Indicated Mineral Resource Estimate of 1.47 billion tonnes at a grade of 9.2%  $K_2O$  which includes a Measured Mineral Resource of 83 million tonnes with an average grade of 10.1%  $K_2O$ . In addition, the revised Inferred Mineral Resource Estimate is 1.85 billion tonnes at a  $K_2O$  grade of 8.6%. Over 1.4 billion tonnes of resource has been upgraded from the inferred to the measured and indicated categories.

The new mineral resource was estimated from data collected from a total of 41,021m of RC drilling from 710 drill holes with a collar spacing ranging from  $100m \times 100m$  (measured resource) to  $400m \times 400m$  (inferred resource) and an additional 1,717m of DC drilling from 25 drill holes. The final drilling program consisted of 15,080m of drilling from 252m RC drill holes and an additional 25m from 25m fro

In October 2015, the Group announced its evolution from a commodities company into an agritech company focused on continual innovation. Verde has been devoted to the development of its potassium silicate mineral asset through technology that converts it into solutions for sustainable and profitable agriculture. As a result, subsequently in June 2016, the Group changed its name to Verde Agritech to better reflect its progression and commitment to agricultural technology innovation.

In February 2016, the Group announced a new product development, Super Greensand®, expected to be used both as a fertilizer and as a soil conditioner.

In April 2016, the Group announced a new product development for the crop protection market, Alpha. The Group has developed a proprietary technology to produce Alpha from its potassium silicate mineral deposit. Alpha is applied directly on crop leaves to provide plant available silicon, an element that has been proven to induce crops' resistance and increase its protection against pests and diseases. The product's development is a strategic addition to the Group's expanding portfolio of products and solutions that foster sustainable, more profitable and productive agriculture.

On February 9, 2017 the Group obtained an environmental license to mine 20,000 tonnes per year until February 2021 (Mine Pit 2).

On April, 27, 2017, the Group obtained the mining permit for 20,000 tonnes per year until February 2021 (Mine Pit 2)

On May 16, 2017 the Group concluded its first export of Super Greensand® to the United States' cannabis and organic market.

On November 9, 2017 the Group obtained an environmental license to mine 49,800 t per year until November 2021 (Mine Pit 3).

On November 27, 2017 the Group announced the conclusion of a Pre-Feasibility Study ("PFS") for the expansion of the current Super Greensand® production. The PFS evaluated the technical

and financial aspects of producing 25 Million tonnes per year ("Mtpy") of Super Greensand® divided in three phases: Phase 1 (0.6Mtpy); Phase 2 (5Mtpy) and Phase 3 (25Mtpy). The proposed scalable development is predicated on production growth being financed largely from expected internal cash flow.

# **Project Highlights:**

- Proven and Probable Reserves of 777.28 Mt, grading 9.78% K<sub>2</sub>O.
- Capex for Phase 1 is estimated at US\$3.05 million.
- Capex for all phases is estimated at US\$369.53 million.
- Sustaining capital for the Project is estimated at US\$222.26 million.
- Estimated after-tax Net Present Value ("NPV") for the Project, using an 8% discount rate, of US\$1,987.97 million.
- Estimated after-tax Internal Rate of Return ("IRR") of 290%.
- Payback of 0.5 years for Phase 1, 0.2 years for Phase 2 and 1. 2 years for Phase 3, from the start of production in each phase (years 1, 3 and 6, respectively).
- Adopted Potassium Chloride ("KCI") long term price of US\$250 CFR Brazil as reference for Super Greensand® pricing.
- Estimated Operating Cost of US\$14.53, US\$6.77, US\$7.92 per product tonne for Phases 1, 2 and 3 respectively.

# The PFS is based on the following assumptions:

- 100% equity.
- Phase 1 production of 0.6 Mtpy; Phase 2 production of 5 Mtpy; Phase 3 production of 25 Mtpy.
- A projected mine life of 36 years.
- · Contract Mining.
- A 15% contingency applied to Capex.
- US Dollar-Brazilian Real exchange rate of US\$1 = R\$3.28.
- Potassium Chloride ("KCI") long term price of US\$250 CFR Brazil as reference for Super Greensand<sup>®</sup> pricing.

In February, 2018 the Group obtained an environmental license to increase the open pit annual production to 50,000 tonnes, valid until February 2022 (Mine Pit 2).

In February, 2018 the Group obtained an environmental license for an additional annual production of 50,000 tonnes, valid until February 2022 (Mine Pit 2).

In March 2018, the Group signed a turnkey agreement for the construction of a processing plant in the municipality of São Gotardo, in the state of Minas Gerais (Plant 1). The expected production capacity was 45 tons per hour. The total cost of the production facility was expected to be US\$ 500,000.

In April, 2018 the Group was awarded a mining permit for 50,000 tonnes per annum, valid until February 2021 (Mine Pit 2).

In May 2018, the Group secured funding from BNDES (Santander) of approximately \$350,000 (B\$1,040,000) to finance the turnkey agreement signed in March 2018.

In May, 2018, the group announced a new product Super Greensand® Granular increasing the product line to three, Micronized, Powder and Grainular.

In June, 2018, the Company obtained an environmental license for construction and operation of an industrial plant (Plant 1) with annual capacity of 199,500 tonnes, valid until September, 2021.

In July 2018, the Group announced the start-up of the processing plant. The cost of the production facility was initially budgeted at US\$500 thousand. However, the total investment

reached US\$600 thousand because the Group advanced part of the ground work necessary for an expansion to reach the 600 thousand tonnes per annum capacity projected for Phase 1 in the pre-feasibility study ("PFS").

With the successful commencement of the production process the Group declared commercial production on July 1, 2018.

In July, 2018, the Group was awarded a second mining permit for 50,000 tonnes per annum, valid until February 2022, bringing the total granted mining permits to 100,000 tonnes (Mine Pit 2).

In August, 2018, the environmental license for mining 233,000 tonnes was granted (Mine Pit 1). This license establishes the environmental feasibility and viability of the projects and authorizes the installation, subject to compliance with specified conditions.

In September, 2018, the Group entered into an agreement with Ysao Munemassa to buy all rights he had over the Project, in connection to discovery contract (Finder's Fee) dated September 29, 2008, by issuing 165,975 shares in Verde Agritech PLC.

In October 2018, the Group announced it had sold out of Super Greensand<sup>®</sup>. It also announced its expansion plan for 2019 which include continuing to use the existing processing plant to produce 200 thousand tonnes per year, and in parallel, start construction of a new processing facility capable of producing an added 600 thousand tonnes per annum. The total 800 thousand tonnes per annum capacity is expected to be reached by early 2020. Financing is expected to be a mix of accumulated cashflow and debt from BNDES bank.

In November, 2018, the Company filed the environmental license on ANM to grants the mining permit for 233 thousand tonnes per year (Mine Pit 1).

In January, 2019, Verde obtained two environmental licenses to increase the annual production from the open pit mine for 200,000 tonnes per year in each area (Mine Pit 1).

In February, 2019, the environmental license to expand the Plant 1 for 600,000 tonnes per annum was granted.

#### Calcario

Summary of the Calcario Limestone Project

The Calcario project was necessary for the production of limestone which is necessary for the production of the TK47® product. Following the decision to produce Super Greensand® the Company will retain title to this project and is considering various options for its future. The project was fully provided against on December 31, 2017.

# SUMMARY OF EXPLORATION CLAIM AREAS

The group holds mineral claim titles in two categories of the Brazilian land tenure process. *Requerimento de Pesquisa* applications for exploration licences and *Autorização de Pesquisa* for granted exploration licences. Applications filed with the ANM are normally granted the permit on a priority of application basis. Applications are sequentially numbered and dated upon filing with the ANM. An exploration permit from the ANM allows the holder to prospect a mineral property and is valid for one to three years; it can be renewed for a further period under special conditions and may be transferred. License areas are in hectares.

| Project       | State        | Permit<br>Applications | Granted<br>Permits | Total     |
|---------------|--------------|------------------------|--------------------|-----------|
| Cerrado Verde | Minas Gerais | 4,350.86               | 52,273.94          | 56,624.80 |
| Calcario      | Minas Gerais | 0                      | 5,450.77           | 5,450.77  |

# **SUMMARY OF LICENSES AND PERMITS**

The current status of Verde's three mining pits is described below:

|            | Mining Permits                               | Environmental Permits                          |
|------------|--|--|
| Mine Pit 1 | The application for a mining permit was      | Verde obtained in August, 2018 an LP and LI    |
|            | filed on June 2013 and the feasibility study | that establishes the environmental feasibility |
|            | for annual production of 233,000 tonnes      | of the project and authorizes construction     |
|            | was approved in August 2015                  |  |
|            | Verde has been granted mining permits        | Verde obtained environmental permits to        |
|            | for 100,000 tonnes per annum The             | mine a total of 200,000 tonnes per annum       |
| Mine Pit 2 | application to increase annual production    | until February 2029.                           |
|            | to 200,000 tonnes was filed on January       |  |
|            | 2019.  |  |
|            | On July 2018, Verde filed an application to  | In November, 2017, the Group obtained an       |
| Mine Pit 3 | produce 49,800 tonnes per year.              | environmental authorization to mine 49,800 t   |
|            |  | per year until November, 2021.                 |
|            |  |  |

# SUMMARY OF DEFERRED EXPLORATION EXPENSES

Following the declaration of commercial production on July 1, 2018 exploration project costs of \$22,416,000 were transferred to mineral properties.

# **Project**

|          |          | 12 months |                                |           |             |            |         |        |
|----------|----------|-----------|--------------------------------|-----------|-------------|------------|---------|--------|
|          | То       | to        |                                |           |             |            |         |        |
|          | December | December  | 12 months to December 31, 2018 |           |             |            |         |        |
|          | 31, 2016 | 31, 2017  | \$'C                           | 000       |             |            |         | Total  |
|          | \$'000   | \$'000    |                                |           |             |            |         | \$'000 |
|          |          |           | Additions                      | Transfer  | Transfer to |            | Impair- |        |
|          |          |           |                                | to        | mineral     | Exchange   | ment    |        |
|          |          |           |                                | inventory | property    | difference |         |        |
| Cerrado  |          |           |                                |           |             |            |         |        |
| Verde    | 24,219   | 23,405    | 371                            | (80)      | (22,416)    | (1,280)    | -       | -      |
| Calcario | 725      | ı         | 1                              | -         |             | (47)       | 47      | -      |
| Total    | 24,944   | 23,405    | 371                            | (80)      | (22,416)    | (1,327)    | 47      |        |

# **O**UTLOOK

The group continues to develop its Cerrado Verde Project. The Group will continue market development, engineering studies, construction, finance and environmental licensing efforts to advance the project.

# SELECTED ANNUAL FINANCIAL INFORMATION

|  | Year to      | Year to      | Year to      |
|--|--------------|--------------|--------------|
| All amounts in \$'000                                | Dec 31, 2018 | Dec 31, 2017 | Dec 31, 2016 |
| Super Greensand® sales (tonnes '000)                 | 29           | -            | -            |
| Revenue  | 1,358        | -            | -            |
| Production costs                                     | 1,067        | -            | -            |
| Selling and distribution expenses                    | 59           | -            | -            |
| Administrative expenses                              | 1,871        | 1,576        | 1,204        |
| Impairment of intangible asset                       | -            | 663          | -            |
| Net loss   | (1,703)      | (2,204)      | (1,172)      |
| Cash Flow utilised in operating activities           | (502)        | (1,119)      | (1,007)      |
| Cash Flow utilised in investing activities           | (187)        | (1,791)      | (989)        |
| Cash Flow from financing activities                  | 933          | 1,809        | -            |
| Net increase (decrease) in cash                      | 244          | (1,101)      | (1,996)      |
| Cash and cash equivalents at end of period           | 836          | 645          | 1,763        |
| Total Assets   | 31,610       | 26,012       | 27,169       |
| Total Liabilities                                    | 7,785        | 465          | 188          |
| Working Capital                                      | 780          | 1,930        | 1,802        |
| Weighted average number of shares outstanding ('000) | 41,020       | 38,523       | 37,617       |
| Loss per share (basic and diluted) (\$)              | (0.041)      | (0.057)      | (0.031)      |

# SELECTED QUARTERLY FINANCIAL INFORMATION

The following table provides information on selected operating results for the past eight fiscal quarters:

| All amounts in \$'000                   | Dec 31,<br>2018 | Sept 30,<br>2018 | Jun 30,<br>2018 | Mar 31,<br>2018 |
|---|-----------------|------------------|-----------------|-----------------|
| Revenue                                 | 692             | 666              | -               | -               |
| Production costs                        | 666             | 401              | -               | -               |
| Selling and distribution expenses       | 59              | -                | -               | -               |
| Administrative expenses                 | 503             | 558              | 461             | 349             |
| Net loss                                | (590)           | (308)            | (457)           | (345)           |
| Loss per share (basic and diluted) (\$) | (0.014)         | (0.007)          | (0.011)         | (0.008)         |
|   | Dec 31,         | Sep 30,          | Jun 30,         | Mar 31,         |
| All amounts in \$'000                   | 2017            | 2017             | 2017            | 2017            |
| Revenue                                 | -               | -                | _               | -               |
| Administrative expenses                 | 411             | 418              | 366             | 377             |
| Impairment of intangible assets         | 663             | -                | -               | -               |
| Net loss                                | (1,074)         | (414)            | (363)           | (353)           |
| Loss per share (basic and diluted) (\$) | (0.029)         | (0.012)          | (0.010)         | (0.009)         |

Expenses for 2018 have increased as the group geared up for commercial production.

#### **RESULTS OF OPERATIONS**

# Three and twelve months ended December 31, 2018 as compared to the three and twelve months ended December 31, 2017.

| All amounts in \$'000  | 3 months                  | 3 months             | 12 months                    | 12 months          |
|--|---------------------------|----------------------|------------------------------|--------------------|
|  | ended                     | ended                | ended                        | ended              |
|  | December                  | December             | December                     | December           |
|  | 31, 2018                  | 30, 2017             | 31, 2018                     | 31, 2017           |
| Revenue Production costs Selling and distribution expenses   | 692                       | -                    | 1,358                        | -                  |
|  | (666)                     | -                    | (734)                        | -                  |
|  | (59)                      | -                    | (392)                        | -                  |
| Administrative salary and consultancy costs Legal and professional Travel and investor relations General administrative expenses | 195                       | 160                  | 736                          | 613                |
|  | 93                        | 63                   | 323                          | 261                |
|  | 90                        | 86                   | 355                          | 196                |
|  | 79                        | 46                   | 276                          | 183                |
| Share based payments  Administrative expenses  Impairment of intangible assets   | (505)<br>-                | 59<br>(414)<br>(663) | 181<br>(1,871)               | (1,576)<br>(663)   |
| Operating loss Corporation tax Interest income Interest expense  | (538)<br>(45)<br>2<br>(9) | (1,077)<br>-<br>3    | (1,639)<br>(45)<br>2<br>(18) | (2,239)<br>-<br>35 |
| Net loss   | (590)                     | (1,074)              | (1,700)                      | (2,204)            |

# Three months ended December 31, 2018 compared with three months ended December 31, 2017

Compared to the three months ended December 31, 2017, the net loss for the three months ended December 31, 2018 has decreased by \$484,000, a decrease of 45%. The loss per share has decreased to \$0.014 from \$0.029. The reduction in losses is due to the contribution made from the sale of Super Greensand® recognised in the income statement following the declaration of commercial production on July 1, 2018 along with no impairment charge in 2018 for the Calcario project.

#### **Production costs**

Production costs include all direct costs required in the process of making Super Greensand<sup>®</sup>. These include rental of the mine, engineering and consultancy fees, wages for staff at the processing plant, transpost to the factory, equipment hire, processing of the ore and amortisation of the mineral property.

## Selling and distribution expenses

Selling and distribution costs include costs associated with the selling and delivery of Super Greensand® to customers. These include product registration, packaging, delivery and commissions paid.

# Administrative salary and consultancy costs

The administrative salary and consultancy costs include the remuneration of the directors and the administrative staff and consultants employed in Brazil. The CEO, CFO and the Board are not currently drawing their remuneration in cash. Prior to commercial production, a proportion of salary costs were capitalised as part of the exploration project. These are now all being expensed which explains the increase.

#### Legal and professional

Legal and professional fees include legal, accountancy, audit related and regulatory costs. These expenses increased in the three months ended December 31, 2018 by \$29,000 compared to the same period last year and by \$62,000 for the twelve months. This is in line with expectations as regulatory costs increase.

## Travel and investor relations expenses

Travel and investor relations expenses include international flights, travel within Brazil, public relations and attendance at trade shows and promotional costs. Investor relation expenses increased by \$3,000 on the same period last year and expenditure for the twelve months increased by \$159,000 as the group continues to promote the newly released product.

## General administrative expenses

These costs include general office expenses, rent and occupancy fees, insurance, IT, foreign exchange variances, equipment depreciation and taxes. General administrative expenses increased by \$33,000 on the same period last year and expenditure for the twelve months increased by \$93,000. This is as a result of increased rent, insurance and other general expenses in Brazil.

## Share based payments

These costs represent the expense associated with stock options granted to employees, directors and consultants. Stock-based compensation expense recognized during the three months ended December 31, 2018 was \$48,000, a decrease of \$11,000 on the same period last year and a decrease of \$140,000 for the twelve months on the same period last year.

#### LIQUIDITY AND CASH FLOWS

For additional detail see the consolidated statements of cash flows for the quarters ended December 31, 2018 and December 31, 2017 in the annual financial statements.

| Cash received        | 3 months ended | 3 months ended | 12 months ended | 12 months ended |
|----------------------|----------------|----------------|-----------------|-----------------|
| from/(used for):     | December 31,   | December 31,   | December 31,    | December 31,    |
| \$'000               | 2018           | 2017           | 2018            | 2017            |
| Operating activities | 98             | (50)           | (502)           | (1,119)         |
| Investing activities | (101)          | (1,079)        | (187)           | (1,791)         |
| Financing activities | 538            | 5              | 933             | 1,809           |

On December 31, 2018, the Group held cash of \$836,000, a decrease of \$191,000 from the cash balance at December 31, 2017.

#### Operating activities

For the twelve months ended December 31, 2018, net cash utilised from operating activities was \$502,000, compared to \$1,119,000 for the twelve months ended December 31, 2017 reflecting changes in working capital.

#### Investing activities

For the twelve months ended December 31, 2018, net cash generated from investing activities was \$187,000, a decrease of \$1,604,000 from the twelve months ended December 31, 2017. This is due to the redemption of \$900,000 short term deposits offset by investment in fixed assets.

# Financing activities

For the twelve months ended December 31, 2018, net cash generated from financing activities was \$933,000 following the exercise of share options and a bank loan from Santander for R\$1,040,000 (\$335,000).

#### **Financial condition**

On December 31, 2018, the Group had current assets of \$1,977,000 and current liabilities of \$1,197,000 providing a working capital surplus of \$780,000 which represents an decrease of \$623,000 since September 30, 2018.

Financing of future expansion is budgeted to be a mix of accumulated cashflow and the issuance of a non-brokered private placement in March 2019.

#### COMMITMENTS AND CONTINGENT LIABILITIES

The Group has the following capital expenditure commitments in respect of its projects:

|   | 2018   | 2017   |
|---|--------|--------|
|   | \$'000 | \$'000 |
| Amount payable within one year                                    | 44     | 47     |
| Amounts payable after more than one year and less than five years | 65     | 68     |
| After five years  | 370    | 392    |
|   | 479    | 507    |

31 Dec

31 Dec

In addition, there is a commitment to rebuild a small house and a commitment of approximately \$5,900 (R\$15,000) per hectare for any damage to land caused during mining, which is expected to be up to 35 hectares. The Group only makes payments on a per hectare basis at the time of impact.

Brazilian labour law entitles a former employee to lodge within two years of leaving the company claims for alleged unpaid remuneration and compensation in the event of dismissal. The Company, whilst contesting each claim notes that should a claim be successful future liability may arise.

## **OFF-BALANCE SHEET FINANCING**

The Group has not entered into any off-balance sheet financing arrangements.

### CORPORATE GOVERNANCE

# Director Term Limits and Representation of Women on the Board and in Executive Positions

The Group does not have term limits for its directors. While there is benefit to adding new perspectives to the Board from time to time, there are also benefits to be achieved through continuity and directors having in depth knowledge of each facet of the Group's business, which necessarily takes time to develop. Also, setting director term limits forces valuable, experienced and knowledgeable directors to leave. Board renewal is one of many factors taken into consideration as part of the Board's annual assessment. Pursuant to requirements for issuers listed on the TSX, directors of the Group are to be elected (including the re-election of incumbent directors) at each annual meeting of the Company, and in all cases, the term of any director will expire at the close of the next annual meeting of shareholders following such director's appointment.

The Group does not have a formal policy with respect to the identification and nomination of women directors or executive management, or adopted targets for the representation of women on the Board or in executive management. The Board is currently comprised of six men and no women, such that none of the Group's directors are women. The Group's executive team is currently comprised of three men and no women, such that none of the Group's executive officers are women. However, approximately 47% of the staff within various departments in the organization are women including the Corporate, Finance and Human Resources Departments.

While diversity is one issue of importance, the Board believes that the key to effective leadership is to choose directors that, having regard to a wide array of factors, possess the range of necessary independence, skills, experience, commitment and qualifications that are best suited to fostering effective leadership and decision making at the Company. The Board reviews its size and composition from time to time to determine the impact the directors have on its effectiveness, and the Board and the Group's management use a rigorous identification and selection process for new directors, having regard to a variety of factors, and through these processes the Board believes that it is well-positioned to address any problems or deficiencies that may arise.

Furthermore, according to the Charter of the Corporate Governance Committee, when identifying new candidates, the Committee takes into consideration the criteria approved by the Board and such other factors, as it deems appropriate. These factors include judgement, skill, integrity, independence, diversity, experience with business and organisations of comparable size, the interplay of a candidate's experience with the experience of other Board members, willingness to commit the necessary time and energy to serve as a director, and a genuine interest in the Group's business. The Group believes the aforementioned factors are all encompassing and although gender is not specifically listed as one of the factors, gender is taken into account when considering diversity in director nominations.

Although the Group and the Board do not believe that quotas or strict policies necessarily result in the identification or selection of the best candidates, the Board is mindful of the benefits of gender diversity on the Board and in executive positions and the need to maximize effectiveness of the Board and management team's decision making abilities. Accordingly, although the Board believes that the current directors comprise an appropriate mix of individuals with accounting, financial, legal, specific industry and general business experience that is appropriate for the Group's current size, as the Group's business grows, it plans to expand the size of its Board and in conducting searches for new directors, the Board intends to focus on increasing the level of female representation but does not have a representation target at this time. Similarly, although there is no current intention to make changes or additions to the Group's executive team, the Board will be mindful of the benefit of gender diversity in any appointment of new executive officers. The Board believes that the current executive management team comprises an appropriate number and mix of individuals with considerable experience in the agriculture resource industry that is appropriate for the Group's current size.

#### FINANCIAL INSTRUMENTS

The Board of Directors determines, as required, the degree to which it is appropriate to use financial instruments and hedging techniques to mitigate risks. The main risks for which such instruments may be appropriate are foreign exchange risk, interest rate risk and liquidity risk, each of which is discussed below. There is no perceived credit risk as the Group has no trade receivables and minimal other receivables and bank deposits are made with financial institutions considered to be safe by the Board of Directors. There were no derivative instruments outstanding on December 31, 2018.

# Foreign currency risk

The Group's cash resources are mainly held in Canadian Dollars and Brazilian Reais. Exchange rate fluctuations may adversely affect the Group's financial position and results. The Group's financial results are reported in Canadian Dollars and its costs are primarily incurred in Canadian Dollars and Brazilian Reais. The appreciation of the Brazilian Real against the Canadian Dollar could increase the actual capital and operating costs of the Group's mineral exploration projects and materially adversely affect the results presented in the Group's financial statements. Currency exchange fluctuations may also materially adversely affect the Group's future cash flow from operations, its results of operations, financial condition and prospects. The Group has a general policy of not hedging against foreign currency risks. The Group manages foreign currency risk by regularly reviewing the balances held in currencies other than the functional currency.

The Group had the following cash and cash equivalents in currencies other than its presentational currency. The amounts are stated in Canadian Dollar equivalents.

|                  | 31 Dec | 31 Dec |
|------------------|--------|--------|
|                  | 2018   | 2017   |
|                  | \$'000 | \$'000 |
| Canadian Dollars | 406    | 1,122  |
| Brazilian Reais  | 395    | 257    |
| American Dollars | 4      | 156    |
| British Pounds   | 31     | 10     |
|                  | 836    | 1,545  |

The results of a foreign currency risk sensitivity analysis showing a 10% weakening/strengthening of the Brazilian Reais against Canadian Dollars, with all other variables held constant, are as follows:

|                                     | Equ    | ity    |
|-------------------------------------|--------|--------|
|                                     | 31 Dec | 31 Dec |
|                                     | 2018   | 2017   |
|                                     | \$'000 | \$'000 |
| 10% weakening of Brazilian Real     | (1)    | (45)   |
| 10% strengthening of Brazilian Real | 1      | 55     |

# Liquidity risk

To date the Group has relied on shareholder funding to finance its operations. As the Group has finite cash resources and no material income, the liquidity risk is significant and is managed by controls over expenditures and cash resources. In addition, the. Group has long-term loans and trade and other payables with a maturity of less than one year.

#### Interest rate risk

The Group's policy is to retain its surplus funds in the most advantageous term of deposit available up to twelve month's maximum duration. Given that the directors do not consider that interest income is significant in respect of the Group's operations no sensitivity analysis has been provided in respect of any potential fluctuations in interest rates.

#### Financial assets

The floating rate financial assets comprise interest earning bank deposits at rates set by reference to the prevailing LIBOR or equivalent to the relevant country.

#### Fair values

In the Directors' opinion there is no material difference between the book value and fair value of any of the Group's financial instruments.

# Classes of financial instruments

The classes of financial instruments are the same as the line items included on the face of the balance sheet and have been analysed in more detail in the notes to the accounts. All the Group's financial assets are categorised as loans and receivables and all financial liabilities are measured at amortised cost.

# **CRITICAL JUDGEMENTS AND ACCOUNTING ESTIMATES**

The preparation of financial statements in conformity with IFRSs requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision

affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Information about such judgements and estimates is contained in the accounting policies and/or the notes to the consolidated financial statements. Areas of judgement and sources of estimation uncertainty that have the most significant effect on the amounts recognized in the consolidated financial statements are as follows:

#### **Judgements**

#### Commerical production

During the period, the Company completed the construction of its processing plant, and entered into the ramp-up phase, a period during which the production of Super Greensand <sup>®</sup> increased until commercial levels were reached.

Prior to reaching commercial production levels, eligible production costs incurred as part of bringing the mine into production are capitalised.

Judgement was required with respect to the point at which commercial production was deemed to have been reached. The plant was successfully completed in July 2018, with full operation of the plant (within permitted licence limits) and acquisition of mining equipment. Accordingly, management considered these factors and concluded that commercial production had been reached on July 1, 2018.

# - Impairment of Mineral Property

The directors have assessed whether there are any indicators of impairment in respect of mineral property costs totalling \$22 million. In making this assessment they have considered the Group's business plan which includes resource estimates, future processing capacity, future exchange rates, the forward market and longer term price outlook and assumptions regarding weighted average cost of capital. Resource estimates have been based on the most recently filed pre feasibility study NI43-101 report and its opportunities economic model which includes resource estimates without conversion of its inferred resources. Management's estimates of these factors are subject to risk and uncertainties affecting the recoverability of the Group's mineral property costs.

#### **Estimates**

### - Share-based payments

The Group charges the consolidated statement of comprehensive income with the fair value of share options issued. This charge is not based on historical cost, but is derived based on assumptions input into an option pricing model. The model requires management to make several assumptions as to future events, including: an estimate of the average future hold period of issued stock options before exercise, expiry or cancellation; future volatility of the Group's share price in the expected hold period (using historical volatility as a reference); and the appropriate risk-free rate of interest. The resulting value calculated is not necessarily the value that the holder of the option could receive in an arm's length transaction, given there is no market for the options and they are not transferable. The value derived from the option-pricing model is highly subjective and dependent entirely upon the input assumptions made.

# - Amortisation of Mineral Property

Amortisation of the Mineral Property is calculated on a unit of production method expected to amortise the cost including future forecast capital expenditure over the expected life of the mine based on the tonnes of ore expected to be extracted. Any

changes to these estimates may result in an increase in the amortisation charge with a corresponding reduction in the carrying value of the mineral property.

#### - Closure costs

The Group has an obligation to reclaim its properties after the minerals have been mined from the site, and has estimated the costs necessary to comply with existing reclamation standards. These estimates are recorded as a liability at their fair values in the periods in which they occur. If the estimate of reclamation costs proves to be inaccurate, the Company could be required to increase the provision for site closure and reclamation costs, which would increase the amount of future reclamation expense, resulting in a reduction in the Company's earnings and net assets.

# NI 52-109 COMPLIANCE

#### Disclosure Controls and Procedures ("DC&P")

As at December 31, 2018, the CEO and the CFO evaluated the design and operation of the Company's DC&P. Based on that evaluation, the CEO and CFO concluded that the Company's DC&P was effective as at December 31, 2018.

# Internal control over financial reporting ("ICFR")

Based on the evaluation of the design and operating effectiveness of the company's ICFR, the CEO and the CFO concluded that the company's ICFR was effective as at December 31, 2018.

There have been no changes during the period ended December 31, 2018 that have a material effect on the disclosure controls and procedures or the internal controls over financial reporting.

#### FINANCIAL REPORTING STANDARDS

The Company has adopted all of the new and revised Standards and Interpretations that are relevant to its operations and effective for accounting periods beginning on or after 1 January 2018. The adoption of these new and revised Standards and Interpretations had no material effect on the profit or loss or financial position of the Company.

No standards issued but not yet effective have been adopted early.

International Financial Reporting Standards and Interpretations that have recently been issued or amended but are not yet effective and have not been adopted for the reporting year ended December 31, 2018:

| IFRS<br>/Amendment | Title  | Application date of standard | Application date for Group |
|--------------------|--------|------------------------------|----------------------------|
| IFRS 16            | Leases | January 1, 2019              | January 1, 2019            |

IFRS 16 'Leases' – IFRS 16 'Leases' was issued by the IASB in January 2016 and is effective for accounting periods beginning on or after 1 January 2019. The new standard will replace IAS 17 'Leases' and will eliminate the classification of leases as either operating leases or finance leases and, instead, introduce a single lessee accounting model. The Standard Provides a single lessee accounting model, specifying how leases are recognised, measured, presented and disclosed. The Group does not expect any significant changes to the accounting treatment of its existing lease arrangements and the Directors do not consider that the financial and operational impact of this standard, will have a material impact but are continuing to assess the impact of this new standard.

#### **OUTSTANDING SHARE DATA**

As at the date of this MD&A the following securities are outstanding:

| Total         | 52,983,820 |
|---------------|------------|
| Stock options | 3,904,460  |
| Warrants      | 3,137,132  |

#### RISKS

The exploration for and exploitation of natural resources are speculative activities that involve a high degree of risk. The following risk factors should be considered in assessing the Group's activities. Should any one or more of these risks occur it could have a materially adverse effect on the business, prospects, assets, financial position or operating results of the Group. The risks noted below do not necessarily comprise all those faced by the Group. Additional risks not currently known to the Group or that the Group currently deems unlikely to influence an investor's decision to purchase securities of the Group may also impact the Group's business, prospects, assets, financial position or operating results.

#### Mining risks

Mining operations are inherently risky. These operations are subject to all hazards and risks encountered in the exploration, development and production. These include but are not limited to formation pressures, seismic activity, rock bursts, fires, power outages, cave-ins, flooding, explosions and other conditions involved in the drilling and removal of material. Any of these events could result in serious damage to the mine and other infrastructure, damage to life or property, environmental damage and possible legal liability.

The Group has all necessary permits in place to continue with the current operation. As expansion plans progress, the Group will be required to submit revised plans for approval. There can be no guarantee that these revised plans will be agreed to or approved in a timely manner.

The Group's profitability will depend, in part, on the economic returns and actual costs of developing its mining projects, which may differ from the estimates made by the Group.

## Uncertainty in the estimation of mineral resources and mineral reserves

The estimation of mineral reserves, mineral resources and related grades has a degree of uncertainty. Until such a time as the mineral reserves and mineral resources are actually mined and processed, the quantity of grades must be considered as estimates only. The mineral reserve estimates of the Group have been determined or reviewed by an independent consultant and is based on assumed cut-off grades and costs that may prove to be inaccurate. Any material change in these variables may affect the economic outcome of current and future projects.

# **Expected Market Potential of Super Greensand®**

Super Greensand® is a new product without an established market. Substantial investment will be required to develop the market in Brazil and internationally. Although an established market for potassium-based fertilizers already exists, there is no assurance that the Group's market development efforts will result in the significant sales of Super Greensand®. The Group continued to made sales of Super Greensand® during 2018 and has been successful in obtaining registration as a fertilizer product in over 30 US states and is confident that further sales will be achieved at competitive, financially viable prices.

#### **Uncertainty of Acquiring Necessary Permits**

The Group's current and future operations will require approvals and permits from various federal, state and local governmental authorities, and such operations are and will be governed by laws and regulations governing prospecting, development, mining, production, taxes, labour standards, health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters. There is no assurance that delays will not occur in connection with obtaining all necessary renewals of such approvals and permits for the existing operations or

additional approvals or permits for any possible future changes to operations. Prior to any development on any of its properties, the Group must receive permits from appropriate governmental authorities. There can be no assurance that the Group will continue to hold all permits necessary to develop or continue operating at any particular property or obtain all required permits on reasonable terms or on a timely basis.

# **Uncertainty of Additional Capital**

In the past, the Group has relied on sales of equity securities to meet its capital requirements. The development of the Group's properties depends upon the Group's ability to obtain financing through the joint venturing of projects, private placement financing, public financing or other means. There is no assurance that the Group will be successful in obtaining the required financing. The ability of the Group to arrange additional financing in the future will depend, in part, on the prevailing capital market conditions as well as the business performance of the Group. Development of the Group's projects will require substantial additional financing. Failure to obtain such financing may result in the delay or indefinite postponement of development or production on any or all of the Group's projects or even a loss of property interest. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favourable to the Group. If additional financing is raised by the Group through the issuance of securities from treasury, control of the Group may change and security holders may suffer additional dilution.

#### **Further information**

Additional information relating to the Group can be found on SEDAR at <a href="www.sedar.com">www.sedar.com</a> and on the Group's website at <a href="www.verdeagritech.com">www.verdeagritech.com</a>.