



# Investors Newsletter

November Edition | December 06, 2021

TSX:NPK | OTCQB:AMHPF

## DISCLAIMER

This document contains “forward-looking information” within the meaning of Canadian securities laws, which includes but is not limited to, statements with respect to Verde AgriTech Plc’s (the Company’s) strategy, the commercial production of Super Greensand®, K Forte®, Silício Forte®, BAKS®, TK47 and Alpha (“Products”), design and building of a manufacturing facility, receipt of environmental permits, and the generation of cash flow. All statements other than statements of historical facts constitute forward-looking information, including but not limited to statements regarding plans, prospects and business strategies; timing and amount of future production; expectations regarding the results of operations and costs; permitting requirements and timelines; timing and possible outcome of pending litigation or labour disputes; timing for any required repairs and resumption of any interrupted operations; the results of any Feasibility Study, economic studies or Mineral Resource and Mineral Reserve estimations and life of mine estimates; market prices of metals, currency exchange rates, and interest rates; the ability to comply with permitting or other regulatory requirements; anticipated exploration and development activities; and the integration and benefits of acquisitions. Words such as “believe”, “expect”, “anticipate”, “contemplate”, “target”, “plan”, “goal”, “aim”, “intend”, “continue”, “budget”, “estimate”, “may”, “will”, “can”, “could”, “should”, “schedule” and similar expressions identify forward-looking statements. Forward-looking information is necessarily based upon various assumptions including, without limitation, the expectations and beliefs of management, including that the Company can access financing, equipment and labour; assumed and future price of metals; anticipated costs; ability to achieve goals; the effective integration of acquisitions; the political environment supporting mining projects; and assumptions related to the factors set forth below. While these factors and assumptions are considered reasonable by Verde as at the date of this document in light of management’s experience and perception of current conditions and expected developments, these statements 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. Such factors include, but are not limited to: volatility in commodity prices; global financial conditions; risks inherent in mining including but not limited to the environment, industrial accidents, catastrophic equipment failures, unexpected geological formations or unstable ground conditions, and natural phenomena; uninsurable risks; equity markets volatility; outbreaks of viruses and infectious diseases (such as COVID-19); negative publicity and reputation risks; reliance on a single asset; fraud and corruption risks; actual ore mined and/or recoveries varying from estimates; risks associated with the estimation of Mineral Resources and Mineral Reserves and the geology, grade and continuity of mineral deposits; ore processing efficiency; foreign country and emerging markets risks; security; taxation regimes; health and safety risks; exploration, development or mining results not being consistent with expectations; infrastructure risks; counterparty and credit risks and customer concentration; environmental regulation risks; exchange rate fluctuations; stakeholder opposition; civil disruption; labour disputes or difficulties; interruptions in production; uncertain political and economic environments; litigation; regulatory investigations, enforcement and/or sanctions; changes in laws or policies; climate change; cybersecurity risks; estimates of future production, operations, capital and operating cash and all-in sustaining costs; permitting risks; compliance with laws; mine closure risks; challenges to title; the price/availability of supplies or services; liquidity risks and limited financial resources; the estimation of asset carrying values; risks relating to dividends; and other risks and uncertainties, including but not limited to those described in the “Risk Factors” section of the Annual Information Form and the “Risks” section of the Company’s MD&A for the year ended December 31, 2020, which are available on SEDAR at [www.sedar.com](http://www.sedar.com) under the Company’s profile and can also be accessed through this link, at Verde’s [website](http://www.investor.verde.ag). All of the forward-looking statements made in this document are qualified by these cautionary statements. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated, forecast or intended and readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in web sites. Accordingly, there can be no assurance that forward-looking information will prove to be accurate and forward-looking information is not a guarantee of future performance. Readers are advised not to place undue reliance on forward-looking information. The forward-looking information contained herein speaks only as of the date of this document. The Company has filed on SEDAR a NI 43-101 compliant updated pre-feasibility study, published date December 22, 2017. All technical information should be reviewed according to this pre-feasibility study. Readers are cautioned not to rely solely on the summary of such information contained in this document and are directed to complete information posted on Verde’s website ([www.investor.verde.ag](http://www.investor.verde.ag)) and filed on SEDAR and any future amendments to such. This document may include facts, views and opinions of individuals and organizations deemed of interest. Verde does not guarantee the accuracy, completeness or timeliness of, or otherwise endorse, such views, opinions or recommendations, give investment advice, or advocate the purchase or sale of any security or investment. Verde is therefore not responsible for the content, accuracy or timeliness of any linked web site or any link contained in a linked web site. Verde provides such links only as a convenience and the inclusion of any link does not imply endorsement, investigation or verification by Verde of the linked web site or information contained therein. Use of such third party web site will be solely at your risk. The reader should seek the advice of a securities professional or other appropriate investment advisor regarding such reader’s particular situation. The Company does not control any third-party web site and in viewing any third-party web sites. Potential investors should conduct their own investigations as to the suitability of investing in securities of Verde AgriTech Plc.

**We are not good enough for you to invest if you:**

Are risk averse.

Just want to make a quick buck.

Expect delayed growth so you can earn dividends in the near term.

Are looking for a traditional potash company.

Don't deal well with changes.

Don't understand the difficulties in developing technologies and markets for innovative products.

**Join our journey if you:**

Want to change the world into a better place.

Are looking for a real-world technology developing company.

Want to help Brazilian farmers protect the Amazon.

Believe that Verde can make you and the planet healthier.

Have watched or will watch the "Kiss the Ground" Netflix documentary.

Care about soil biodiversity.

## LATEST PRESS RELEASE AND FILINGS

On November 15, 2021 Verde filed its Q3 2021 Results. Please find below weblinks to the relevant materials:

[MD&A](#)

[Financial Statements](#)

[Press Release](#)

[Results Presentation \(Video\)](#)

[Results Presentation \(PDF File\)](#)

**Access the Company's latest released news on the following links:**

November 15, 2021: [Verde announces 169% increase in revenue in Q3 2021 and revises upwards its target for the year](#)

November 5, 2021: [Verde AgriTech Files Amended Interim Financial Statements and MD&A](#)

**All new information since the last newsletter will be highlighted in green.**

## 1. PERMITS \*

### 1.1. Summary

Verde has 3 different mine pits, each one at a different permitting stage and targeting different volumes, as summarized in the table below:

Mine Pit	Fully Permitted to Produce (tpy)	Mining (tpy)		Environmental (tpy)	
		Granted	Pending	Granted	Pending
1	233,000	233,000	0	233,000	0
2	200,000	200,000	25,000,000	2,600,000	0
3	49,800	49,800	2,500,000	49,800	2,500,000
Total	482,800	482,800	27,500,000	2,882,800	2,500,000

The Company currently has full rights to mine 482,800 tpy (since it holds mining Concessions / Permits and Environmental Licenses) and has submitted joint mining and environmental applications for an additional 2,500,000 tpy.

### 1.2. Last 12 months

Verde has 3 different mine pits, each one at a different permitting stage and targeting different volumes, as summarized in the table below:

Mine Pit	Date	Category	Status	Event
2	December 23, 2020	Environment	Granted	2,500,000 tpy Preliminary, Installation and Operation License

## 2. SALES GROWTH

### 2.1. Percentage of recurring clients

The table below shows the percentage of recurring clients that bought Verde's product for two consecutive years (in 2017 and again in 2018, 2018 and 2019, 2019 and 2020), also known as repurchase number.

\* Please refer to the Glossary on page 12 for technical terms.

## 2. SALES GROWTH

This number indicates the amount of clients that bought Verde's product in a given year and reordered it in the next one. For instance, 65.07% of all the farmers that purchased Verde's product in 2019, repurchased it in 2020. The reasons for non-repurchase are also listed in the table, except for 2017-2018, which are not registered.

32.53% of 2019 clients did not repurchase Verde's products in 2020 because the Company failed in customer relationship management due to the lack or non-observance of standard operating procedures for some of its internal processes related to post-sales, such as product usage guidance, positioning, storage and application, customers experience monitoring and market development with consultants.

2.05% of 2019 clients did not repurchase Verde's products in 2020 because the Company's sales team did not have the appropriate technical agronomic knowledge to instruct customers concerning the products specific characteristics and their crop nutrient requirements.

0.34% of 2019 clients did not repurchase Verde's products in 2020 because K Forte was more expensive than KCI in farms farther from the Plant due to freight costs.

Period	2017-2018	2018-2019	2019-2020
Percentage of recurring clients	29.17%	44.85%	65.07%
Non- repurchase reason:			
Verde failed in customer relationship management	Not Registered	51.47%	32.53%
Lack of technical agronomic knowledge to instruct farmers	Not Registered	3.68%	2.05%
K Forte was more expensive than KCI	Not Registered	-	0.34%
Total	-	100%	100%

## 2. SALES GROWTH

### 2.2. Clients per year

The table below shows the number of sales made by the Company per year since 2017. It indicates that Verde has sold its product to 787 clients in 2020, including repurchase clients.

Year	2017	2018	2019	2020
Number of total clients	28	136	355	787

### 2.3. Sales per quarter:

The following table shows Verde's growth per quarter year-on-year:

Product Sales (Tonnes)				
Quarter	2019	2020	2021	YoY Growth
Q1	1,093	10,170	16,558	63%
Q2	23,600	71,183	96,233	35%
Q3	62,895	105,769	153,674	325%
Q4	32,221	56,585	133,535 <sup>1</sup>	163% <sup>1</sup>
Total	119,809	243,707	400,000 <sup>1</sup>	64% <sup>1</sup>

<sup>1</sup> Targeted numbers, based on 2021 guidance.

Revenue (CAD \$'000)				
Quarter	2019	2020	2021	YoY Growth
Q1	154	510	831	63%
Q2	1,329	2,492	5,376	116%
Q3	3,055	3,956	10,651 <sup>3</sup>	169% <sup>3</sup>
Q4	1,491	2,209	8,964 <sup>2</sup>	305% <sup>2</sup>
Total	6,029	9,167	25,822 <sup>2,4</sup>	212% <sup>2,4</sup>

<sup>2</sup> Targeted numbers, based on FY 2021 guidance. Average exchange rate in Q3 2021: C\$1.00 = R\$4.26.

<sup>3</sup> Revenue in Brazilian Real ("R\$") increased by 206%, to R\$45,409,000 compared to R\$14,815,000 in Q3 2020.

<sup>4</sup> Verde announced another increase in its 2021 guidance, now aiming for a total revenue target of R\$110 million, which if achieved would represent a 212% growth YoY.

### 3. ENVIRONMENTAL, SOCIAL AND GOVERNANCE

- Verde's production process is sustainable, with no water or chemical consumption and no tailings dams or waste generation. Ore recovery rate is 100%.
- Mined area is mainly composed of degraded pasture that, once mined, Verde will transform into tropical forest.
- Verde planted 4,300 trees in 2019 and 5,000 trees in 2020. All planted species are native to the region located around the Company's production area.
- Verde was awarded the "Good Environmental Practices Award", promoted by the State System of Environment and Water Resources (SISEMA, in Portuguese) in the category "Best Practice of Mineral Solid Waste Management", 2019.

#### Potassium Chloride Replacement

Potassium salt fertilizers are soil biodiversity's number 1 enemy.

The average farmer applies 200 kg of potassium chloride to the soil per hectare per year. This is equivalent to the application of 1,600 litres of bleach as far as killing soil biodiversity.<sup>1</sup>

The world currently uses 61.5 million tonnes of potassium chloride for agriculture per year<sup>2</sup>, the equivalent to more than 460 billion liters of bleach killing soil biodiversity yearly.

Verde's Product eliminates the need for potassium chloride.

Period	Bleach equivalent amount that has not been applied to agricultural soils
In Q3 2021	193M litres
Since production started	831M litres

Over the next 36 years<sup>3</sup>, the Company intends to have prevented at least 957.8 billion liters of chloride bleach from being applied to soils in the form of KCl.

<sup>1</sup> Effects of Some Synthetic Fertilizers on the Soil Ecosystem (HEIDE HERMARY, 2007)

<sup>2</sup> FAOSTAT, Agricultural use of nutrient potash, 2018: <http://www.fao.org/faostat/en/#data/RFN>

<sup>3</sup> Based on NI 43-101 Production Schedule. See Pre-Feasibility Technical Report Cerrado Verde Project, MG, Brazil, page 141.

#### 4. OPERATIONS

Verde will use this newsletter to provide monthly updates about the construction development of Plant 2, which is expected to reach commercial production in the third quarter of 2022. Plant 2 will have an operational capacity of 1,200,000 tpy, raising Verde's overall production capacity to 1,800,000 tpy.



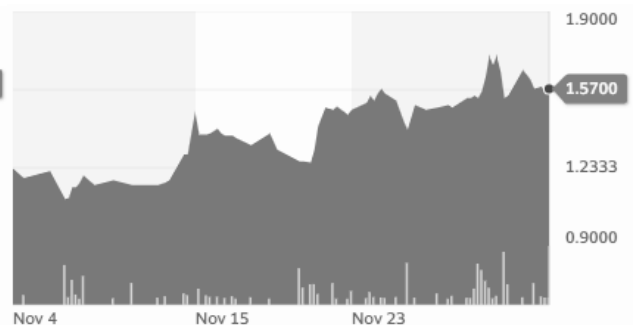
\* Earthwork process in the construction area of Plant 2.

#### 5. SHARE STATISTICS

The graphs below show Verde's stock value over the past 30 days and average volume statistics over the past 3 months, as of December 01, 2021:



TSX: NPK  
Average Volume (3 months) = 67.22k



OTCQB: AMHPF  
Average Volume (3 months) = 11.1k



## 6. TOP HEADLINES

### Verde's YouTube Channel

- [Q3 2021 Results Presentation + Q&A session](#): Watch the Company's Q3 Results Presentation followed by a Q&A session.
- [Fertilizer Companies in Brazil](#): Cristiano Veloso talks about the fertilizer production in the country, how its market works, and the main fertilizer companies in Brazil.

### Investors Blog

Verde launched its blog for investors, and the first texts are already available.

- [Potash Investing: An Overview](#): As potash price rose this 2021, potash investing was brought to new light. Learn more about this market.
- [Despite booming potash production, potash ETFs still scarce](#): Potash ETFs are still uncommon, despite the rise of exchange-traded funds. Learn more about potash ETFs.

### Analyst Coverage

- [Discovery Watch](#): John Kaiser talks about Verde during an interview at HoweStreet.com.
- [Hallgarten & Company Portfolio Review for the month of October 2021](#): Christopher Ecclestone sets a target for Verde's stock price in 12 months, page 11.

### Relevant Agribusiness News

- [Potential Use of Beneficial Microorganisms for Soil Amelioration, Phytopathogen Biocontrol, and Sustainable Crop Production in Smallholder Agroecosystems](#): To ensure healthy crop production approaches, smallholders are looking for alternative ecological strategies that best fit their systems. The most widely accepted solution that has aroused a lot of interest among researchers and small farmers is the use of biological agents

## 7. HOW MUCH K FORTE® IS USED IN AVERAGE PER CROP

- Soybeans: 1 tonne per hectare
- Corn: 1 tonne per hectare
- Cotton: 1.5 tonne per hectare
- Coffee: 3 tonnes per hectare
- Sugarcane: 1.5 tonne per hectare

## 8. K FORTE® APPLICATION CALENDAR

The calendar below shows the agricultural production cycles and the period for application of K Forte® in different crops, according to seasonality.

Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Soybeans	Harvest				K Forte® Application				Planting			
	Harvest				K Forte® Application				Planting			
Corn	Harvest				K Forte® Application				Planting			
	Harvest				Harvest ( Second Crop)				Planting			
Cotton	Planting (Second Crop)				K Forte® Application				Planting			
	Planting (Second Crop)				Harvest				Planting			
Coffee	Planting - Top Dressing				K Forte® Application				Planting - Top Dressing			
	Planting - Top Dressing				Harvest				Planting - Top Dressing			
Sugarcane	Harvest (Northeast Region)				K Forte® Application				Planting - Top Dressing			
	Harvest (Northeast Region)				Harvest (Central-West and South Regions)				Planting - Top Dressing			
	Planting (18-month cycle)								Planting - Top Dressing			

## 9. AREA USED FOR CROP PRODUCTION IN BRAZIL \*

State	Area (ha)
Mato Grosso	16,611,799
Paraná	10,565,962
São Paulo	8,172,747
Goiás	6,522,432
Mato Grosso do Sul	5,790,276
Minas Gerais	5,596,641
Bahia	4,073,219
Other States	21,913,415
Total area	79,246,491

\* Source: Brazilian Institute of Geography and Statistics, Systematic Survey of Agricultural Production, 2019.



## 10. RESULTS CALENDAR

Results	Due Date
Q4/21	March 31, 2022
Q1/22	May 15, 2022
Q2/22	August 15, 2022
<b>Q3/22</b>	<b>November 15, 2022</b>

## 11. ANALYSTS COVERING VERDE

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## 12. LEAD INDEPENDENT DIRECTOR CONTACT

Michael St Aldwyn was unanimously elected by all other four independent directors to serve as Verde's Lead Independent Director. For any enquiries please contact: [ild@verde.ag](mailto:ild@verde.ag)

## 13. VERDE`S SOCIAL MEDIA

Verde has investors-only Social Media . Click on the links below and follow the company to receive the latest news:

<a href="#">YouTube</a>	<a href="#">Twitter</a>	<a href="#">Linkedin</a>	<a href="#">Facebook</a>	<a href="#">Website</a>
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## 14. GLOSSARY

**3D Alliance®:** Technology developed to transform the three-dimensional structure of the raw materials added to the fertilizer. The materials are subjected to a mechanical process, increasing their specific surfaces and forming microparticles that release nutrients progressively. The fertilizers resulting from the mixture are homogeneous and can be evenly distributed in the soil. The 3D Alliance® technology is used in the BAKS® production process.

**ANM:** See "National Mining Agency".

**BAKS®:** The Group's newest product, which is a combination of K Forte® (source of potassium, silicon and magnesium) plus three other nutrients that can be chosen by customers according to their crops' needs. BAKS® was launched by the Group on December 15, 2020.

## 14. GLOSSARY

**Cerrado Verde Project (“the Project”):** Located in Minas Gerais state, Brazil. Potassium-rich deposit owned by Verde, from which the Group is producing solutions for crop nutrition, crop protection, soil improvement, and increased sustainability. The Project has an NI 43-101 Measured and Indicated Mineral Resource Estimate of 1.47 billion tonnes at a grade of 9.2% K<sub>2</sub>O, which includes a Measured Mineral Resource of 83 million tonnes with an average grade of 10.1% K<sub>2</sub>O. The Pre-Feasibility Study of the Project evaluated the technical and financial aspects of producing 25 Mtpy of the Product divided in three phases: Phase 1 (0.6 Mtpy); Phase 2 (5 Mtpy) and Phase 3 (25 Mtpy). The Cerrado Verde Project has been in production since 2017.

**Exploration Authorisation Application (“Requerimento de Pesquisa”):** Claim for the geological exploration of an area. Interested parties must file an application for exploration authorisation with the ANM and state a case for conducting mineral exploration activities. The Exploration Authorisation Applications are analysed in order of filing date. If the party requesting an exploration authorisation meets the necessary legal requirements and an exploration authorisation has not been previously issued for any part of the area in question, then the ANM will grant the exploration authorisation.

**Exploration Authorisation (“Alvará de Pesquisa”):** The Exploration Authorisation guarantees to the owner, be it an individual or a legal entity, the power and duty to carry out mineral research work in the entitled area. It grants the rights to conduct exploration activities for a period from two to four years, which may be renewed for an additional period (and potentially additional renewals on a case-by-case basis). An exploration authorisation does not entitle the holder the right to extract mineral substances. During the research work, extraction will only be allowed in exceptional circumstances, with a specific title issued by the ANM (Mining Permit - “Guia de Utilização”). Once mineral exploration is completed, a final exploration report must be submitted for ANM’s review and approval. If approved, the next step is to file, within one year, all applications for a mining concession with the Ministry of Mines and Energy (MME).

**Environmental License (“Licença Ambiental”):** The environmental licensing process consists of a three-step system, each step is a separate license contingent upon the prior step. In the state of Minas Gerais there is the possibility of licensing phases simultaneously, depending on the size of the project, according to the Normative Resolution 217/2017. The three phases are, as follows:

## 14. GLOSSARY

- **Preliminary License (“Licença Prévia – LP”)**: Granted at the planning stage of the project, this license signals the approval of its location, concept and environmental feasibility. It establishes the basic requirements to be met during the subsequent implementation phases. The maximum term for LPs is five years.
- **Installation License (“Licença de Instalação – LI”)**: This license authorises the setup of the works and commencement of construction based on the specifications set forth in the previous license and the approved plans, programs and project designs, including environmental control measures. The maximum term for LIs is six years.
- **Operating License (“Licença de Operação – LO”)**: This license authorises the operation contingent upon compliance with the terms of the LO and the LI, including any environmental control measures and operating conditions. The maximum term for LOs is 10 years.

**Feasibility Study (“Plano de Aproveitamento Econômico – PAE”)**: report filed as part of the Mining Concession Application. It demonstrates quantitative geological and technological study of the mineral deposit and as well as demonstrating the technical-economic feasibility of a mine.

**Final Exploration Report (“Relatório Final de Pesquisa”)**: At the end of the exploration stage, the holder of the mineral right must present a Final Exploration Report with the results obtained from the work, containing a quantitative geological and technological study of the mineral deposit and demonstrate the technical-economic feasibility of a mine. The ANM analyses this report technically through a site visit. If the ANM approves the report based on the potential merits of a future mining operation, the titleholder has a one-year period to prepare and file the Mining Concession Application with the Federal Minister of Mines and Energy.

**K Forte® (“the Product”)**: Multinutrient potassium fertilizer brand marketed in Brazil by the Group.

**MME**: See “Ministry of Mines and Energy”.

## 14. GLOSSARY

**Micro S Technology®:** The Group's exclusive elemental sulfur micronization technology, that allows for a larger contact surface. This facilitates the work of microorganisms and oxidation rate increases and so nutrients become available to plants more efficiently. This increases the absorption of sulfur and, consequently, the development of the plant. Micro S Technology® allows micronized sulfur, one of the additional nutrients most required by farmers, to be added to BAKS®.

**Mine Site:** An economic unit comprised of an underground and/or open pit mine, a treatment plant and equipment and other facilities necessary to produce metals concentrates, in existence at a certain location.

**Mineral Reserve:** A mineral reserve is the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which mineral reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a mineral reserve must be demonstrated by a pre-feasibility study or feasibility study.

- **Probable Mineral Reserve:** The economically mineable part of an indicated, and in some circumstances, a measured mineral resource. The confidence in the modifying factors applied to a probable mineral reserve is lower than that applied to a proven mineral reserve.
- **Proven Mineral Reserve:** The economically minable part of a measured mineral resource. A proven mineral reserve implies a high degree of confidence in the modifying factors.

## 14. GLOSSARY

**Mineral Resource:** A mineral resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

- **Indicated Mineral Resource:** That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

An indicated mineral resource has a lower level of confidence than that applied to a measured mineral resource and may only be converted to a probable mineral reserve.

- **Inferred Mineral Resource:** That part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.



## 14. GLOSSARY

**Measured Mineral Resource:** That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. A measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource. It may be converted to a proven mineral reserve or to a probable mineral reserve.

**Mining Concession Application (“Requerimento de Lavra”):** This application must satisfy certain requirements, including the presentation of the mining Group’s Feasibility Study (“Plano de Aproveitamento Econômico - PAE”). While the ANM reviews the application for a mining concession, the applicant retains the exclusive rights to this area. Mine construction and development activity can only begin after the publication of a mining concession issued by the MME and provided that the respective license is also granted pursuant to applicable Brazilian environmental laws.

**Mining Concession (“Portaria de Concessão de Lavra”):** guarantees to the owner the power and duty to explore the mineral deposit until it is exhausted, without a definite term. The title can only be obtained by mining companies and only after undertaking the authorised exploration through an exploration authorisation and subsequent approval of the Final Exploration Report. One of the essential documents for requesting a mining concession is the Feasibility Study, which must demonstrate the technical and economic viability of the project and indicate, among other information, the mining method, the planned scale of production and the mine closure plan.

**Mining Permit (“Guia de Utilização”):** exceptional mining permit with predetermined expiration date. It is granted by the ANM and allows the mineral extraction in the area before the grant of a Mining Concession, according to the environmental legislation.

**Ministry of Mines and Energy (“Ministério de Minas e Energia - MME”):** federal government’s branch responsible for making public policy that covers the geological, mineral and energy resources, hydroelectric, mining, and metallurgic energy sectors.

## 14. GLOSSARY

**Mtpy:** Million tonnes per year.

**N Keeper® Technology:** proprietary processing technology for glauconitic siltstone that alters its physical-chemical properties to enable ammonia retention for use as a calibrated additive in Nitrogen fertilizers. N Keeper® leads to the reduction of Nitrogen volatilization loss, which increases the efficiency of crop fertilization and mitigates the impact on the environment and climate changes.

**National Mining Agency (“Agência Nacional de Mineração – ANM”):** federal agency subordinated to the Ministry of Mines and Energy. It is responsible for the management of mining activities and Brazilian mineral resources. Former National Department of Mineral Production (“Departamento Nacional de Produção Mineral - DNPM”).

**NI 43-101:** National Instrument 43-101 - Standards of Disclosure for Mineral Projects within Canada.

**PFS:** See “Pre-Feasibility Study”.

**Pre-Feasibility Study (“PFS”):** A pre-feasibility study is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined.

It includes a financial analysis based on reasonable assumptions on the Modifying Factors and the evaluation of any other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the mineral resource may be converted to a mineral reserve at the time of reporting. A pre-feasibility study is at a lower confidence level than a feasibility study.

**Product:** Multinutrient potassium fertilizer marketed in Brazil under the brand K Forte® and internationally as Super Greensand®, whose production and sale is the principal activity of the Group.

**Tonne:** A unit of weight. One metric tonne equals 2,204.6 pounds or 1,000 kilograms.

## 14. GLOSSARY

**tpy:** Tonnes per year.

**Super Greensand® (“the Product”):** Multinutrient potassium fertilizer brand marketed internationally by the Group.



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