



# ANNUAL INFORMATION FORM

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For the year ended December 31, 2019

Dated March 20, 2020

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## GLOSSARY OF TERMS

The following are defined terms used in this Annual Information Form:

"\$" and "dollars" means Canadian dollars.

"**2016 Technical Report**" means the technical report entitled "KCl and MgCl<sub>2</sub> Reserve and Resource Estimate for the Wynyard Carnallite Project, Subsurface Mineral Lease KL 246, KL 247 and KLSA 010, Saskatchewan, Canada" prepared by ERCOSPLAN, Amec Foster Wheeler Canada Ltd. and North Rim with an effective date June 23, 2016.

"**ABCA**" means the *Business Corporations Act* (Alberta) together with any amendments thereto and where applicable, includes all regulations promulgated thereunder.

"**AIF**" means this annual information form dated March 20, 2020.

"**Belle Plaine Member**" means the potash and carnallite bearing bed that is second from the top, within the Prairie Evaporite Formation.

"**Board of Directors**" or "**Board**" means the board of directors of the Company.

"**CAPEX**" means capital expenditures.

"**carnallite**" means a highly deliquescent evaporite mineral, being hydrated potassium magnesium chloride, with the chemical formula of KCl•MgCl<sub>2</sub>•6(H<sub>2</sub>O).

"**carnallitite**" means rock material consisting primarily of carnallite, along with sylvite, halite and insoluble materials such as clays, anhydrite, and dolomite.

"**CIM Definition Standards**" means the CIM Definition Standards for Mineral Resources and Mineral Reserves, dated May 10, 2014, approved on May 10, 2014 by Council of the Canadian Institute of Mining, Metallurgy and Petroleum.

"**Common Shares**" means common shares in the share capital of the Company.

"**Company**" or "**Karnalyte**" means Karnalyte Resources Inc., a corporation incorporated under the ABCA.

"**Deadwood Formation**" means a succession of sandstones, shales, siltstones, and limestones formed during the Cambrian Period when a shallow sea existed in what is now central western North America. It is now a "porous rock sea" situated about 1500 metres below the surface at Wynyard, Saskatchewan and which is approximately 50 metres thick in the Wynyard area.

"**Devonian Age**" means the geological period of the Paleozoic Era spanning from the end of the Silurian Period.

"**EIS**" means an Environmental Impact Statement, which is a description and evaluation of the impacts of a development on the environment and includes a discussion of a company's commitment regarding such development, which statement is required to be submitted to the Saskatchewan Ministry of the Environment pursuant to *The Environmental Assessment Act* (Saskatchewan).

**"Elk Point Group"** means an area composed of dolomite, shale, anhydrite, potash and limestone located from North Dakota in the south-east, through Manitoba, Saskatchewan, and Alberta to north-eastern British Columbia.

**"ERCOSPLAN"** means ERCOSPLAN Ingenieurgesellschaft Geotechnik und Bergbau mbH, an independent engineering company based in Erfurt, Germany that provides consulting services for potash exploration, mining, and processing.

**"Esterhazy Member"** means the lowest potash and carnallite bearing bed within the Prairie Evaporite Formation.

**"Framework Agreement"** means the agreement dated March 14, 2016 and made effective February 24, 2016 by and among the Company, GSFC, and Mr. Robin Phinney, as further described in the material change report filed by the Company on March 18, 2016, and which agreement expired on September 30, 2016.

**"GSFC"** means Gujarat State Fertilizers & Chemicals Limited, a publicly-traded Indian agribusiness company focused on the production and sale of fertilizers and industrial products.

**"halite"** means the natural mineral form of sodium chloride, or NaCl.

**"high quality"** means, when used in relation to potash and fertilizer, low sodium content, and when used in relation to magnesium products, minimal impurities.

**"Indicated Mineral Resource"** has the meaning ascribed to it under the heading "Technical Information".

**"Inferred Mineral Resource"** has the meaning ascribed to it under the heading "Technical Information".

**"Initial Facility"** means the planned solution mining facility of the Company which is intended to initially produce 625,000 tonnes of potash per year.

**"K<sub>2</sub>O"** is a chemical term used in the analysis and marketing of fertilizers that contain different potassium compounds, as a comparison of their relative potassium content when compared to equivalent potassium oxide (K<sub>2</sub>O). Pure KCl is equivalent to 63.178% K<sub>2</sub>O.

**"Karnalyte Property"** means the approximately 90,766 acres (36,733 hectares) of land located in south central Saskatchewan that is included in the Leases.

**"KCl"** is the chemical formula for potassium chloride, or potash.

**"Leases"** means Subsurface Mineral Lease KLSA 010, Subsurface Mineral Lease KL 246, and Subsurface Mineral Lease KL 247A, and **"Lease"** means any one of them.

**"MD&A"** means management discussion and analysis.

**"Measured Mineral Resource"** has the meaning ascribed to it under the heading "Technical Information".

**"MgCl<sub>2</sub>"** is the chemical formula for magnesium chloride.

**"Mineral Reserve"** has the meaning ascribed to it under the heading "Technical Information".

"**Mineral Resource**" has the meaning ascribed to it under the heading "Technical Information".

"**Modifying Factor**" has the meaning ascribed to it under the heading "Technical Information".

"**MTPD**" means metric ton per day.

"**NaCl**" is the chemical formula for sodium chloride.

"**NI 43-101**" means National Instrument 43-101 - *Standards of Disclosure for Mineral Projects*.

"**NI 52-110**" means National Instrument 52-110 - *Audit Committees*.

"**North Rim**" means North Rim Exploration Ltd., an engineering, technical, and consulting services company located in Saskatoon, Saskatchewan.

"**Offtake Agreement**" means the offtake agreement dated January 10, 2013 and entered into between the Company and GSFC.

"**OPEX**" means operational expenditures.

"**Options**" means incentive stock options of the Company currently issued or to be issued under its stock option plan.

"**Patience Lake Member**" means the uppermost potash and carnallite bearing bed within the Prairie Evaporite Formation.

"**Permit Area**" means the area covered by the historical Permit KP 360 or Permit KP 360A, as the case may be.

"**Permit KP 360**" means the subsurface mineral permit issued on March 13, 2008 by the Saskatchewan Ministry that was held by the Company for rights to explore and prospect for subsurface minerals on portions of Karnalyte Property, which permit was replaced with Permit KP 360A and Subsurface Mineral Lease KLSA 010.

"**Permit KP 360A**" means the subsurface mineral permit issued by the Saskatchewan Ministry on February 14, 2011 to the Company that, along with Subsurface Mineral Lease KLSA 010, replaced Permit KP 360 and provided the Company with exclusive rights to explore and prospect for subsurface minerals located within the Permit Area, which Permit KP 360A subsequently expired on March 12, 2016 and was replaced by Subsurface Mineral Lease KL 246 and Subsurface Mineral Lease KL 247.

"**Phase I**" means the Company's proposed development of the Wynyard Potash Project with an expected production capacity of 625,000 TPY of potash.

"**Phase II**" means the proposed development of the Wynyard Potash Project with an expected production capacity of 750,000 TPY, bringing the total capacity with Phase I to 1,375,000 TPY of potash.

"**Phase III**" means the proposed development of the Wynyard Potash Project with an expected production capacity of 750,000 TPY of potash, bringing the total capacity with Phase I and Phase II to 2,125,000 TPY of potash.

"**potash**" means the commercial name for potassium chloride, used as a fertilizer and as an industrial feedstock.

**"potassium chloride"** is the chemical compound that is a metal halide composed of potassium and chloride.

**"Prairie Evaporite Formation"** means an underground sedimentary formation containing many layers of salts and insoluble material, formed by evaporation of water from ancient seas.

**"Preferred Shares"** means preferred shares in the share capital of the Company.

**"preliminary feasibility study" or "pre-feasibility study"** means a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social and environmental factors and the evaluation of other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or a part of the mineral resource may be classified as a mineral reserve.

**"Probable Mineral Reserve"** has the meaning ascribed to it under the heading "Technical Information".

**"Proteos Nitrogen Project"** means the nitrogen fertilizer project the development of which the Company is actively exploring, which project is intended to be a small-scale, ammonia and urea plant to be located in central Saskatchewan with a nameplate production capacity of approximately 700 MTPD ammonia and approximately 1,200 MTPD urea, and would be designed to produce anhydrous ammonia (82-0-0) and granular urea (46-0-0).

**"Proven Mineral Reserve"** has the meaning ascribed to it under the heading "Technical Information".

**"Qualified Person"** means an individual who: (a) is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation, or mineral project assessment, or any combination of these; (b) has experience relevant to the subject matter of the mineral project; and (c) is a member in good standing of a professional association as defined by NI 43-101.

**"Rights Offering"** means the rights offering the Company announced on November 14, 2018 and closed on December 24, 2018 pursuant to which the Company issued a total of 28,116,565 rights to subscribe for up to an aggregate of 14,058,282 Common Shares.

**"Saskatchewan Ministry"** means the Saskatchewan Ministry of the Economy (and its predecessors and successors, as applicable).

**"SEDAR"** means the System for Electronic Document Analysis and Retrieval, which is the electronic filing system for the disclosure documents of reporting issuers across Canada, available at [www.sedar.com](http://www.sedar.com).

**"SRC"** means the Saskatchewan Research Council, a Saskatchewan treasury board crown corporation that provides services related to technology commercialization and applied research, development, and demonstration.

**"Subscription Agreement"** means the subscription agreement dated January 10, 2013 and entered into between the Company and GSFC.

"**Subsurface Mineral Lease KL 246**" means the Subsurface Mineral Lease KL 246 issued on June 23, 2016 by the Saskatchewan Ministry to the Company which has an initial term that commenced on March 13, 2016 and expires on April 24, 2037, as such lease may be amended or replaced from time to time.

"**Subsurface Mineral Lease KL 247**" means the Subsurface Mineral Lease KL 247 issued on June 23, 2016 and replaced on November 23, 2016 by Subsurface Mineral Lease KL 247A.

"**Subsurface Mineral Lease KL 247A**" means the Subsurface Mineral Lease KL 247A issued on November 23, 2016 by the Saskatchewan Ministry to the Company which has an initial term that commenced on March 13, 2016 and expires on April 24, 2037, as such lease may be amended or replaced from time to time.

"**Subsurface Mineral Lease KLSA 010**" means the Subsurface Mineral Lease KLSA 010 issued on February 14, 2011 by the Saskatchewan Ministry to the Company which has an initial term that commenced on September 8, 2010 and expires on September 7, 2031, as such lease may be amended or replaced from time to time.

"**sylvinite**" means a rock containing sylvite, in varying mixtures with halite and insoluble material.

"**sylvite**" means a natural mineral form of potassium chloride.

"**tonne**" means a metric ton, equal to 1,000 kilograms.

"**TPY**" means tonnes per year.

"**TSX**" or "**Exchange**" means the Toronto Stock Exchange.

"**US**" or "**United States**" means the United States of America, its territories or possessions, any state of the United States and the District of Columbia.

"**Wynyard Carnallite Project**" or "**Wynyard Potash Project**" means the potash and magnesium exploration and development project of the Company on the Karnalyte Property.



## FORWARD LOOKING INFORMATION

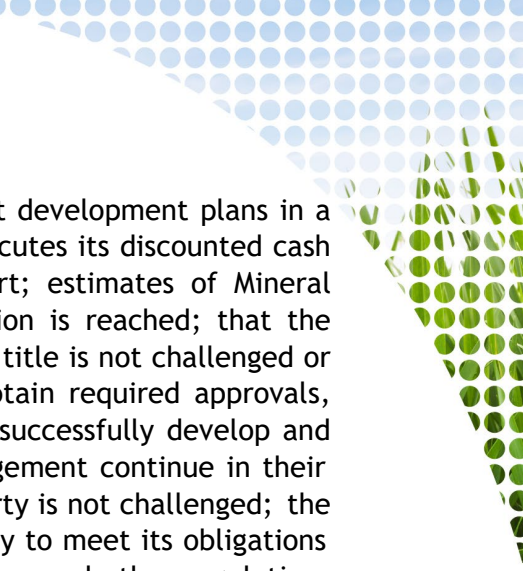
Certain statements in this AIF may constitute "forward-looking" statements which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking information is often, but not always, identified by the use of words such as "anticipate", "believe", "could", "estimate", "expect", "plan", "intend", "forecast", "future", "guidance", "may", "predict", "project", "should", "strategy", "target", "will" or the negative or similar words or phrases suggesting future outcomes or language suggesting an outlook.

Forward-looking statements may include, but are not limited to, managements expectations, intentions, and beliefs concerning: the development and operation of the Wynyard Potash Project or the Proteos Nitrogen Project; future extraction and exploitation of mineral deposits; capital expenditure requirements; future commodity prices; expectations regarding prices and costs; expectations regarding the Companys ability to obtain additional financing necessary to develop the Wynyard Potash Project and the Proteos Nitrogen Project; expectations regarding the production capacity of the Wynyard Potash Project and the Proteos Nitrogen Project; expectations regarding markets for potash and nitrogen fertilizers in North America and globally; expectations regarding the distinction between standard-grade and high-grade potash; expectations regarding markets for magnesium compounds; the effectiveness of the Companys anticipated solution mining methods; expenditures to be made by the Company to meet certain work commitments; work plans to be conducted by the Company; reclamation and rehabilitation obligations and liabilities; treatment under governmental regulatory regimes with respect to environmental matters; treatment under governmental taxation regimes; impact of foreign governments and regulation on the Companys operations; future development of infrastructure; government regulation of mining operations; dependence on key personnel; and competitive conditions.

Forward-looking statements in this AIF include statements regarding: the Companys ability to commence and increase production from 625,000 TPY, to 1.375 million TPY, and thereafter to 2.125 million TPY of potash; the production of potash, nitrogen fertilizer, or magnesium compounds; the costs related to the operation of the plant and facilities will be consistent with other solution mining operations subject to differences in the Companys mineral body and processing; the implementation and ongoing use of solution mining process; further seismic exploration and drilling; global fertilizer demand and consumption; CAPEX and OPEX estimates; anticipated results of development and extraction activities and estimated future developments; the Companys ability to produce sufficient potash to meet its obligations under the Offtake Agreement; the Companys ability to obtain additional financing on satisfactory terms; the market prices for potash, nitrogen fertilizer, and magnesium compounds; the Companys ability to pump the waste underground to eliminate any requirement for surface salt tailings piles; the Companys ability to economically extract and process mineralized material into potash; and the improvements that the Company has developed for the solution mining process are as effective as expected by the Company.

Such forward-looking statements are based on a number of material factors and assumptions, including: the stabilization of the global potash industry and market; the Company obtains





additional financing in the future; the Company executes its project development plans in a manner consistent with the 2016 Technical Report; the Company executes its discounted cash flow model assumptions as described in the 2016 Technical Report; estimates of Mineral Resources and Mineral Reserves are accurate; full potash production is reached; that the Company continues to have title to the Karnalyte Property, and such title is not challenged or impacted in any material manner; that the Company is able to obtain required approvals, licences and permits, in a timely manner; the Company is able to successfully develop and market magnesium-based products; the Companys key senior management continue in their respective roles with the Company; the Companys intellectual property is not challenged; the Company does not become subject to litigation; the Companys ability to meet its obligations under the Offtake Agreement; environmental and other applicable law and other regulations are not amended, repealed or applied in a manner that impacts the development and operation of the Wynyard Potash Project and the Proteos Nitrogen Project as currently anticipated; there are no adverse changes to price of potash, nitrogen fertilizer, or magnesium compounds that would adversely affect the prospects for developing and operating the Wynyard Potash Project and the Proteos Nitrogen Project, or making it inadvisable or uneconomic to proceed with development; the future mining facilities operate as anticipated; the Companys ability to maintain and develop positive relationships with foreign governments and future business partners; the Company is able to develop and maintain the infrastructure required to export, store and transport its potash, nitrogen fertilizer, or magnesium compounds production; there are no comparable mining companies targeting carnallite in North America; and the continued existence and operation of the primary potash or nitrogen fertilizer production facility.

Forward-looking statements involve significant risks and uncertainties. Such statements should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements, including, but not limited to, the following factors, which are discussed in greater detail under the heading "Description of the Business - Risk Factors": exploration, development and operation risks related to the Wynyard Potash Project and the Proteos Nitrogen Project; the ability to secure adequate financing to implement the Companys strategic and development objectives; the ability to maintain adequate capital to meet the Companys financial commitments; the successful execution of the Companys project plans; the uncertainty regarding the estimation of Mineral Resources and Mineral Reserves; the lack of current revenues and uncertainty about future revenues; the risks associated with the limited operating history of the Company; the lack of developed markets for the Companys magnesium-based products; the unproven nature of solution mining of carnallite in Saskatchewan; no assurance of titles, leases, or maintenance of existing permits; permit and licensing requirements related to exploration and development activities; the Companys ability to satisfy its material agreements, including the Offtake Agreement; the risks associated with the enforcement of the Companys material agreements, including the Offtake Agreement; the potential loss of key employees, technical experts or key suppliers; the potential for a volatile market for the Common Shares; the potential dilution of shareholders through future financings; failure to protect the Companys intellectual property rights; litigation and tax matters; adequacy of the Companys insurance coverage; adequacy of the Companys internal controls over financial reporting; environmental and regulatory risks; the volatility of potash and magnesium compounds prices; the cyclical nature of the potash and magnesium compounds industries;

availability and cost of labour and materials required for the construction of Phase I; competition; and currency exchange rate fluctuations.

Although the forward-looking statements contained in this AIF are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this AIF and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company assumes no obligation to update or revise them to reflect new events or circumstances.

All forward-looking statements contained in this AIF are expressly qualified by this cautionary statement. Further information about the factors affecting forward-looking statements is available in Karnalytes MD&A and audited annual financial statements for the year ended December 31, 2019 which have been filed with Canadian provincial securities commissions and are available on SEDAR at [www.sedar.com](http://www.sedar.com).

## TECHNICAL INFORMATION

The disclosure included in this AIF uses Mineral Reserves and Mineral Resources classification terms that comply with reporting standards in Canada and the Mineral Reserve and Mineral Resources estimates are made in accordance with the CIM Definition Standards, which were adopted by NI 43-101. NI 43-101 is a rule that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. The following definitions are reproduced from the CIM Definition Standards:

A "**Modifying Factor**" or "**Modifying Factors**" are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors.

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. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated, and Measured categories.

An "**Inferred Mineral Resource**" is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. 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.

An "**Indicated Mineral Resource**" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and

evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

A "**Measured Mineral Resource**" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. 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 Mineral Reserve or to a Probable 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.

A "**Probable Mineral Reserve**" is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

A "**Proven Mineral Reserve**" is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

Unless otherwise indicated, all of our Mineral Reserves and Mineral Resources included in this Annual Information Form have been prepared in accordance with NI 43-101.

## **CORPORATE STRUCTURE**

The Company was incorporated pursuant to the ABCA on November 16, 2007. Effective April 9, 2008, Karnalytes articles were amended by a Certificate of Amendment to increase the minimum number of directors from one to three, and to remove the restrictions on share transfers.

The Company's head office is located at 3150B Faithfull Avenue, Saskatoon SK, S7K 8H3. The Company's registered office is located at 2100 Livingston Place, 222 3rd Avenue SW, Calgary, AB T2P 0B4.

The Company has no subsidiaries.

## GENERAL DEVELOPMENT OF THE BUSINESS

### Three Year History

#### 2017

On May 5, 2017, at the Companys annual meeting of shareholders, the shareholders elected as directors of the Company Messrs. Vishvesh Nanavaty, Sanjeev Varma, Peter Matson, W. Todd Rowan, Gregory Szabo, and Mark Zachanowich.

On June 28, 2017, the Company announced that Mr. Robin Phinney, the Companys president before that date, was no longer with the Company.

On July 4, 2017, the Company announced that it has received and accepted the resignation of Mr. Siu Ma, as Executive Vice-president and Chief Operating Officer of the Company, which resignation was effective as of July 30, 2017.

On July 20, 2017, the Company announced that the Board appointed Mr. W. Todd Rowan as Interim Chief Executive Officer.

On November 1, 2017, the Company announced that it received a statement of claim filed at the Court of Queens Bench of Alberta by Mr. Siu Ma, alleging breach of contract for the Companys failure to provide payments to Mr. Ma after he terminated the employment agreement alleging a change of control had occurred.

On December 6, 2017, the Company announced the completion of magnesium testing by SRC.

On December 15, 2017, the Company announced the appointment of Ms. Danielle Favreau as Chief Financial Officer. The Company also announced the grants of Options to employees, officers, and directors of the Company.

#### 2018

On February 5, 2018, the Company announced the appointment of Mr. Frank Wheatley as President of the Company and that the Company intends for Mr. Wheatley to become the permanent Chief Executive Officer, replacing Interim Chief Executive Officer, W. Todd Rowan, upon the Companys successful arrangement of financing for the Wynyard Potash Project.

On May 14, 2018, the Company announced an update to its strategic plan and that it intends to diversify its business into two fertilizer products—potash and nitrogen.

On June 7, 2018, at the Companys annual and special meeting of shareholders, the shareholders elected as directors of the Company Messrs. Vishvesh Nanavaty, Sanjeev Varma, Peter Matson, W. Todd Rowan, Gregory Szabo, and Mark Zachanowich.

On July 30, 2018, the Company announced that it has initiated several component parts of the pre-feasibility study on the Proteos Nitrogen Project, designed to explore the technical and economic viability of the proposed project, including an invitation for expressions of interest on the technical and economic aspects of the project, an independent market analysis, and due diligence on a number of potential project sites.

On November 14, 2018, the Company announced the Rights Offering.

On December 24, 2018, the Company announced that the Rights Offering successfully closed and was fully subscribed, and that the Company issued 14,058,282 Common Shares pursuant to the Rights Offering for a total of approximately \$2.3 million in proceeds.

## **2019**

On May 15, 2019, at the Companys annual and special meeting of shareholders, the shareholders elected as directors of the Company Messrs. Vishvesh Nanavaty, Sanjeev Varma, and W. Todd Rowan.

On August 9, 2019, the Company announced the appointment of Mr. D.C. Anjaria as a director of the Company.

On September 11, 2019, the Company announced that Mr. Frank Wheatley, the Companys chief executive officer before that date, was no longer with the Company and that Ms. Danielle Favreau would act as interim chief executive officer.

On November 5, 2019, the Company announced that it began the development of a pre-feasibility study for the Proteos Nitrogen Project.

On December 23, 2019, the Company announced that it received a first draft of the pre-feasibility study for the Proteos Nitrogen Project. The Company also announced that Mr. W. Todd Rowan stepped down from his position as director of the Company and that Mr. Gerald Scherman was appointed as a director of the Company.

## **DESCRIPTION OF THE BUSINESS**

### **General**

The Company is engaged in the business of exploration and development of high quality agricultural and industrial potash. The Company intends to develop and extract carnallite-sylvite mineral deposits through a solution mining process, at competitive cost and with minimal environmental impact. Using a staged approach to potash plant construction, the Company plans to operate the Initial Facility to produce 625,000 TPY of potash, increasing to 1,375,000 and 2,125,000 TPY of potash by the completion of Phase II and Phase III respectively.

The Companys potash exploration and development project on the Wynyard Potash Project is within a dominant zone of carnallite and sylvite mineralization. In 2011, the Company drilled two geotechnical drill holes and seven new exploration drill holes on the Wynyard Potash Project. These are in addition to the two previous exploration drill holes drilled by the Company in 2009 and the two historical drill holes located on the Karnalyte Property. To date, the Company has conducted advanced exploration on approximately 17,544 acres, or approximately 20% of the Karnalyte Property.

In addition to the Wynyard Potash Project, the Company announced the Proteos Nitrogen Project. See "Proteos Nitrogen Project".



### ***Offtake Agreement with GSFC***

Karnalyte and GSFC have entered into an Offtake Agreement for GSFCs purchase of approximately 350,000 TPY of potash from Phase I. The Company and GSFC intend to commence the offtake with commercial production from Phase I with the result that the Company will secure sales for approximately 56% of its intended potash production from Phase I for approximately 20 years. The Offtake Agreement also provides GSFC with the option to increase its offtake by 250,000 TPY to 600,000 TPY (representing approximately 44% of the planned total of 1,375,000 TPY) from the date of commencement of Phase II commercial production. The Offtake Agreement provides GSFC the potential to increase its offtake by up to 400,000 TPY from Phase III such that the total annual quantity of potash to be sold pursuant to the Offtake Agreement shall be up to 1,000,000 TPY.

### ***Proteos Nitrogen Project***

The Proteos Nitrogen Project is a proposed small-scale nitrogen fertilizer plant to be located in Central Saskatchewan, having a nameplate production capacity of approximately 700 MTPD (metric tonnes per day) of ammonia and approximately 1,200 MTPD of urea, and designed to produce two products - anhydrous ammonia (82-0-0) and granular urea (46-0-0). Karnalytes primary target market is independent local Saskatchewan fertilizer wholesalers within a 400-kilometer radius of Saskatoon, Saskatchewan. A secondary target market is the US Midwest fertilizer wholesalers near to the Canadian - United States border. The proposed plant would be the first greenfield nitrogen fertilizer plant built in Canada in the last 26 years.

In 2019, progress on investigating the viability of the Proteos Nitrogen Project included examination of potential project sites and the preparation of a pre-feasibility study for the Proteos Nitrogen Project. At the end of 2019, the Company received the first draft of the study. The study includes investigation and analysis of project location and site selection, an evaluation of the production process and technology options, a project description, analysis of process selection for both the ammonia and urea plants, an analysis of raw material, utility and product specifications, an analysis of environmental implications, a financial analysis, and identification and analysis of the risks inherent in the project. The study also contemplates a project implementation plan and time schedule. The Company hopes to finalize the report in 2020.

### ***Interest from the Agricultural Industry***

Karnalyte has received interest in the Proteos Nitrogen Project from a number of agriculture industry participants and Karnalyte continues to have discussions with such industry participants.

### ***Summary from the 2016 Technical Report***

The information set out below under this heading "Summary from the 2016 Technical Report" has been derived from, and is based on, the summary set out in the 2016 Technical Report. The following summary does not purport to be complete and is subject to all the assumptions, qualifications, and procedures as set out in the 2016 Technical Report. The 2016 Technical Report



has an effective date of June 23, 2016. For more information, including a more detailed analysis and the assumptions and qualifications on which the 2016 Technical Report authors rely, see the 2016 Technical Report the Company filed on July 15, 2016 on SEDAR at [www.sedar.com](http://www.sedar.com). The full 2016 Technical Report is incorporated by reference into this AIF.

### ***Location and Property Description***

The Karnalyte Property is located in central Saskatchewan approximately 175 kilometers east of Saskatoon and some 65 kilometers east of the Potash Company of Saskatchewan Lanigan mine. The historic Permit KP 360 was transferred by Mr. Robin Phinney to Karnalyte on October 24, 2008. Effective September 8, 2010, the west area of Permit KP 360 was converted to a Subsurface Mineral Lease KLSA 010, and the remainder was converted to Permit KP 360A. Permit KP 360A was converted to Subsurface Mineral Lease KL 246 and Subsurface Mineral Lease KL 247A in 2016. Crown mineral rights among Subsurface Mineral Lease KLSA 010, Subsurface Mineral Lease KL 246, and Subsurface Mineral Lease KL 247A cover an aggregate area of approximately 36,733 hectares in portions of Townships 31 and 32 and Ranges 14 to 17 over Sections 1 to 36. The dimensions of the project area are approximately 22 miles (35.4 kilometers) east to west and 8.75 miles (14.1 kilometers) north to south.

Each of the Leases is subject to rentals and exploration assessment rates. The area of Subsurface Mineral Lease KLSA 010 Lease is 6,810 hectares. The aggregate area Subsurface Mineral Lease KL 246 and Subsurface Mineral Lease KL 247A is approximately 29,923 hectares.

### ***Geological Setting and Mineralization***

The deposit in the Karnalyte Property is located in the Prairie Evaporite Formation, which is part of the Elk Point Group of the Devonian Age. Within the properties, potash occurs in more or less horizontal lying beds in the Esterhazy, the Belle Plaine, and the Patience Lake Members of the Prairie Evaporite Formation.

North Rim refined the geologic model for the Karnalyte Property based on evaluation of historical exploration data, two exploration drill holes from 2009, and 9 new drill holes drilled in 2011, combined with a re-interpretation of the 3D seismic surveys commissioned by Karnalyte in 2008 and 2009. Within the western part of the Karnalyte Property, potash occurs in the Esterhazy Member mainly as sylvite (KCl) mineralization and mainly as carnallite ( $\text{KCl} \cdot \text{MgCl}_2 \cdot 6(\text{H}_2\text{O})$ ) mineralization in the Belle Plaine and Patience Lake Members of the Prairie Evaporite Formation.

Three different intervals are discussed in the 2016 Technical Report for each of the three potash members:

- **The Geology Interval** - This interval represents the first and last occurrence of sylvite and carnallite mineralization as the potash beds transition to halite.
- **The Mineral Resource Interval** - This interval represents a refinement of the geology interval. For the purpose of the mineral resource estimation, the upper and lower bounds of the members were determined using a grade cut-off from the assay results.

- **The Mineral Reserve Interval** - This interval represents a further refinement of the Mineral Resource Interval, to ensure that the average production brine composition used in the Company's feasibility studies can be achieved during the mining operation. The upper and lower bounds of the member have been defined using grade cut-off as well as operational requirements.

The layering of the salt dips slightly to the southwest as undisturbed beds with nearly continuous grade and thickness of the members, except near collapse features, where based on seismic information, it is assumed that the potash-bearing members have been partly dissolved.

### ***Exploration Concept and Status***

The exploration started with a program of 2 holes in 2009 to extend the mineral resource base defined on the basis of two existing historical holes. In 2011, 9 new holes were drilled, 7 of which were defined as exploration holes, and 2 as geotechnical holes, to extend the area with verifiable information about thickness and grade of the deposit and to provide core material required for rock mechanical investigations and dissolution test work. Based on the data from the new drill holes the existing 3D seismic survey, covering most of Subsurface Mineral Lease KLSA 010 area and part of Subsurface Mineral Lease KL 246 and Subsurface Mineral Lease 247A area was re-interpreted to better define the mineralized members and collapse features. With the data from the historical, the 2009, and the seven 2011 exploration holes, a mineral resource estimate report was prepared in August 2011. Also in 2011, the two geotechnical holes were sampled and analysed and are now included in the mineral resource estimate of the 2016 Technical Report. In 2016, all geological data was converted into a 3D grid geologic model that was used for the mineral resource estimate.

### ***Mining and Processing Methods***

For potash, the method used was a combination of hot leaching from high grade parts of the carnallite layers of the Belle Plaine and Patience Lake Members and cold leaching from high grade parts of the Esterhazy Members in dual well caverns to obtain production brine with an average KCl content of 115 g/l. This requires that the brine makeup from the 2016 Technical Report used to dissolve the carnallite has a pre-concentration of 20 to 25 g/l KCl, 10 g/l MgCl<sub>2</sub> and a maximum of 170 g/l NaCl from mixing of water with brines from preparation leaching in the lower part of the Belle Plaine Member and the upper layer of the Esterhazy Member.

The production brine is processed in the plant using evaporation and crystallization for separation of the KCl, and prepared by the Company's patented granulation method to a final pellet product with a 97% KCl grade.

For magnesium, the MgCl<sub>2</sub> endbrine from potash production will be used to produce a saleable high grade MgCl<sub>2</sub> brine and basic magnesium carbonate (hydromagnesite). This endbrine is the product from evaporation and crystallization of a production brine to a 97% KCl grade product. The production brine is obtained using a combination of hot leaching from high grade parts of the carnallite layers of the Belle Plaine and Patience Lake Members and cold leaching from high grade parts of the Esterhazy Members in dual well caverns to obtain a production brine with an average KCl content of 115 g/l and a MgCl<sub>2</sub> content of 121.5 g/l.

A part of the potash production endbrine is diluted with process water to a 32%  $\text{MgCl}_2$  brine and cooled to 30°C to prevent precipitation of magnesium chloride from the brine during transportation.

A further part of the potash production endbrine is used for hydromagnesite production; this involves treating the brine with Epsom salt to remove any calcium from the brine through precipitation of gypsum. This pre-treated brine is diluted with some process water and ammoniated in an absorption tower. Carbonation of this brine results in the precipitation of hydromagnesite, which is filtered from the spent brine, washed to remove adhering ammonia, dewatered and dried in a Holo-Flite drier to produce dry hydromagnesite ( $4\text{MgCO}_3 \cdot \text{Mg}(\text{OH})_2 \cdot 4\text{H}_2\text{O}$ ). In parallel, a limestone calcination process is operated to produce the  $\text{CO}_2$  required for carbonation. The lime produced is slaked by adding process water and the slaked lime is fed into an ammonia stripping column, which drives the ammonia back in a gaseous anhydrous form, which can be recycled in the process. This part of the operation is similar to the well-known Solvay process for producing soda ash from sodium chloride brine.

In the opinion of the authors of the 2016 Technical Report, subject to the assumptions therein, the mining and processing described above show that the mineralized material can be economically extracted and processed to potash and magnesium products and constitutes a Mineral Reserve.

### ***Capital Expenditures and Operational Expenditures Economic Evaluation***

Updated in the 2016 Technical Report were estimates for the CAPEX and OPEX for the mining and processing of the mineral resources in the Karnalyte Property for an original case with 625,000 TPY of 97% KCl product ("Case 1"). Further, the 2016 Technical Report expanded this with 2 stages of expansion of 750,000 TPY to a total annual production of 2.125 million tonnes ("Case 2"). The CAPEX for the potash project includes brine field, plant, infrastructure, as well as product loading and has been estimated ( $\pm 15\%$  accuracy) at:

- Case 1 \$789 million,
- Case 2 \$2,396 million.

The OPEX of the potash operation from mining to loading in rail cars has been estimated ( $\pm 15\%$  accuracy) at:

- Case 1 \$136.99/tonne of product,
- Case 2 \$131.70/tonne of product.

For Case 1, about 19.5% of the endbrine from potash production would be used in the magnesium product facility. For Case 2, about 5.8% of the endbrine from potash production would be used in the magnesium product facility.

The 2016 Technical Report includes updated estimates for CAPEX and OPEX for the processing of the potash plant endbrine to 100,000 TPY of  $\text{MgCl}_2$  brine at 32%  $\text{MgCl}_2$  concentration and 104,000 TPY of 99% pure hydromagnesite product. The CAPEX for the magnesium product project includes plant, reagent unloading, and product loading and assumes that  $\text{MgCl}_2$  endbrine and some infrastructure are provided by the potash production facility. For the 2016 Technical

Report, the magnesium facility can only be constructed after a potash production facility is built and the magnesium-rich endbrine from the potash production facility is received. The CAPEX for the magnesium facility ( $\pm 25\%$  accuracy) contain a contingency of 20% on direct and indirect costs and 10% on owner costs and are estimated at \$171.2 million.

The OPEX for the magnesium facility for the processing of the potash endbrine to loading the products in rail cars or trucks has been estimated ( $\pm 25\%$  accuracy) at:

- $\text{MgCl}_2$  Brine \$ 7.01/tonne of product, hydromagnesite \$302.01/tonne of product,

with a contingency of 10% on the OPEX estimate for  $\text{MgCl}_2$  brine and hydromagnesite.

Karnalyte plans to market its potash product mainly in the North American market. Due to the relatively high grade and superior handling qualities at a competitive price compared to conventional compacted granular and standard product, it is expected that a share of the North American market may be obtained.

Karnalyte plans to market its hydromagnesite product mainly in the North American market. There are three main potential markets:

- as high quality precipitated basic magnesium carbonate, which is presently imported, Karnalyte may have a price advantage due to lower shipping costs. However, this is a relatively small market and therefore the volume produced by Karnalyte may suppress prices;
- as an alternative to precipitated calcium carbonate in the paper industry and eventually the plastic industry. The total precipitated calcium carbonate market in North America is about 2.5 million tonnes; and
- as an extender for titanium oxide in paint pigments, which has an annual production in North America of 1.4 million tonnes.

Karnalyte has letters of interest from prospective customers totalling nearly 50% of the planned production for the last 2 uses and it is a reasonable assumption that Karnalyte can market its hydromagnesite at competitive prices.

Karnalyte intends to market the  $\text{MgCl}_2$  brine mainly in the western provinces of Canada, which presently import  $\text{MgCl}_2$  brine at approximately \$3.4 million annually. Due to the high cost of transportation associated with a relatively low value product, the potential for Karnalyte to be able to replace a significant volume of these imports is reasonable.

A discounted cash flow model for Case 2 potash production, taking into account a conservative 60-year mine life, financial provision for closure estimated at 10% of the CAPEX, resulting in \$240 million at the end of the life of the project, current Saskatchewan tax and royalty regulations and a potash price US Midwest of \$466/tonne in 2019 provides favourable economic modelling results:

- Net present value after tax at 8% discount rate of \$3.39 billion
- Internal rate of return after tax of 19.1%

A discounted cash flow model for the magnesium project, taking into account a conservative 60-year mine life, financial provision for closure estimated at 10% of the CAPEX, resulting in \$17.1 million at the end of the life of the project, current Saskatchewan tax, royalty regulations and a hydromagnesite price of \$600/tonne for 50% of production as hydromagnesite and alternative to precipitated calcium carbonate, at \$1,800/tonne for the remaining 50% as titanium oxide extender and a  $\text{MgCl}_2$  brine price of \$40/tonne provides favourable economic modelling results:

- Net present value after tax at 10% discount rate of \$512 million
- Internal rate of return after tax of 26.1%

Based on the assumptions contained in the 2016 Technical Report, the authors consider the project technically and economically feasible.

### ***Resource Estimate***

It is the opinion of the authors of the 2016 Technical Report that Inferred Mineral Resources will be limited to within 6.0 km of the cored and assayed drill holes excluding any established Mineral Reserves and any known seismic anomalies that may be present due to dissolution or collapse features. The mineralization present in the Patience Lake through Belle Plaine Member represents the carnallite mineral resource. The mineralization present in the Esterhazy Member constitutes the sylvinitic mineral resource. The Inferred Mineral Resource was estimated using the grid model. Interpolation of member thickness and grades between wells were done using inverse distance squared weighting.

For the 2016 Technical Report, most of the Indicated and Measured Mineral Resources (based on proximity to drill holes) have been upgraded to Probable and Proven Mineral Reserves respectively. There are, however, four distinct areas where Indicated Mineral Resources and Measured Mineral Resources have been reclassified to Inferred Mineral Resources in the 2016 Technical Report based on the judgement of the qualified persons that there are some impediments or doubt as to the reasonable prospects for economic extraction for these areas. The four areas are:

1. Small parcels of land along the perimeters of the radiuses of influence
2. Small parcels of land next to collapse anomalies
3. Small parcels of land next to the property boundary, including the boundaries of freehold land
4. Restricted areas around the plant area and along the major highway, where theoretically some of the mineralization could be mined at the end of the mine life.

For the Inferred Mineral Resource in all defined Inferred Mineral Resource areas, the area is transformed to tonnage from the volume for each area and zone. The volume is calculated by multiplying the net area by the thickness of the potential solution mining intervals present in the Patience Lake, Belle Plaine and Esterhazy Members. The volume is multiplied by a density factor being calculated from the mineral composition of the carnallite and sylvinitic rock as



determined from assays, typically in the range of 1.8 to 2.1 t/m<sup>3</sup> respectively, for the in-situ sylvinites and carnallite tonnage.

The total Inferred Mineral Resources for KCl amount to:

	Average KCl Grade (%) <sup>(1)</sup>	In Place Tonnage (MMT) <sup>(2)</sup>	Total Extraction Tonnage (MMT) <sup>(3)</sup>	Net KCl Tonnage (MMT)	Net KCl Product (MMT) <sup>(4)</sup>
Total Carnallite	13.71	4,240.5	1,547.8	191.0	171.9
Total Sylvinites	20.87	629.3	229.7	43.1	38.8
<b>TOTAL</b>		<b>4,869.8</b>	<b>1,777.5</b>	<b>234.1</b>	<b>210.7</b>

and for MgCl<sub>2</sub> to:

	Average MgCl <sub>2</sub> Grade (%) <sup>(1)</sup>	In Place Tonnage (MMT)	Total Extraction Tonnage (MMT) <sup>(3)</sup>	Net MgCl <sub>2</sub> Tonnage (MMT)	MgCl <sub>2</sub> Product (MMT) <sup>(4)</sup>
Total Carnallite	14.92	4,240.5	1,547.8	207.8	12.1
Total Sylvinites	3.03	629.3	229.7	6.3	0.4
<b>TOTAL</b>		<b>4,869.8</b>	<b>1,777.5</b>	<b>214.1</b>	<b>12.5</b>

(1) "Average KCl grade" and "Average MgCl<sub>2</sub> Grade" refer to weighted averages.

(2) MMT stands for million tonnes.

(3) Variable Extraction Ratio (27.5% for the Patience Lake and Belle Plaine, 30% for Esterhazy Members).

(4) "Net Product" for KCl and MgCl<sub>2</sub> represent current plant design considerations and includes a plant recovery of 90% for KCl from the production brine and 5.8% recovery for MgCl<sub>2</sub> from the production brine.

## Mineral Reserve Estimate and Conclusions

In the opinion of the authors of the 2016 Technical Report, potash Proven Mineral Reserves can be estimated from the areas with Measured Mineral Resources and Probable Mineral Reserves can be estimated from the areas with Indicated Mineral Resources. For the magnesium chloride, the engineering is at a preliminary feasibility level. Therefore, according to the CIM Definition Standards, only Probable Mineral Reserves can be estimated for magnesium chloride from Measured Mineral Resources and Indicated Mineral Resources. These Mineral Resource areas have been reduced by restricted areas, where mining should not take place to avoid any problems at the surface due to potential subsidence. Mineral Reserves have been estimated by placing caverns in a grid. For each drill hole a typical cavern recovery of mineralized material at given grade has been estimated. This amount was reduced by 10% to account for any anomalies below the resolution of 3D seismic surveys. Reserves were estimated by counting the number of caverns in the Measured Mineral Resources and Indicated Mineral Resource areas for each drill hole and multiplying this number with the typical cavern recovery. This results in the following Proven Mineral Reserves for potash (in million tonnes, if not stated differently):

Proven Mineral Reserves	Mineralized Material	Average KCl Grade (% KCl)	Mineable KCl Tonnage	Product Tonnage
Patience Lake Member	106.3	19.9	21.2	19.6
Upper Belle Plaine Member	131.0	19.3	25.3	23.5
Lower Belle Plaine Member	31.3	12.1	3.8	3.5
<b>TOTAL/Average</b>	<b>268.6</b>	<b>18.7</b>	<b>50.3</b>	<b>46.6</b>



Proven Mineral Reserves	Mineralized Material	Average KCl Grade (% KCl)	Mineable KCl Tonnage	Product Tonnage
Upper Esterhazy	32.6	26.1	8.5	7.9
Lower Esterhazy	20.2	26.4	5.3	5.0
<b>TOTAL/Average</b>	<b>52.8</b>	<b>26.2</b>	<b>13.8</b>	<b>12.9</b>

and Probable Mineral Reserves (in million tonnes, if not stated differently):

Probable Mineral Reserves	Mineralized Material	Average KCl Grade (% KCl)	Mineable KCl Tonnage	Product Tonnage
Patience Lake Member	171.2	19.9	34.0	31.5
Upper Belle Plaine Member	204.7	19.0	38.9	36.1
Lower Belle Plaine Member	49.2	12.2	6.0	5.6
<b>TOTAL/Average</b>	<b>425.1</b>	<b>18.6</b>	<b>78.9</b>	<b>73.2</b>

Proven Mineral Reserves	Mineralized Material	Average KCl Grade (% KCl)	Mineable KCl Tonnage	Product Tonnage
Upper Esterhazy	38.0	25.1	9.5	8.8
Lower Esterhazy	23.6	26.5	6.3	5.8
<b>TOTAL/Average</b>	<b>61.6</b>	<b>25.6</b>	<b>15.8</b>	<b>14.6</b>

The total amount of KCl product that can be made from the Mineral Reserves at 97% KCl and 90% plant efficiency is 147 million tonnes, which suggests a lifetime of the project at 2.125 million tonnes annual production of 70 years.

For magnesium chloride, the situation is different, because only a part of the magnesium chloride mined together with the potash is transformed into a saleable product, the remaining part is considered waste. Therefore, the magnesium chloride mineral reserve is dependent on the size of the magnesium products plant and the market for the products and a magnesium chloride transformation factor is defined as percentage of magnesium chloride mined that gets transformed to saleable magnesium products to determine the magnesium chloride mineral reserves. With an average production brine composition from the brinefield, about 191,000 TPY of magnesium chloride is required for the planned annual production of 100,000 tonnes  $MgCl_2$  brine and 104,000 tonnes hydromagnesite, which translates to 141,000 TPY of magnesium chloride in the final products. The mineral reserves have been estimated by applying a factor of 5.8% for all phases of the project that will be transformed to product for the annual amount of magnesium chloride mined from sylvite and carnallite to produce 2.125 million TPY of potash product.

Assuming that during the first years of potash production only  $MgCl_2$  brine will be produced and only when full potash production is reached will hydromagnesite be produced, the following Probable  $MgCl_2$  Mineral Reserves (in million tonnes, if not stated differently) will result:

Probable Mineral Reserves	Mineralized Material	Average $MgCl_2$ Grade (% $MgCl_2$ )	Mineable $MgCl_2$ Tonnage	Product Tonnage
Patience Lake Member	277.5	22.4	62.1	3.2
Upper Belle Plaine Member	335.7	24.7	82.8	4.3
Lower Belle Plaine Member	81.4	10.3	8.4	0.4
<b>TOTAL/Average</b>	<b>694.6</b>	<b>22.1</b>	<b>153.3</b>	<b>7.9</b>

The total amount of  $\text{MgCl}_2$  products that can be produced is not dependent on the available mineral reserves but on the capacity of the plant and the market. The  $\text{MgCl}_2$  mineral reserves can be increased without further exploration by investment in a plant expansion and identification of a market for the additional product.

In the opinion of the authors of the 2016 Technical Report, the investigated part of the Leases contain sufficient potassium and magnesium chloride mineral reserves to further develop both the potash and magnesium projects.

It is also the opinion of the authors of the 2016 Technical Report that it is reasonable to conclude that potash mineralization as identified in the drill holes may extend to the remainder of Subsurface Mineral Lease KL 246 and that further drilling to confirm the presence of potash and further seismic work to delineate the structure of the deposit is warranted.

The authors of the 2016 Technical Report see the following risks to the potash project that are considered to be within the estimate accuracy of the estimated CAPEX and OPEX:

- Project funding, which must be secured;
- Scope changes during engineering, procurement, and construction;
- Land purchase and right of way issues; and
- Schedule impact due to shipping delay, utilities installation, or the availability of resources, especially site labour.

For the magnesium product project that relies on the potash project, the potash project risks apply in addition to further risks including:

- Brine quality from the potash production plant, especially with regard to sulfate, iron and  $\text{CaCl}_2$  levels, which might negatively influence the product quality;
- Market size and pricing structure for the use of hydromagnesite as a  $\text{TiO}_2$  extender; and
- Source and pricing of magnesium sulfate as an important reagent for the hydromagnesite process. This risk is relatively small as the process can be redesigned for the use of sodium sulfate.

### ***Recommendations***

The authors of the 2016 Technical Report recommend continuing separately with both projects with the potash project as the most important by taking the following steps:

- Begin detailed engineering and advance it to a point where equipment packages can be awarded; and
- Perform detailed engineering to support a construction licence application.

The cost for the detailed engineering work for the Phase I potash plant of 625,000 TPY are estimated at around \$75 million, in the CAPEX estimate. Additionally, full project financing (approximately \$790 million for Phase I for a 625,000 TPY potash operation) has to be secured, to start construction.

For the magnesium product project, the following project phases have to be organized:

1. **First phase.** Extensive laboratory and pilot testing program consisting of tests for:

- Exact composition of the potash production end brine;
- Ammonia brine dissolution and brine dilution in the selected absorption tower;
- Ammonia reclamation in selected column;
- Carbon dioxide dissolution to properly size equipment; and
- Hydromagnesite dewatering and drying tests.

Concurrent with the test program, the engineering required for the magnesium feasibility study can be completed. Furthermore, baseline studies for EIS should be conducted and finalised, and the market and pricing of the hydromagnesite as  $\text{TiO}_2$  extender has to be firmed. The total costs for this first phase are estimated at \$2 million, and are included in the CAPEX estimate.

2. **Second phase.** Conditional upon a favourable outcome of the first phase, the second phase can be initiated, which consists of:

- Detailed engineering advanced to a point where equipment packages can be awarded, and
- Perform detail engineering to support preparation of construction licence application.

The costs for this second stage are estimated at \$12 to 14 million and these costs are included in the development CAPEX.

Additionally, full project financing (approximately \$171 million) for the magnesium product project has to be secured before construction can start, although there is an option to get the  $\text{MgCl}_2$  brine plant constructed earlier. This depends on having the financing for at least Phase I of the potash project in place.

It is also the opinion of the authors of the 2016 Technical Report that it is reasonable to conclude that potash mineralization as identified in the drill holes may extend to the remainder of Subsurface Mineral Lease KL 246 and that further drilling to confirm the mineralization and further seismic work to delineate the structure of the deposit is warranted, but not required for the present projects.

### **Proprietary Protection**

The Company relies upon intellectual property rights to maintain proprietary control over its improvements to the industry standard solution mining process and the formulation of the Company's anticipated products. The Company also maintains proprietary concepts, inventions, and technology as confidential information and generally only discloses them to third parties under the protection of confidentiality agreements.

The Company was granted three trademark registrations with the Canadian Intellectual Property Office on September 21, 2015. The Company was granted three trademark registrations with the United States Patent and Trademark Office which issued in March 2017.

The Company also relies on common law trademark rights to protect its corporate identity. The Company uses the name Karnalyte for its business in the jurisdictions where it operates. The Company has also registered the following domain name which it uses in connection with its business: [www.karnalyte.com](http://www.karnalyte.com).

Patent applications have been filed by the Company in Canada and the United States for improvements on various portions of the industry standard solution mining process and for the formulation of anticipated products. See "Forward-Looking Statements". The following table summarizes the patent applications that have been filed by the Company.

The Company has been granted the following patents for the following inventions:

Jurisdiction	Patent Application Number	Patent Number	Filing Date/ Issue Date	Title	Description
USA	12/539,688	8,323,371	August 12, 2009/ December 4, 2012	Process for synthesizing a compacted product	A method forming a potassium chloride particle from potassium chloride powder having resistance to moisture absorption and shrinkage is set forth. The original feedstock comprises potassium chloride in a size distribution of 30 mesh to 100 mesh as well as a gluten based binder. The technology incorporates granulation processing.
USA	13/692,470	8,685,135	December 3, 2012/ April 1, 2014	Process for synthesizing a compacted product	A method forming a potassium chloride particle from potassium chloride powder having resistance to moisture absorption and shrinkage. The original feedstock comprises potassium chloride in a size distribution of 30 mesh to 100 mesh as well as a gluten based binder.
USA	12/623,636	8,282,898	November 23, 2009/ October 9, 2012	Process for the formulation of potassium chloride from a carnallite source	A process for formulating high purity potassium chloride from a carnallite source. The process takes advantage of solubility differences and saturation levels in a multiple salt system generated upon dissolution of carnallite. In the system, the sodium chloride is kept in solution and the MgCl <sub>2</sub> present in the system is controlled to be in a concentration range of between 12% and 25% by weight. This avoids co-precipitation of sodium chloride with the potassium chloride during crystallization and therefore prevents the sodium chloride from contaminating the potassium chloride. The result is high grade potassium chloride.

Canada	2,638,521	2,638,521	August 1, 2008/ June 18, 2013	Method of selectively dissolving minerals from a carnallite or sylvinitic source	A method for producing high grade potassium chloride from a source of carnallite. The method solubilizes and purifies the carnallite to produce potassium chloride having low levels of contaminants and resistance to hygroscopic behaviour.
Canada	2,638,704	2,638,704	August 13, 2008/ April 8, 2014	Process for Producing Potassium Chloride Granulars	A method forming a potassium chloride particle form potassium chloride powder having resistance to moisture absorption and shrinkage. The original feedstock comprises potassium chloride in a size distribution of 30 mesh to 100 mesh as well as a gluten based binder.
Canada	2,703,276	2,703,276	May 5, 2010/ November 17, 2015	Method for improving ore extraction	The patent application teaches a method of augmenting ore extraction from a solution mine having caverns. The method provides at least a pair of opposed caverns containing ore to be extracted. Ore is extracted from one cavern of the cavern pair to exhaust the one cavern. The tailings from the ore exhausted cavern are deposited in the exhausted cavern. This allows for more efficient solution mining
Canada	2,720,371	2,720,371	November 8, 2010/ October 11, 2016	Process for the formulation of potassium chloride from a carnallite source	A process for formulating high purity potassium chloride from a carnallite source. The process takes advantage of solubility differences and saturation levels in a multiple salt system generated upon dissolution of carnallite. In the system, the sodium chloride is kept in solution and the MgCl <sub>2</sub> present in the system is controlled to be in a concentration range of between 12% and 25% by weight. This avoids co-precipitation of sodium chloride with the potassium chloride during crystallization and therefore prevents the sodium chloride from contaminating the potassium chloride. The result is high grade potassium chloride.
USA	15/126,180	10,364,156	April 10, 2015/ July 30, 2019  (National Entry Date: September 14, 2016)	Process for producing high grade hydromagnesite and magnesium oxide	The present invention provides a process for producing high purity hydromagnesite from a source of magnesium chloride. The process involves preparation of a magnesium chloride brine of a specific concentration, which is ammoniated at a specific temperature range, followed by carbonation, while maintaining the reaction at a specific temperature range to form a hydromagnesite precipitate. The product can be calcined to generate high purity magnesium oxide compounds.

USA	15/126,188 10,364,157	April 10, 2015/ July 30, 2019  (National Entry Date: September 14, 2016)	Process for producing high grade hydromagnesite and magnesium oxide	The present invention provides a process for producing high purity hydromagnesite from a source of magnesium chloride. The process involves preparation of a magnesium chloride brine of a specific concentration and reacting with sodium carbonate, while maintaining the reaction at a specific temperature range to form a hydromagnesite precipitate. The product can be calcined to generate high purity magnesium oxide compounds.
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The Company has pending patent applications for the following inventions:

Jurisdiction	Patent Application Number	Filing Date	Title	Description
Canada	2,939,418  (based on PCT/CA2015/050301)	April 10, 2015  (National Entry Date: August 11, 2016)	Process for producing high grade hydromagnesite and magnesium oxide	The present invention provides a process for producing high purity hydromagnesite from a source of magnesium chloride. The process involves preparation of a magnesium chloride brine of a specific concentration, which is ammoniated at a specific temperature range, followed by carbonation, while maintaining the reaction at a specific temperature range to form a hydromagnesite precipitate. The product can be calcined to generate high purity magnesium oxide compounds.
Canada	2,939,417  (based on PCT/CA2015/050298)	April 10, 2015  (National Entry Date: August 11, 2016)	Process for producing high grade hydromagnesite and magnesium oxide	The present invention provides a process for producing high purity hydromagnesite from a source of magnesium chloride. The process involves preparation of a magnesium chloride brine of a specific concentration and reacting with sodium carbonate, while maintaining the reaction at a specific temperature range to form a hydromagnesite precipitate. The product can be calcined to generate high purity magnesium oxide compounds.

## Competitive Conditions

### *The Potash Industry*

#### *Overview*

Potash is the common name given to a group of potassium-bearing minerals such as potassium carbonate and various mined and manufactured salts that contain the element potassium. While there are a number of such minerals, only those that are water-soluble are of significant commercial interest. The most common commercial product is potassium chloride (KCl), also known as muriate of potash or sylvite, a naturally occurring salty mineral of which Canada is the leading producer and exporter. Since the amount of potassium contained in potash varies, the industry has established a common standard of measurement by defining a products



potassium content in terms of equivalent percentages of potassium oxide (K<sub>2</sub>O). For example, carnallite typically contains approximately 17% K<sub>2</sub>O equivalent and sylvite contains approximately 63% K<sub>2</sub>O equivalent.

Potash demand depends on the demand for fertilizer, which is based on the total planted acreage, crop mix, fertilizer application rates and farming economics. Each of these factors is affected by current and projected grain stocks and prices, governmental agricultural policies, improvements in efficiency and fertilizer application and weather.

There are a number of factors that have led to the increase in fertilizer consumption over the past 50 years and that some industry observers expect to continue, and possibly accelerate, this trend. The root of these factors is the need to produce increasing amounts of food from shrinking amounts of arable land per capita due to development. These factors include (i) world population growth, (ii) shrinking arable land per capita, (iii) changes in diet worldwide (such as increased protein consumption resulting in increased demand for grain and other animal feed), and (iv) the growth in alternative fuels that use crops as feedstock.

### *Mining Methods*

Potash ore is extracted from two major ore deposit types:

- Deeply buried marine evaporite deposits that typically range from 400 metres to greater than 1,000 metres below the surface such as those typically found in Canada and Russia. Most potash is sourced from buried deposits using conventional mechanized underground mining methods, although solution mining methods also are employed. The land area affected is typically confined to the immediate area of the shaft, plant, and waste disposal but may be up to several square kilometres.
- Surface brine deposits are associated with saline water bodies such as the Dead Sea in the Middle East and the Great Salt Lake in the US. These types of ore deposits are exploited using solar evaporation ponds to concentrate and precipitate the potash. The evaporation ponds are extensive, with some operations covering in excess of 90 square kilometres of land area.

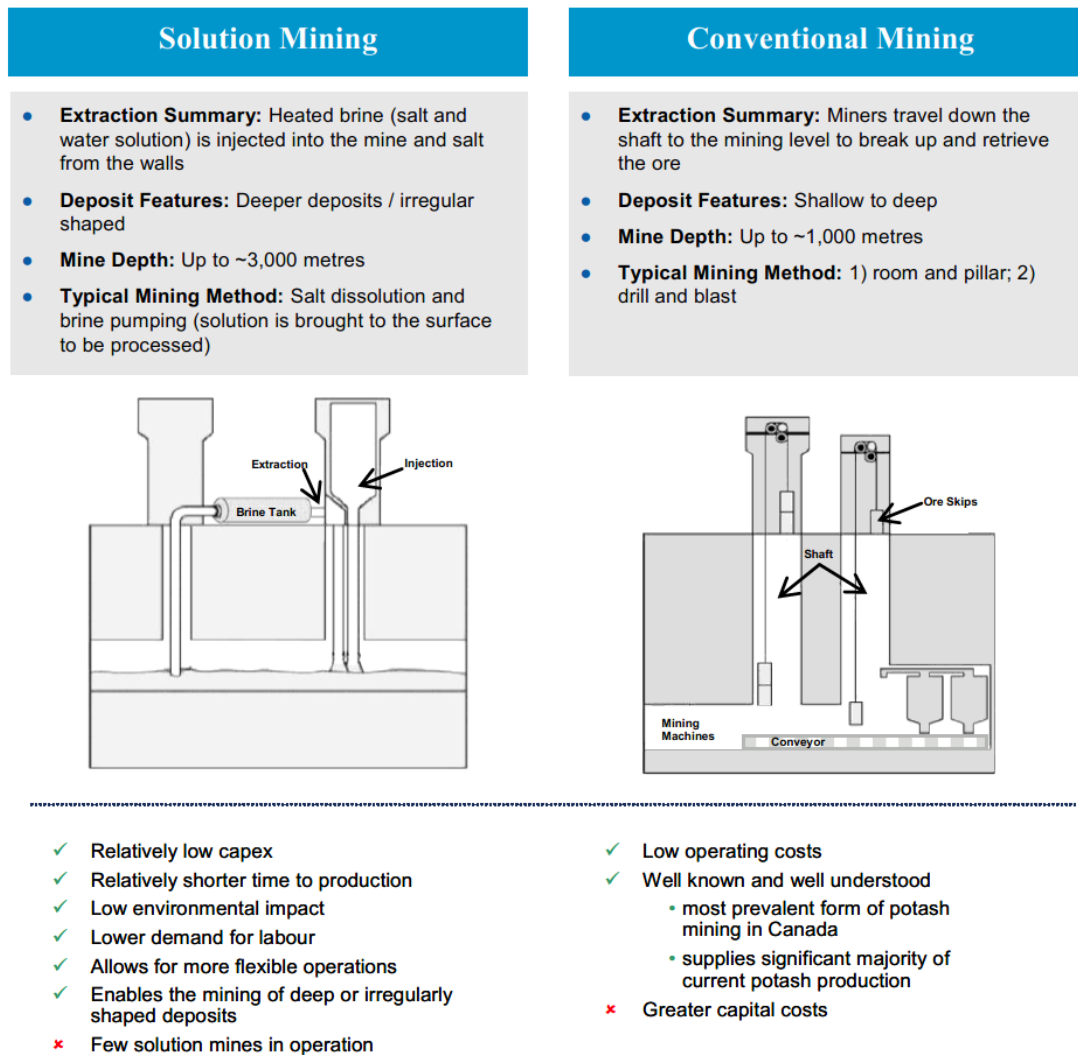


Figure 1: Mining method illustrative comparison (Source: Equity Research)

A conventional mechanized underground mining operation is the most widely used method for the extraction of potash ore. A variety of mining techniques and equipment may be employed depending on factors such as ore body depth, geometry, thickness and consistency, the geological and geotechnical conditions of the ore and surrounding rock, and the presence of overlying aquifers. Methods in widespread use include variations of room-and-pillar, longwall, cut and fill, and open stope techniques. At great depths, conventional room-and-pillar mining

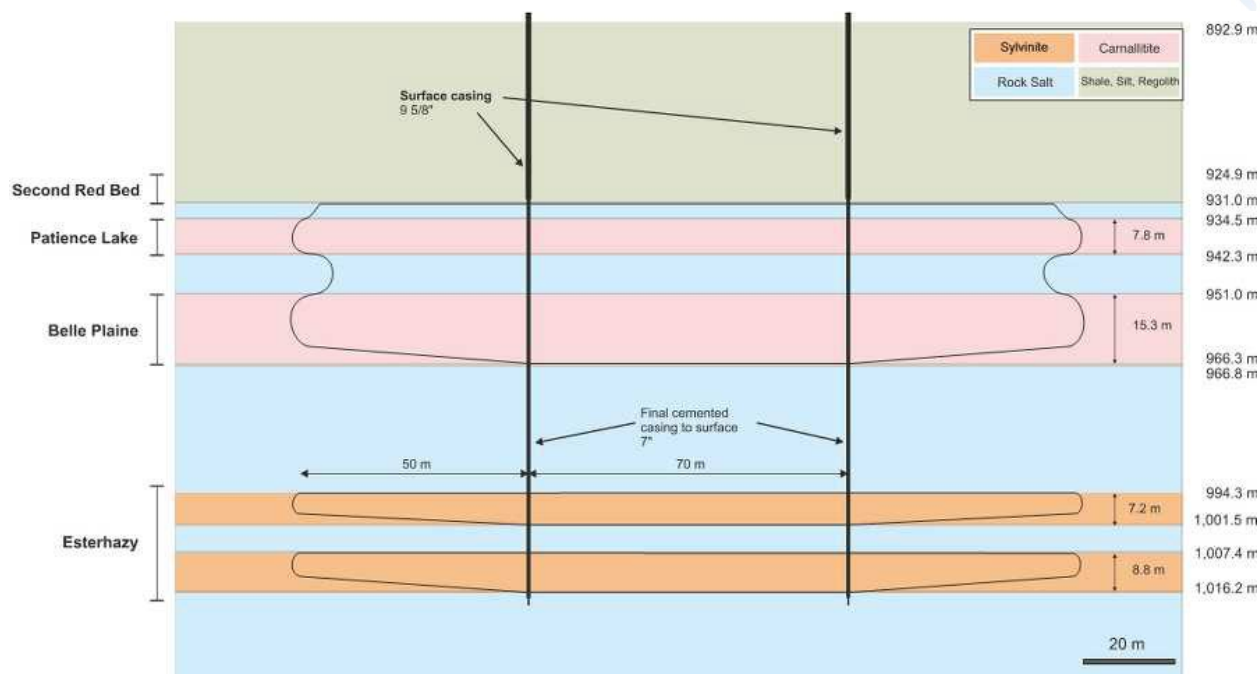


Figure 2: Section view along the long cavern axis and parameters of the proposed cavern and pillar design  
(Source: the 2016 Technical Report)

for potash faces technical challenges and can be cost prohibitive primarily due to the significant costs associated with sinking deep shafts and the increasing likelihood of water infiltration.

An alternative mining method is solution mining. The principle of solution mining involves drilling large-diameter boreholes to the bottom of the lowest mineralized layer. Heated water is then introduced into the well. A small volume of oil is injected to control upward vertical dissolution and the layers of rock salt assist in creating a connection between two wells to form a dual well cavern as well as lateral dissolution of the highly soluble carnallite salt layer. Once a diameter of approximately 100 metres is achieved, the leaching tubes are retracted or perforated thereby developing a working solution mining cavern.

For the Wynyard Potash Project, it is planned to mine multiple production zones. Zones may be mined in one or two separate cuts, depending on the local geology, each with a preparation phase and a single mining cut production phase.

Each cavern is anticipated to be served by two wells drilled from centralized well pads. Production wells and waste brine injection will be completely cased and continuously grouted from the top of the deep carnallite beds to the ground surface.

The Company expects that potassium rich brine will be pumped from the production wells to the surface processing plant. The first step of the potash production process is the removal of "insolubles" from the production brine. This is accomplished by using flocculants and an inclined plate separator. Once insolubles removal is completed, the production brine flows into the evaporation and crystallization process. In this process, water is evaporated and the concentration of  $MgCl_2$  in the brine increases and super saturates the KCl and NaCl causing them to precipitate out. The residual co-product  $MgCl_2$  brine is pumped to a disposal tank which is anticipated to be eventually disposed of in the Deadwood Formation or spent caverns.

## *The Magnesium Industry*

### *Overview*

Magnesium is the eighth most abundant element in the Earth's crust and the third most plentiful element dissolved in seawater. Magnesium and magnesium compounds are recovered from seawater, wells and lake brines, and bitterns, as well as from minerals such as magnesite, dolomite, and olivine.

In contrast to potash, the uses for magnesium products are varied and the sources for magnesium compounds range from Mg bearing salts such as carnallite, bischofite and magnesium sulfates, natural occurring magnesite ( $\text{MgCO}_3$ ), serpentinite, sea water and lake and well brines.

### *Magnesium Chloride Brine*

Standard trade statistics provide limited information on the market for  $\text{MgCl}_2$  brine. Market studies combine statistics on different grades, and across a diverse range of  $\text{MgCl}_2$  products. Statistics on the import and export volumes, and regional sales or consumption figures, are not readily available for specific products.

Potential customers for magnesium chloride brine include road service contractors, municipalities and counties, mining industry participants, mineral supplement producers for salt blocks, and drilling contractors.

Uses for magnesium chloride brine include, dust control for gravel roads (summer), de-icing agent for roads (winter), sewage treatment, textiles and paper, components in cements, and drilling mud / completion fluid.

### *Magnesium Carbonate*

Magnesite ( $\text{MgCO}_3$ ) is a naturally occurring mineral used in a wide range of applications, the most significant of which is as feedstock for magnesia production. Synthetic magnesium carbonate is used to produce high purity magnesium compounds for the paint and printing industries as well as in fireproofing, fire-extinguishing, flooring, polishing compounds, and as fillers and smoke suppressants in the paper, plastics and rubber industries. High purity magnesium carbonate is also used as an anti-caking agent in salt, as a bulking compound in powder formulations and as an antacid. According to the 2016 Technical Report, the magnesium carbonate that could be produced at the proposed magnesium products plant could be a precipitated synthetic basic magnesium carbonate (hydromagnesite).

The market for synthetic or precipitated magnesium carbonate is a specialized market which is very closely correlated to product quality, and is not included in general market reports. According to the 2016 Technical Report, pricing currently available for high quality precipitated basic magnesium carbonate range from US\$500 per ton to US\$1,200 per ton.

## Industry Outlook

The Company's management believes that the long term prospects for the potash industry are promising. Historically, potash markets have been supported by a growing global economy. In the short term, the Company's management believes that both demand and pricing may continue to trade in a narrow, but stable, range. For the long term, however, investment in potash projects looks promising. According to various research that the Company subscribes to on global supply and demand for potash, potash demand is expected to rebound in 2020 by 7% to a projected 66.6 million metric tonnes. This demand is expected to grow to 80 million metric tonnes by 2030. However, the Company has been maintaining caution as the industry continues to face headwinds with major potash mines in Saskatchewan shuttering production during the third and fourth quarters of 2019 and some into the first quarter of 2020 in order to bolster prices after forecasted North American demand in the fourth quarter of 2019 didn't materialize due to a delayed harvest season. More recently, the uncertainty around the impact of the global coronavirus pandemic on the economy and capital markets has deepened the Company's sense of caution. The Company continues to monitor potash prices, the state of the capital markets and the economy generally.

Of particular importance to Karnalyte is the distinction between standard-grade potash and high-grade granular potash. Prices for high-grade granular potash have historically traded at a premium to standard-grade potash, and management believes that demand for high-grade granular potash will grow at a faster rate than will standard-grade potash. The Company believes that the industry outlook for its project, which is expected to have significantly lower capital expenditures compared to a conventional underground mine and to produce a premium high-grade granular product, will be favoured over standard-grade conventional underground potash mining projects.

## Capital Market Outlook

Access to the capital markets is crucial for all developing companies and many junior resource companies in the exploration phase continue to face challenges in accessing the capital markets. There has been a five-year bear market in the mining sector as equity issuances have trended lower with declining prices and limited institutional interest in investment in the sector. The Company continues to seek financing for the construction of Phase I, however there can be no assurance that the Company will be able to secure such financing given prevailing depressed potash prices and difficult capital markets. See "Risk Factors".

## Company Outlook

### *Wynyard Potash Project*

With the completion of its optimization program in 2016 and follow-up measurement of cavern parameters in 2017, the Company achieved many of the material milestones necessary to technically de-risk the Wynyard Potash Project. In 2017, the Company measured the brine concentration, temperature, and blanket oil level in the Belle Plaine Pilot Test cavern to further match actual operating conditions to the ERCOSPLAN laboratory work and verify their modeling. In addition, the Company had a sonar map of the test cavern prepared, for comparison with the

initial mapping done before the test cavern was created, to compare final results to observations and measurements taken during the test program. These activities will assist in improving the future detailed engineering design and optimizing Karnalytes capital and operating economics. Further testing in the Patience Lake Member and the development of a dual-well cavern were determined not to be necessary and were not undertaken.

As noted above under the heading "Description of the Business - Summary from the 2016 Technical Report", the 2016 Technical Report includes updated estimates for CAPEX and OPEX for the processing of the potash plant endbrine to 100,000 TPY of  $\text{MgCl}_2$  brine at 32%  $\text{MgCl}_2$  concentration and 104,000 TPY of 99% pure hydromagnesite product. In relation thereto, in 2017 the Company extracted brine containing  $\text{MgCl}_2$  from the Pilot Test Cavern and contracted SRC to conduct a lab scale testing program to further verify Karnalytes process to produce high purity Basic Magnesium Carbonate in a specified variety of formulations to meet various industrial specifications. SRC also completed testing to convert the BMC to high grade Magnesium Oxide under various calcination conditions. The Company also had a marketing consultant prepare an evaluation of the potential markets for  $\text{MgCl}_2$  brine, Basic Magnesium Carbonate (BMC) and  $\text{MgO}$ , and SRC incorporated this evaluation into their overall report.

### ***Proteos Nitrogen Project***

As noted above under the heading "Proteos Nitrogen Project", the Company proposes to build small-scale nitrogen fertilizer plant to be located in Central Saskatchewan, which would be the first greenfield nitrogen fertilizer plant built in Canada in the last 26 years. See "Proteos Nitrogen Project".

### **Employees**

As at December 31, 2019, Karnalyte had a total of 3 full-time employees and 1 part-time employee.

### **RISK FACTORS**

The Companys business in mineral exploration and development is inherently risky in nature due to its formative stage of development, its current financial position, and its lack of an earnings record. As a result, the securities of the Company must be considered speculative. A prospective investor in Karnalyte should carefully consider the following risk factors.

**The Company cannot guarantee that the Wynyard Potash Project will become a commercially viable mine, or that it will discover any commercially viable potash deposits.**

Potash exploration, development, and operations are highly speculative and are characterized by a number of significant inherent risks, which even a combination of careful evaluation, experience and knowledge may not eliminate and may result in the inability to develop a project. These risks include, among other things, unprofitable efforts resulting from the failure to discover profitable or commercial quantities or grades of potash. Few properties that are explored are ultimately developed into producing mines. Unusual or unexpected formations, formation pressures, flooding, fires, power outages, labour disruptions, and the inability to



obtain suitable or adequate machinery, equipment or labour are other risks involved in mining operations and the conduct of exploration and development programs, as well as the inability to obtain required capital. There is no assurance that the foregoing risks will not occur and inhibit, delay or cease the development of the Wynyard Potash Project or other exploration or development activities, all of which could have an adverse impact on the Companys business, results of operations and financial condition.

Substantial expenditures are required to establish a viable mine, to develop processes to extract potash and to investigate the economic feasibility of construction of extraction and processing facilities and infrastructure at any site chosen for mining. No assurance can be given that the Companys potash will be of sufficient quantities or grades or in appropriate geological structures, to justify commercial operations or that the funds required for exploration and development can be obtained on a timely basis.

There can be no assurance that the Company will be able to complete development of the Wynyard Potash Project on time, on budget or at all due to, among other things, and in addition to those factors described above, a decline in potash prices; changes in the economics of the Wynyard Potash Project; delays in receiving required consents, permits and licences; the delivery and installation of plant and equipment; changes in magnesium co-product prices, cost overruns; governmental and bank regulations, including regulations relating to prices, taxes, royalties, infrastructure, land use, importing and exporting of commodities and environmental protection; or that the Companys personnel, systems, procedures and controls will be adequate to support operations. Should any of these events occur, it would have a material adverse effect on the Companys business, financial condition, and results of operations.

**The Company cannot guarantee that the Proteos Nitrogen Project will become commercially viable.**

Careful evaluation, experience and knowledge may not eliminate and may result in the inability to develop the Proteos Nitrogen Project. Substantial expenditures are required to establish a viable nitrogen fertilizer project and to investigate the economic feasibility of construction of facilities and infrastructure at any site chosen for the Proteos Nitrogen Project. There can be no assurance that the Company will be able to complete development of the Proteos Nitrogen Project on time, on budget or at all.

**The Company may not successfully execute its project plans**

Project delays may postpone the expected commencement of commercial production and expected revenues from operations. Significant project cost over-runs could make the Wynyard Potash Project and the Proteos Nitrogen Project uneconomic. The Companys ability to execute projects and market its products will depend upon numerous factors beyond the Companys control, including the availability of processing capacity, the availability of storage capacity, the supply of and demand for its products, the availability of alternative fertilizer products, the effects of inclement weather, the availability of drilling and related equipment, unexpected cost increases, accidental events, currency fluctuations, changes in regulations, the availability and productivity of skilled labour, and the regulation of industry by various levels of government and governmental agencies.

As a result of the foregoing factors, the Company may be unable to develop the Wynyard Potash Project or the Proteos Nitrogen Project on time, on budget or at all, and may not be able to effectively market its products.

### **Estimates of Mineral Resources and Mineral Reserves are uncertain**

The figures for Mineral Resources and Mineral Reserves contained in this AIF are estimates only and no assurance can be given that the anticipated tonnages and grades will be achieved, that the indicated level of recovery will be realized, or that Mineral Reserves will be mined or processed profitably. Such estimation is a subjective process, and the accuracy of any Mineral Resource or Mineral Reserve estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. However, such figures are estimates, and no assurance can be given that the indicated level of Mineral Reserves will be produced. There are numerous uncertainties inherent in estimating Mineral Resources or Mineral Reserves, including many factors beyond the Companys control. Fluctuations in the price of potash, magnesium, or co-products may render Mineral Resources or Mineral Reserves containing lower grades of mineralization uneconomic. Market price fluctuations of potash, magnesium may render the present Mineral Resources or Mineral Reserves unprofitable for periods of time. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Fluctuation in potash prices, results of drilling, metallurgical testing and production and the evaluation of mine plans subsequent to the date of any estimate may require revision of such estimate. Any material reductions in estimates of Mineral Resources or Mineral Reserves, or of the Companys ability to extract these Mineral Resources or Mineral Reserves, could have a material adverse effect on the Companys operations and financial condition.

### **The Company currently has no production revenues and future revenues may be uncertain**

To date, the Company has not recorded any revenues from operations nor has the Company commenced commercial production at the Wynyard Potash Project or the Proteos Nitrogen Project. The Company does not expect to generate revenues from operations in the foreseeable future. The Company expects to continue to incur losses until such time as Wynyard Potash Project or the Proteos Nitrogen Project enter into commercial production and generate sufficient revenues to fund its continuing operations. The exploration and development of the Karnalyte Property and a property for the Proteos Nitrogen Project will require the commitment of substantial resources to conduct time-consuming development programs. There can be no assurance that the Company will generate any revenues or achieve profitability. The amounts and timing of expenditures will depend on the progress of ongoing exploration and development, the results of consultants analysis and recommendations, the rate at which operating losses are incurred, the execution of any joint venture agreements with strategic partners and other factors, many of which are beyond the Companys control.

**The Company will need additional financing in the future, and cannot assure that such financing will be available**

The Company will need additional financing through the issuance of equity or debt to continue and complete the development of its Karnalyte Property and there can be no assurance that such financing will be available or, if available, will be on reasonable terms. Any future funding that is obtained by issuing Common Shares from treasury may result in a change of control of the Company and owners of Common Shares may suffer dilution. The failure of the Company to raise additional funds and complete the construction of the Initial Facility would have material adverse consequences on the business, financial condition and results of operations of the Company.

The Company has limited financial resources, has not earned any revenue since commencing operations, has no source of operating cash flow and there is no assurance that additional funding will be available to it for further exploration and development of the Karnalyte Property, the Wynyard Potash Project, and the Proteos Nitrogen Project or to fulfill its obligations under any applicable agreements. Failure to obtain such additional financing could result in delay or indefinite postponement of further exploration and development of the Karnalyte Property, the Wynyard Potash Project, and the Proteos Nitrogen Project.

To the extent financing is not available, lease expiry dates, work commitments, rental payments and option payments, if any, may not be satisfied and could result in a delay or indefinite postponement of development or production on the Karnalyte Property and the Wynyard Potash Project, or in a loss of property ownership or earning opportunities by the Company.

The continued operation of the Company will be dependent upon its ability to generate operating revenues and to procure additional financing. There can be no assurance that any such revenues can be generated or that other financing can be obtained. The Company currently has no source of funding for the financing of the capital needs of its business and future activities, other than by the issuance of additional securities of the Company. If the Company is unable to generate revenues or obtain additional financing, any investment in the Company may be lost.

**Adverse changes in commodity prices would adversely affect the future revenues of the Company and its ability to develop and operate the Wynyard Potash Project**

The potential economic viability of the Companys operations, and the value of the Common Shares, may be significantly affected by changes in commodity prices. The economics of Phase I of the Wynyard Potash Project are highly sensitive to a decrease in potash prices. Potash prices can fluctuate widely and are affected by numerous factors beyond the Companys control. The market prices for potash are affected by global rates of production of potash and fluctuating consumer demands, and may be affected by a variety of unpredictable international economic, monetary, and political considerations. Macroeconomic considerations include: expectations of future rates of inflation; the strength of, and confidence in, the US dollar, the currency in which the price of potash is generally quoted, and other currencies; interest rates; global or regional economic events; and competition from other types of fertilizers.

### **The cyclical nature of the potash markets may adversely affect the Company's financial position**

The market for potash tends to move in cycles. Periods of high demand, increasing profits, and high capacity utilization lead to additional capacity through expansion of existing mines and investment in new mines which results in increased production. This growth increases supply until the market is oversaturated, leading to declining prices and declining capacity utilization until a decrease in production as a result of low profitability results in production supply shortages, and a resurgence in demand for potash. This cyclical nature in prices can result in supply/demand imbalances and pressures on potash prices and profit margins which may impact Karnalytes business, financial condition, and results of operations and price for the Common Shares. The potash industry is dependent on conditions in the global economy generally and the agriculture sector, both in North America and worldwide. The agricultural sector can be affected by adverse weather conditions, cost of inputs, commodity prices, animal diseases, the availability of government support programs and other uncertainties that may affect sales of fertilizer products. The Company is not currently producing and selling any products; however, a decrease in the interest of investors in potash (which may be caused by decreased commodity prices) could have a material adverse effect on the Companys ability to obtain financing and secure sales for its products.

### **The Company has a limited operating history on which to base future performance**

The Company has a very limited history of operations and the Wynyard Potash Project and the Proteos Nitrogen Project are still in the exploration and development stage. As such, the Company is subject to many risks common to such enterprises, including under-capitalization, cash shortages, limitations with respect to personnel, financial and other resources and the lack of revenues. There is no assurance that the Companys business will be successful or profitable and the likelihood of success must be considered in light of its early stage of operations.

### **The Company currently has no developed markets for its magnesium products**

Karnalyte would need to develop new markets for its magnesium co-products. The diversity of potential markets offers a reasonable expectation that such markets can be developed. However, a more comprehensive analysis will be required to better delineate products quality, demand, potential sales regions, transportation costs, and pricing variables.

### **Solution mining of carnallite deposits has not been proven in Saskatchewan**

Although the process of solution mining of carnallite deposits has been undertaken outside North America, the scale of those projects are not as large as the solution mining process planned for the Wynyard Potash Project. Solution mining of carnallite deposits in Saskatchewan has not been previously undertaken at a commercial scale and there can be no assurance that the Companys process will be economically viable. The failure of the Companys process of solution mining of carnallite deposits to be economically viable will have a material adverse effect on the Companys business, financial condition and results of operations.

**The Company will require approvals, licences and permits, that it currently does not have, in order to commence operations, and for its current exploration and development activities**

The future mining operations of the Company will require approvals, licences, and permits from various governmental authorities that the Company does not currently have. There can be no assurance that the Company will be able to obtain all necessary licences and permits that may be required to carry out future mining operations, as well as exploration and development at the Wynyard Potash Project or otherwise on the Karnalyte Property.

To the extent such approvals, licences, and permits are required and not obtained, the Company may be curtailed or prohibited from proceeding with planned exploration, development or operation of the Karnalyte Property and the Wynyard Potash Project. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations, and parties that were engaged in operations in the past, may be required to compensate those suffering loss or damage by reason of such mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or the more stringent implementation thereof, could have a material adverse effect on the Company's business, financial condition, and results of operations.

### **No Assurance of Titles**

Title to, and the area of, mineral rights, under the Leases may be disputed and additional amounts may have to be paid to surface rights owners in connection with any development of mining activity. The properties may also be subject to prior unregistered agreements of transfer or aboriginal land claims, and title may be affected by undetected defects. Although the Company believes it has taken reasonable measures to ensure proper title to its properties, there is no guarantee that title to its properties will not be challenged or impaired.

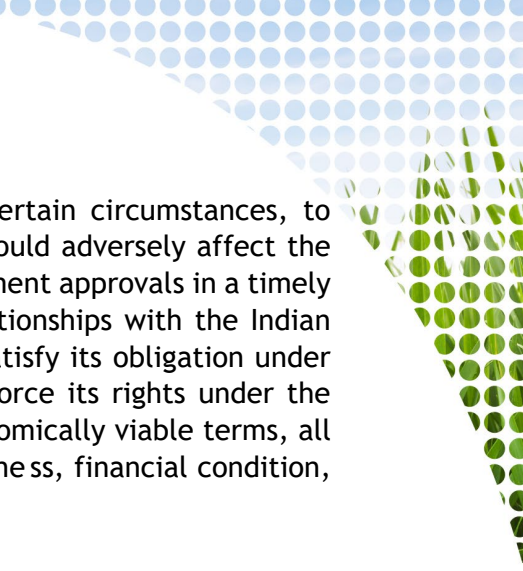
Under Saskatchewan law, the Company is required to make certain payments, take certain actions, and meet certain required expenditures in order to keep subsurface mineral leases in good standing. If the Company defaults with respect to making payments or completing assessment and expenditure work as required, the Company may lose its rights to such leases, or the Wynyard Potash Project could be lost and its operations terminated.

The Company has purchased land to build a production facility and intends to expand development of its properties beyond what it has already purchased. The Company would have to make arrangements with all free-hold property owners if it were to explore further within some parts of the Leases area.

### **India's regulatory regime may affect the Company's risks and expenses in doing business**

The Company has entered into the Offtake Agreement with GSFC, which is an Indian state controlled company. Therefore, certain matters relating to the implementation and conduct of





operations under the Offtake Agreement may be subject, under certain circumstances, to government of India consent. Shifts in political conditions in India could adversely affect the Companys business in India and the ability to obtain requisite government approvals in a timely fashion or at all. Karnalyte must maintain satisfactory working relationships with the Indian government. There is no guarantee that Karnalyte will be able to satisfy its obligation under the Offtake Agreement, nor that it will be able to successfully enforce its rights under the Offtake Agreement to negotiate additional offtake contracts on economically viable terms, all of which could have a material adverse effect on the Companys business, financial condition, and results of operations.

### **The Company relies on key personnel**

The development of the Karnalyte Property, the Wynyard Potash Project, and the Proteos Nitrogen Project will require specialized skills with respect to the exploration and project management. There is no assurance that the Company will be able to retain the required specialized skills and knowledge to meet its business objectives relating to the Karnalyte Property.

The Companys success will depend in large measure on the performance of its management and other key personnel. The loss of the services of any of such persons could have a material adverse effect on the Companys business, financial condition and results of operations. The Company does not have key person insurance in effect for management, and has no current plans to do so. The contributions of these individuals to the immediate operations of the Company may be of central importance. In addition, the competition for qualified personnel in the mining industry is intense and there can be no assurance that the Company will be able to attract and retain all personnel necessary for the development and operation of its business. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of the management of the Company.

### **The Company relies on technical experts**

Exploration and development involves securing the services of and reliance on technical experts particularly in areas of drilling, assay testing and analysis, metallurgy, geology, resource analysis and reporting. The Companys inability to obtain or maintain the services of such technical experts may have a material adverse effect on the Companys ability to proceed with its exploration and development plans.

### **The Company may rely on a limited number of suppliers**

The Company may only be able to purchase the required mining and production equipment from a limited number of contractors and/or suppliers. Any interruption in the operations of its suppliers and/or the inability to obtain timely delivery of key equipment of acceptable quality or any significant increases in the prices of such equipment could result in material production delays, increased costs and reductions in shipments of the Companys products, any of which could increase the Companys operating costs or could have a material adverse effect on the Companys business, financial condition and results of operations.

### **The Company depends on adequate infrastructure**

The Company's activities will depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants which affect capital and operating costs. Unusual or infrequent weather phenomena, government, or other interference in the maintenance or provision of such infrastructure, or sabotage could adversely affect the Company's operations, financial condition, and results of operations. Adequate infrastructure development will also be required in any country in which the Company operates or transacts. The limited infrastructure available, the need for future development of infrastructure and the cost associated with such development may affect the Company's ability to explore and develop its property and to export, store and transport its products. There can be no assurance that future instability in one or more of the countries in which Karnalyte operates or intends to operate in the future, actions by government or by companies doing business there, or actions taken by the international community will not have a material adverse effect on the countries in question and in turn on the Company's business, financial condition and results of operations.

### **The future trading price of the Common Shares will be subject to the price volatility associated with publicly traded securities**

Securities of mining companies have experienced, and continue to experience, substantial volatility often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally, and market perceptions of the attractiveness of particular industries. As a result of any of these factors, the market price of the securities of the Company at any given point in time may be subject to market trends and macroeconomic conditions generally, notwithstanding any potential success of the Company in developing the Karnalyte Property, the Wynyard Potash Project, and the Proteos Nitrogen Project, creating revenues, cash flows or earnings and may not accurately reflect the long-term value of the Company. There can be no assurance that the continual fluctuations in the trading price of the Common Shares will not occur. This may have a material adverse effect on the market price or value of the Common Shares.

### **The Company has significant shareholders**

As of the date hereof, GSFC owns and controls an aggregate of 16,334,558 Common Shares, representing approximately 38.7% of the current issued and outstanding Common Shares. Accordingly, GSFC may be able to exercise influence over matters requiring shareholder approval. Market reaction to the foregoing may affect the demand for Common Shares and adversely affect the liquidity and market value of the Common Shares.

### **The Company has no intention to pay dividends in the near future**

The Company has not paid dividends in the past and has no plans to pay dividends for the foreseeable future. The future dividend policy of the Company will be determined by the Board.

**Protection of intellectual property may be necessary for maintaining the Company's competitive advantage, but cannot be assured**

The Company relies on various intellectual property rights to maintain proprietary control over its improvements to the industry standard solution mining process and the formulation of the Company's anticipated products.

The success of Karnalyte may depend, in part, on its ability to maintain trade secret protection and operate without infringing the proprietary rights of third parties. In certain cases, where management considers that a patent will be an effective means of maintaining the Company's competitive advantage, Karnalyte has made or may make application for patents in the appropriate jurisdictions. Karnalyte has also made applications to Canadian and United States trademark offices for the protection of its logos and branding.

There can be no assurance that the Company's patent applications will be valid, or that patents will issue from the patent applications that Karnalyte has filed or may file. Additionally, there can be no assurance that the scope of any claims granted in any patent will provide the Company with adequate protection for its improvements to the industry standard solution mining process and the formulation of the Company's anticipated products currently or in the future. Karnalyte cannot be certain that the creators of its technology were the first inventors of the improvements covered by patent applications or that they were the first to file. Accordingly, there can be no assurance that the patent applications will be valid or will afford Karnalyte with protection against competitors with similar improvements.

The products developed by Karnalyte may also incorporate technology and processes that will not be protected by any patent and are capable of being duplicated or improved upon by competitors. Accordingly, the Company may be vulnerable to competitors who develop competing technology, whether independently or as a result of acquiring access to the proprietary information of Karnalyte and trade secrets. In addition, effective patent and trademark protection may be unavailable or limited in certain foreign countries and may be unenforceable under the laws of certain jurisdictions. Policing unauthorized use of Karnalyte's improvements could prove to be difficult, and there can be no assurance that the steps taken by the Company will prevent misappropriation of its improvements. In addition, litigation may be necessary in the future to enforce Karnalyte's intellectual property rights, to protect its patents or trademarks, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on the Company's business, operating results and financial condition.

Although the Company does not believe that its improvements or trademarks infringe on the proprietary rights of any third parties, there can be no assurance that infringement or invalidity claims (or claims for indemnification resulting from infringement claims) will not be asserted or prosecuted against Karnalyte or that any such assertions or prosecutions will not materially adversely affect Karnalyte's business, financial condition or results of operations. Irrespective of the validity or the successful assertion of such claims, Karnalyte could incur significant costs and diversion of resources with respect to the defence thereof which could have a material adverse effect on Karnalyte's business, financial condition, and results of operations.

### **The Company may become subject to litigation, the results of which may have a material and adverse impact on the Company's business, financial position and prospects**

The Company may become involved in, named as a party to, or the subject of, various legal proceedings, as well as contract disputes, regulatory proceedings, tax proceedings and legal actions relating to intellectual property, product liability, property damage, property taxes, land rights, and the environment. The outcome with respect to outstanding, pending, or future proceedings cannot be predicted with certainty and may be determined adversely to Karnalyte and as a result, could have a material adverse effect on Karnalytes business, financial condition, and results of operations. Even if the Company prevails in any such legal proceedings, the proceedings could be costly and time-consuming and would divert the attention of management and key personnel from Karnalytes business operations, which could have a material adverse effect on Karnalytes business, financial condition, and results of operations.

### **The Company does not insure against all possible risks**

Although the Company may obtain liability insurance in an amount which management considers adequate, the nature of the risks for mining companies is such that liabilities might exceed policy limits, the liabilities and hazards might not be insurable, or the Company might not elect to insure itself against certain liabilities due to high premium costs or other reasons. Should such liabilities occur, the Company could incur significant costs that could have a material adverse effect on Karnalytes business, financial condition, and results of operations.

### **The Company has negative operating cash flow**

For the year ended December 31, 2019, the Company had negative operating cash flow. The Company's ability to generate positive operating cash flow will depend upon a number of factors, including, among others, its ability to successfully construct and operate the Wynyard Potash Project and the Proteos Nitrogen Project, the quantity of potash and nitrogen fertilizer products that will be produced and the price at which the Company can sell the potash and nitrogen fertilizer products produced from the Wynyard Potash Project or the Proteos Nitrogen Project. If positive operating cash flow is not achieved in a timely fashion, the Company may be required to raise additional funds through the issuance of additional equity or debt securities. There is no assurance such financing will be available or, if available, that it will be on terms favourable to the Company.

### **Future operational and marketing risks may affect the Company**

There is a risk that the Initial Facility, when constructed, may not be or continue to be profitable or successful. There can be no assurance that the Initial Facility will commence commercial operation on schedule or at all, or that the Initial Facility will operate at planned production capacity. The delay or cancellation of any of the planned expansion may affect the Company's ability to satisfy customer orders.

There are also many risks associated with the operating facilities, including the ability to secure materials and components, utility prices, the failure or substandard performance of equipment, hiring and maintaining a productive and reliable workforce, labour disputes, natural disasters,

suspension of operations and compliance with existing and new governmental statutes, regulations, and policies. The occurrence of material operational problems, including but not limited to any of the events described above, could have a material adverse effect on the Companys business, financial condition and results of operations.

Achieving market success will require substantial marketing efforts and the expenditure of significant funds to inform potential customers and third party distributors of the distinctive characteristics and benefits of Karnalytes products. The Companys long -term success may also depend, to a significant extent, on its ability to develop its marketing function. The Company will, among other things, have to attract and retain experienced marketing and sales personnel. No assurance can be given that the Company will be able to attract and retain qualified or experienced marketing and sales personnel or that any efforts undertaken by such personnel will be successful.

Other than the Offtake Agreement with GSFC, the Company does not currently have any contracts in place for the sale of any future production. To the extent that future customers or third parties delay, reduce or cancel orders or are unable or refuse to pay for products and services purchased in a timely fashion or at all, the Companys business, financial condition, and results of operations may be adversely affected.

### **Environmental regulations may adversely impact the Company**

All phases of the Companys operations are subject to environmental regulation. Environmental legislation is becoming stricter, with increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects, and a heightened degree of responsibility for companies and their officers, directors and employees. There can be no assurance that environmental regulation will not adversely affect the Companys business, financial condition and results of operations. Environmental hazards may exist on the Karnalyte Property that are unknown to the Company at present, which may be naturally occurring or could have been caused by previous or existing owners or operators of the property. Reclamation costs are uncertain and planned expenditures estimated by management may differ from the actual expenditures required.

Environmental legislation provides for restrictions and prohibitions on spills, releases or emissions of various substances produced in association with certain mining industry operations, which could result in environmental pollution. A breach of such legislation may result in the imposition of fines and penalties. In addition, certain types of operations require the submission and approval of environmental impact assessments.

Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Companys business, financial condition, and results of operations.



## **Governmental and regulatory requirements could adversely impact the Company**

The current exploration and development activities, and future operations of the Company, are and will be governed by laws and regulations governing mineral concession acquisition, prospecting, development, mining, production, exports, taxes, labour standards, occupational health, waste disposal, toxic substances, land use, water use, environmental protection, aboriginal land claims, mine safety, and other matters. Companies engaged in exploration activities and in the development and operation of mines and related facilities may experience increased costs and delays in production and other schedules as a result of the need to comply with applicable laws, regulations, and permits. Permits are subject to the discretion of government authorities and there can be no assurance that the Company will be successful in obtaining all required permits. Amendments to current laws and regulations governing the operations and activities of the Company or more stringent implementation thereof could have a material adverse effect on the Company's business, financial condition, and results of operations. Further, there can be no assurance that all permits which the Company may require for future exploration, construction of mining facilities and conduct of mining operations will be obtainable on reasonable terms or on a timely basis, or that such laws and regulations would not have an adverse effect on any project which the Company may undertake.

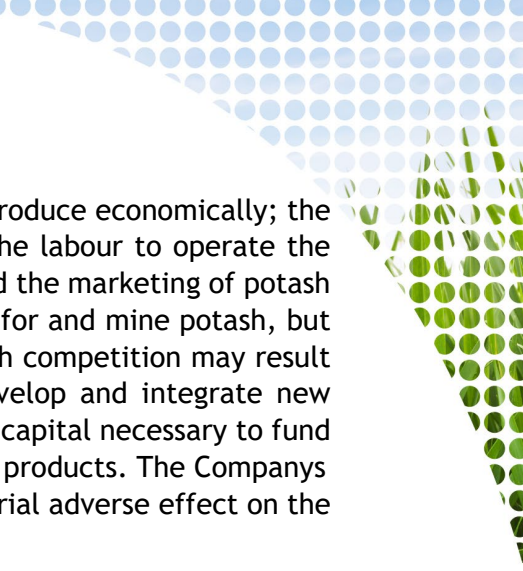
Failure to comply with applicable laws, regulations and permits may result in enforcement actions thereunder, including the forfeiture of claims, orders issued by regulatory or judicial authorities requiring operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or costly remedial actions. The Company may be required to compensate those suffering loss or damage by reason of its mineral exploration and development activities and may have civil or criminal fines or penalties imposed for violations of such laws, regulations and permits. Existing and possible future laws, regulations and permits governing operations and activities of exploration companies, or more stringent implementation thereof, could have a material adverse effect on Karnalytes business, financial condition, and results of operations. Changes to tax laws may also have an adverse effect on the Company's future earning potential.

## **The Company's future mining operations are subject to the normal risks associated with mine operations**

The Company's future mining operations are subject to the risks normally related to the extraction of minerals, incidents including explosions, fires, flooding, discharge of toxic chemicals and other hazards, all of which could result in personal injuries, loss of life, damage to the property of the Company and others, environmental damage, delayed production, increased production costs, unexpected capital costs, and possible legal liability for any and all damages. The occurrence of any such risks or such liabilities may have a material adverse effect on Karnalytes business, financial condition and results of operations.

## **Competition in the mining industry may adversely affect the Company**

The potash mining industry is highly competitive. The Company competes with other mining companies, many of which have greater resources and experience and are currently in advanced stages of development or production. Competition in the potash and magnesium product



industry is primarily for properties which can be developed and can produce economically; the technical expertise to find, develop, and operate such properties; the labour to operate the properties; the capital for the purpose of funding such properties; and the marketing of potash to foreign and domestic markets. Many competitors not only explore for and mine potash, but conduct refining and marketing operations on a worldwide basis. Such competition may result in the Company being unable to acquire desired properties, to develop and integrate new technologies, to recruit or retain qualified employees, to acquire the capital necessary to fund its operations and develop its properties or to successfully market its products. The Company's inability to compete with other mining companies would have a material adverse effect on the Company's business, financial condition and results of operations.

### **The Company may be subject to risks associated with foreign operations**

International operations are subject to political, economic and other uncertainties including, among others, risk of war, risk of terrorist activities, border disputes, expropriation, renegotiations or modification of existing contracts, restrictions on repatriation of funds, import, export and transportation regulations and tariffs, taxation policies including royalty and tax increases and retroactive tax claims, exchange controls, limits on allowable levels of production, currency fluctuations, labour disputes, sudden changes in laws, government control over potash, nitrogen fertilizer, and magnesium pricing and other uncertainties arising out of foreign government impact over the Company's future international operations. The governments and other regulatory agencies in the foreign jurisdictions in which Karnalyte intends to operate in the future may make sudden changes in laws relating to taxation or impose higher tax rates which may affect Karnalyte's operations in a significant manner. In the event of a dispute arising from international operations, the Company may be subject to the jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in Canada. There can be no assurances that Karnalyte will be successful in protecting itself from the impact of such risks.

### **Currency fluctuations may adversely impact the financial position of the Company**

Karnalyte has entered into the Offtake Agreement with GSFC for the sale of certain of its potash production. Sales under the Offtake Agreement are denominated in US dollars. Karnalyte may sell additional potash to the US or other foreign markets in the future. Net income from sales into the US and other foreign markets may be denominated in US dollars, and resulting fluctuations in the currency exchange rate between the Canadian dollar and the US dollar may have an impact on the Canadian dollar amount of net income realized from future potential sales to foreign markets.

### **Global financial conditions may adversely affect the Company's financial position**

Current financial conditions globally continue to be subject to increased volatility with increasing global market uncertainty. Access to financing on satisfactory terms continues to be negatively impacted by economic uncertainties resulting from the ability of certain governments to meet their debt payment obligations. These factors may impact the ability of the Company to obtain equity and/or debt financing in the future and, if obtained, on terms favourable to the Company. If these increased levels of volatility and market turmoil continue,

the Companys operations could be adversely impacted and/or the Company may not be able to secure appropriate debt or equity financing, any of which could affect the trading price of the Companys securities in an adverse manner.

#### **Weather patterns may affect future demand**

Anomalies in regional weather patterns can have a significant and unpredictable impact on the demand for the Companys products and services, and may also have an impact on prices, and, as a result, may impact future revenue. The Companys future customers have limited windows of opportunity to complete required tasks at each stage of crop cultivation. Should adverse weather occur during these seasonal windows, the Company could face the possibility of reduced revenue in the season without the opportunity to recover until the following season.

#### **The Company's internal controls over financial reporting and disclosure controls may prove ineffective**

Inadequate disclosure controls or ineffective internal controls over financial reporting could result in an increased risk of material misstatements in the financial reporting and public disclosure record of the Company. An internal control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance to management and the Board regarding achievement of intended results. The Companys current system of internal and disclosure controls places reliance on a limited number of personnel to perform a variety of control functions including reviews, analysis, reconciliations and monitoring. The failure of individuals to perform such functions or properly implement the controls as designed could have a material adverse effect on the Companys business, results of operations and financial condition. The Company has previously disclosed material weaknesses in the Companys internal controls over financial reporting, as described in the restated MD&A for the three and nine months ended September 30, 2015. These material weaknesses may increase the risk of material misstatements in the financial statements.

#### **Forward-looking information may prove inaccurate**

Investors are cautioned not to place undue reliance on forward-looking information. By its nature, forward-looking information involves numerous assumptions and known and unknown risks and uncertainties, of both a general and specific nature, that could cause actual results to differ materially from those suggested by the forward-looking information or contribute to the possibility that predictions, forecasts or projections will prove to be materially inaccurate.

#### **DIVIDEND POLICY**

The Company has not declared or paid a dividend. Other than pursuant to the TSXs policies and the requirements of the ABCA, there are currently no restrictions on the Company that would prevent it from paying a dividend. However, the Board of Directors intends to retain future earnings for reinvestment in the Companys business, and therefore, has no current intention to declare or pay dividends on the Common Shares in the foreseeable future. The Companys dividend policy will be reviewed from time to time in the context of its earnings, financial condition, and other relevant factors.

## GENERAL DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of the Company consists of an unlimited number of Common Shares and an unlimited number of Preferred Shares issuable in series. The following is a summary of the rights, privileges, restrictions, and conditions attaching to each class of shares of Karnalyte.

### Common Shares

The holders of Common Shares are entitled to receive notice of, and to vote at every meeting of the Karnalyte shareholders and have one vote for each Common Share held. Subject to the rights, privileges, restrictions, and conditions attaching to any Preferred Shares of the Company, the holders of Common Shares are entitled to receive such dividends as the directors of Karnalyte from time to time, by resolution, declare. Subject to the rights, privileges, restrictions and conditions attached to any Preferred Shares of the Company, in the event of the liquidation, dissolution or winding-up of the Company or upon any distribution of the assets of Karnalyte among Karnalyte shareholders being made (other than by way of dividend out of monies properly applicable to the payment of dividends), the holders of Common Shares are entitled to share in the proceeds pro rata.

### Preferred Shares

The Company is also authorized to issue an unlimited number of Preferred Shares without nominal or par value, of which, as at the date hereof, none have been issued. The Preferred Shares of Karnalyte may be issued in one or more series and the directors are authorized to fix the number of shares in each series and to determine the designation, rights, privileges, restrictions, and conditions attached to the shares of each series. The Preferred Shares of Karnalyte rank on a parity with the Preferred Shares of every other series and are entitled to a priority over the Common Shares, and any other class of shares ranking junior to the Preferred Shares of the Company with respect to the payment of dividends and the distribution of assets upon the liquidation of the Company.

## MARKET FOR SECURITIES

The Common Shares are listed and posted for trading on the TSX under the trading symbol "KRN". The following table sets forth certain trading information in respect of the Common Shares on the TSX for the periods indicated.

### Common Shares

2019	Trading Price (\$) Close (Average)	Price Range (\$)		Trading Volume
		High	Low	
January	\$0.27	\$0.36	\$0.21	449,800
February	0.23	0.25	0.22	58,500
March	0.23	0.30	0.20	535,000
April	0.20	0.24	0.16	410,800
May	0.18	0.24	0.15	441,900
June	0.21	0.26	0.18	188,400
July	0.21	0.25	0.19	242,700
August	0.20	0.25	0.18	218,800

September	0.21	0.23	0.16	158,000
October	0.19	0.21	0.18	110,900
November	0.19	0.20	0.18	82,400
December	0.18	0.20	0.17	177,600

## DIRECTORS AND OFFICERS

The term of office of the directors expires annually at the time of the Companys annual shareholder meeting or when or until their successor is duly appointed or elected. The term of office of the Companys executive officers expires at the discretion of the Companys directors. As at December 31, 2019, the Companys current directors and executive officers as a group beneficially owned, directly or indirectly, or exercise control or direction over, none of the issued and outstanding Common Shares representing 0% of the Common Shares outstanding at December 31, 2019. As of the date of this AIF, the Companys directors and executive officers as a group beneficially own, directly or indirectly, or exercise control or direction over, none of the issued and outstanding Common Shares representing 0% of the Common Shares outstanding. This amount does not include Common Shares held by GSFC.

Including the 16,334,558 Common Shares held by GSFC, the Companys directors and executive officers as a group beneficially own, directly or indirectly, or exercise control or direction over 16,334,558 Common Shares or 37.73% of the issued and outstanding Common Shares.

The following table sets out the names and municipalities of residence of the directors and executive officers of the Company, their present position(s) and offices with the Company, their principal occupations during the last five years and their holdings of Common Shares as at the date hereof.

Name and Municipality of Residence	Office held and Date became a Director (as applicable)	Present and Principal Occupation for the Past Five Years	Number of Common Shares Beneficially Owned Directly or Indirectly
<b>Vishvesh D. Nanavaty</b> <sup>(1)(2)</sup> Vadodara, Gujarat State, India	Director since March 7, 2013.	Executive Director & CFO of GSFC. Prior thereto, Senior Vice President (Finance) & CFO of GSFC.	nil <sup>(3)</sup>
<b>Sanjeev V. Varma</b> <sup>(1)(2)</sup> Vadodara, Gujarat State, India	Director since May 21, 2015.	Executive Director of GSFC. Prior thereto, Sr. Vice President (Finance & Projects) of GSFC.	nil <sup>(3)</sup>
<b>D.C. Anjaria</b> <sup>(1)(2)</sup> Ahmedabad, India	Director since August 9, 2019.	Mr. Anjaria owns the consulting firm International Financial Solutions Pvt. Ltd., which he founded after having served for 20 years as a Vice President with Citibank. Mr. Anjaria currently serves as an independent director of Gujarat State Fertilizers and Chemicals Ltd., Gujarat Venture Capital Fund Management and Ratnamani Metal and Tubes Ltd.	nil



<b>Gerald Scherman</b> Saskatoon, Saskatchewan, Canada	Director since December 23, 2019.	Retired. Prior to that, Mr. Scherman spent more than 15 years with AREVA Resources Canada Inc. (now ORANO Canada Inc.). He retired from AREVA as its Senior Vice President & Chief Financial Officer and a member of its board of directors.	nil
<b>Danielle Favreau</b> Saskatoon, Saskatchewan, Canada	Officer since December 25, 2015.	Interim Chief Executive Officer since September 11, 2019 and Chief Financial Officer since December 15, 2017. Prior thereto, Interim Chief Financial Officer from December 31, 2015 to December 14, 2017. Prior thereto, from 2009 to 2015 audit manager, then human resources manager at Virtus Group LLP.	nil

**Notes:**

- (1) Member of the Audit Committee.
- (2) Member of the Compensation and Corporate Governance Committee.
- (3) This amount does not include the 16,334,558 Common Shares held by GSFC.

## Cease Trade Orders

To the knowledge of Karnalyte, no director or executive officer is, as of the date of this AIF, or was within 10 years prior to the date of this AIF, a director, chief executive officer or chief financial officer of any company (including Karnalyte) that: (i) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation and which order was in effect for a period of more than 30 consecutive days while he was acting in the capacity as director, chief executive officer or chief financial officer of such company; or (ii) was subject to any of the foregoing orders for a period of more than 30 consecutive days after he ceased to be a director, chief executive officer or chief financial officer of such company and which resulted from an event that occurred while he was acting in such capacity.

## Bankruptcies

To the knowledge of Karnalyte, no director, executive officer or shareholder holding a sufficient number of securities to materially affect the control of Karnalyte, is, as of the date of this AIF, or was within 10 years prior to the date of this AIF, a director or executive officer of any company that, while such person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver-manager or trustee appointed to hold its assets.

To the knowledge of Karnalyte, no director or executive officer of Karnalyte, or shareholder holding a sufficient number of securities to materially affect the control of Karnalyte has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver-manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

## **Penalties or Sanctions**

To the knowledge of Karnalyte, no director or executive officer of Karnalyte, or shareholder holding a sufficient number of securities to materially affect the control of Karnalyte has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or has been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

## **Conflicts of Interest**

There are potential conflicts of interest to which the directors and officers of the Company will be subject in connection with the operations of the Company. Conflicts, if any, will be subject to the procedures and remedies available under the ABCA. The ABCA provides that in the event that a director has an interest in a contract or proposed contract or agreement, the director shall disclose his or her interest in such contract or agreement and shall refrain from voting on any matter in respect of such contract or agreement unless otherwise provided by the ABCA.

## **PROMOTER**

To the knowledge of Karnalyte, no person or company has been a promoter of Karnalyte within the two most recently completed financial years or during the current financial year.

## **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

In the fourth quarter of 2017, Karnalyte received a statement of claim filed at the Court of Queens Bench of Alberta by Mr. Siu Ma, the Companys former Executive Vice -president and Chief Operating Officer, in the amount of \$728,750. Mr. Mas claim is for an alleged breach of contract for the Companys failure to provide payments to Mr. Ma after he terminated the employment agreement alleging a change of control had occurred. The Company has denied Mr. Mas allegations and filed a statement of defence.

On May 28, 2018, the Company filed an originating application at the Court of Queens Bench of Alberta naming Mr. Robin Phinney, Mr. Dave Van Dam, and Mr. Dan Brown as respondents, seeking, among other things, a declaration that the Company was entitled to take certain actions with respect to shareholder proposals made by the respondents, a declaration that the respondents engaged in improper proxy solicitation, a declaration that the respondents were acting jointly and in concert to effect change in the Companys Board, and a declaration that Mr. Phinney and Mr. Van Dam have failed to discharge their obligations to comply with the early warning system as set out in Multilateral Instrument 62-104 and with other securities laws and regulations. On February 18, 2020, the Court found that Mr. Brown published an improper proxy solicitation on May 28, 2018 and dismissed the remainder of the Companys application.

On June 29, 2018, the Company filed a statement of claim at the Court of Queens Bench of Alberta against Mr. Dan Brown claiming, among other things, damages in the amount of \$1,250,000 for defamation. Mr. Brown filed a statement of defence on September 14, 2018.

On July 4, 2018, the Company filed a statement of claim at the Court of Queens Bench of Alberta against Mr. Robin Phinney, the Companys former President and director, claiming, among other things, damages in the amount of \$5,000,000 arising from breaches of fiduciary duties, improper proxy solicitation, misrepresentation before securities regulators, and interference with contractual relationships. Mr. Phinney filed a statement of defence on September 24, 2018.

Karnalyte is not aware of any other legal proceedings to which the Company is or was a party, or of which any of its property is or was the subject, during the financial year ended December 31, 2019. The Company is not aware of any contemplated proceedings.

During the financial year ended December 31, 2019, management is not aware of any penalties or sanctions imposed against the Company by a court relating to provincial and territorial securities legislation or by a securities regulatory authority, nor any other penalties or sanctions imposed by a court or regulatory body against the Company. During the financial year ended December 31, 2019 the Company did not enter into any settlement agreements before a court relating to provincial and territorial securities legislation or with a securities regulatory authority.

## **INTERESTS OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

Other than the Offtake Agreement, the Subscription Agreement, and the Framework Agreement, each as disclosed herein, there were no material interests, direct or indirect, of any director or executive officer of the Company, any person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10% of the outstanding Common Shares, or any associate or affiliate of any of such persons or companies, in any transaction within the three most recently completed financial years that has materially affected or is reasonably expected to materially affect the Company or a subsidiary of the Company.

## **AUDITORS, REGISTRAR AND TRANSFER AGENT**

The auditors of the Company are KPMG LLP, Chartered Professional Accountants, at their principal office in Saskatoon, Saskatchewan.

The transfer agent and registrar for the Common Shares is AST Trust Company (Canada) at its principal office in Calgary, Alberta and its office in Toronto, Ontario.

## **MATERIAL CONTRACTS**

The following is a list of the material contracts, other than those contracts entered into in the ordinary course of business, of the Company required to be filed on SEDAR under National Instrument 51-102 - *Continuous Disclosure Obligations*, and that were entered into within the most recently completed financial year or prior to the most recently completed financial year and that are still in effect:

1. The Offtake Agreement;
2. The Subscription Agreement; and

### 3. The Framework Agreement.

Pursuant to the terms of the Subscription Agreement and the Offtake Agreement, the Company must not divest, sell, assign, transfer or otherwise dispose of any part of its interests in the Wynyard Potash Project without the prior written consent of GSFC until the third anniversary of the date on which the first shipment for delivery of products is dispatched by the Company in accordance with the terms of the Offtake Agreement (in this section, the "**Project Lock In Period**"). After the expiry of the Project Lock-In Period, a person may acquire an interest in the Wynyard Potash Project subject to GSFC's right to terminate the Offtake Agreement at that time. The Subscription Agreement provides that, subject to certain conditions, the above-described restrictions on disposition do not apply to a creation or grant of a security interest to a lender providing financing for the Wynyard Potash Project (including for an expansion thereof). The Offtake Agreement provides that following the expiry of the Project Lock In Period, the Company may dispose of any part of the Wynyard Potash Project that is not part of Subsurface Mineral Lease KLSA 010 or that is not intended or reasonably required for the three phases of the Wynyard Potash Project.

While the Framework Agreement terminated on September 30, 2016, certain obligations under the Framework Agreement survived such termination. Those surviving obligations provide that as long as the Investor Rights Adjusted Ownership Percentage (as defined in the Subscription Agreement) are not less than 10% then (which Investor Rights Adjusted Ownership Percentage is not less than 10% as of the date hereof):

- the Company and GSFC will use commercially reasonable efforts to cause the Board of Directors to consist of not more than seven members;
- GSFC will be entitled to require that the Company nominate at any annual or special meeting of the shareholders of the Company held for the purpose of electing the directors of the Company (i) three duly qualified nominees of GSFC for election to the Board of Directors if there are seven members of the Board of Directors; (ii) two duly qualified nominees of GSFC for election to the Board of Directors if there are five or six members of the Board of Directors; and (iii) one duly qualified nominee of GSFC for election to the Board of Directors if there are fewer than five members of the Board of Directors; and
- the Company will use commercially reasonable efforts to cause GSFC's nominees to be elected by the shareholders of the Company at any annual or special meeting of the shareholders of the Company held for the purpose of electing the directors of the Company;

provided that if at any such meeting none of the individuals nominated by GSFC are elected by the shareholders of the Company, the nomination rights of GSFC set forth under the Framework Agreement will terminate and GSFC and the Company will then be subject to the terms and conditions set forth in the Subscription Agreement that had been previously entered into by such parties, which (i) based on GSFC's ownership interest entitles GSFC to designate one nominee for election or appointment to the Board of Directors as long as GSFC holds 10% or more of the outstanding Common Shares; and (ii) entitles GSFC the right to nominate an observer to attend all meetings and committee meetings of the Board of Directors if GSFC owns less than 10% of the outstanding Common Shares.

Further particulars of each of the Subscription Agreement and the Offtake Agreement can be found under the heading "General Development of the Business". Copies of the Subscription Agreement, the Offtake Agreement, and the Framework Agreement are available on SEDAR at [www.sedar.com](http://www.sedar.com).

## **AUDIT COMMITTEE**

Pursuant to the provisions of NI 52-110, the Company is required to disclose certain information concerning its audit committee including the audit committees charter, the composition of the audit committee and its relationship with its independent auditors. Such information is set forth below. The charter of the Companys audit committee is attached as Appendix "A" to this AIF.

### **Composition of Audit Committee**

The audit committee consists of Mr. Vishvesh Nanavaty (Chairman), Mr. Sanjeev Varma, and Mr. D.C. Anjaria. Each of Mr. Nanavaty, Mr. Varma, and Mr. Anjaria are financially literate, and independent, within the meaning of NI 52-110.

The relevant education and experience of each audit committee member is outlined below.

#### ***Vishvesh Nanavaty***

Mr. Nanavaty has been the General Manager of Finance of GSFC since 2002. Prior to joining GSFC, Mr. Nanavaty was Senior Finance Manager and Company Secretary at Johnson Pump (India) Ltd. from 1992 to 2002. Mr. Nanavaty is a chartered accountant and has a First Class Commerce degree from Gujarat University. Mr. Nanavaty has also received designations from the Institute of Cost and Works Accountants of India and the Institute of Company Securities of India.

#### ***Sanjeev Varma***

Mr. Varma is Sr. Vice President (Finance & Projects) at GSFC. Mr. Varma did his Bachelor of Engineering at Sardar Patel University, Gujarat, India in 1990 and joined GSFC as a Trainee Engineer. While serving at GSFC, he did his Master of Business Administration (Finance) in 2002 at MS University Baroda securing Gold Medals for his academic achievements. Since then, he has been working in the Finance Department of GSFC. He presently heads the Budget & Project Financing Sections and Project Monitoring & Development Cell of GSFC. He has extensive experience of about 25 years as a techno-commercial executive in a large petrochemical & fertilizer complex which includes project implementation from the stage of conceiving to commissioning, maintenance, budgeting, project financing and strategic decision making.

#### ***D.C. Anjaria***

Mr. Anjaria is a management graduate from the Indian Institute of Management in Ahmedabad, India. He has extensive international banking experience in India, Africa, the Middle East and Europe. Since returning to India, his focus has been on the financial markets industry where he works closely with investment banks, brokerage houses and mutual funds. As a financial markets professional, he has significant experience as a government policy advisor including advisor to



the Securities and Exchange Board of India and the Securities Markets Regulator (BAPEPAM) in Indonesia. Mr. Anjaria has a wide-range of experience serving as an independent director with many companies in India and currently serves as an independent director of Gujarat State Fertilizers and Chemicals Ltd., Gujarat Venture Capital Fund Management and Ratmani Metal and Tubes Ltd.

### **Audit Committee Oversight**

At no time since incorporation was a recommendation of the audit committee to nominate or compensate an external auditor not adopted by the Board of Directors of the Company.

### **Reliance on Certain Exemptions**

Although Mr. W. Todd Rowan is not independent within the meaning of NI 52-110, he was appointed as an interim member of the audit committee effective as of March 22, 2019 in accordance with the exemption under section 3.5 of NI 52-110. The Board determined, in accordance with section 3.9 of NI 52-110, that Mr. Rowan's appointment and the reliance on the exemption in Section 3.5 of NI 52-110 will not materially adversely affect the ability of the audit committee to act independently and to satisfy the other requirements of NI 52-110. Mr. Rowan was replaced on the audit committee with Mr. D.C. Anjaria, who is both financially literate and independent within the meaning set out in NI 52-110.

Other than as disclosed above, at no time since the commencement of the Company's most recently completed financial year has the Company relied on the exemption in section 2.4 of NI 52-110 (De Minimis Non-audit Services), the exemption in section 3.2 of NI 52-110 (Initial Public Offerings), the exemption in subsection 3.3(2) of NI 52-110 (Controlled Companies), the exemption in section 3.4 of NI 52-110 (Events Outside Control of Member), the exemption in section 3.5 of NI 52-110 (Death, Disability or Resignation of Audit Committee Member), the exemption in section 3.6 of NI 52-110 (Temporary Exemption for Limited and Exceptional Circumstances) or an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52-110 (Exemptions).

### **Pre-Approval Policies and Procedures**

The Audit Committee has adopted a policy in relation to the engagement of non-audit services whereby the Audit Committee pre-approved certain services from its auditors of up to \$50,000 in aggregate. Any services by the auditor above these thresholds must be brought to the Audit Committee for approval.

### **External Auditor Service Fees**

The following table provides information about the fees billed to the Company, respectively, for professional services rendered by KPMG LLP, Chartered Professional Accountants, during the years ended 2017 and 2018.

	2019	2018
Audit Fees <sup>(1)</sup>	71,500	\$77,487
Audit Related Fees <sup>(2)</sup>	45,900	\$54,392

	2019	2018
Tax Fees <sup>(3)</sup>	3,600	7,721
Total <sup>(4)</sup>	121,000	\$139,600

**Notes:**

- (1) Audit fees were for professional services rendered by the auditors for the audit of the Companys annual financial statements and review of the interim financial statements.
- (2) Audit-related fees are for services performed by the Companys auditors related to and in connection with regulatory filings.
- (3) Tax fees are for tax compliance, tax advice, and tax planning.
- (4) These fees only represent professional services rendered and do not include any out-of-pocket disbursements or fees associated with filings made on the Companys behalf.

## **INTERESTS OF EXPERTS**

The Companys auditors are KPMG LLP, Chartered Professional Accountants, who have prepared an independent audit report dated March 20, 2020 in respect of Karnalytes audited annual financial statements with accompanying notes thereto for the year ended December 31, 2019. KPMG LLP advises that they are independent of Karnalyte within the meaning of the relevant rules and related interpretations prescribed by the professional bodies in Canada and any applicable legislation or regulations.

## **ADDITIONAL INFORMATION**

Additional information relating to Karnalyte may be found on SEDAR at [www.sedar.com](http://www.sedar.com). Additional information regarding directors and officers remuneration and indebtedness, principal holders of Karnalytes securities and securities authorized for issuance under equity compensation plans is contained in Karnalytes management information circular prepared in respect of its annual general meeting held on May 14, 2019. Additional financial information is provided in Karnalytes audited annual financial statements, together with the accompanying report of the auditor and MD&A for the year ended December 31, 2019.

## **EFFECTIVE DATE**

Unless otherwise specifically herein provided, the information contained in this AIF is stated as at March 20, 2020.

**APPENDIX "A":  
KARNALYTE RESOURCES INC.  
AUDIT COMMITTEE CHARTER**

**Overall Role and Responsibility**

The primary role and responsibilities of the Audit Committee shall be to:

- (a) assist the Board of Directors in its oversight role with respect to:
  - (i) the quality and integrity of financial reporting and information;
  - (ii) the independent auditors performance, qualifications and independence;
  - (iii) the performance of the Corporations internal audit function, if applicable; and
  - (iv) the Corporations compliance with legal and regulatory requirements and
- (b) prepare such reports of the Audit Committee required to be included in any documents in accordance with applicable laws or the rules of applicable securities regulatory authorities;
- (c) assess the processes related to the determination and mitigation of risks and the maintenance of an effective control environment; and
- (d) strengthen the role of the outside directors by facilitating in depth discussions between the directors on the Audit Committee, management and independent auditors.

**Membership and Meetings**

The Audit Committee shall consist of three or more Directors of the Corporation appointed by the Board of Directors, all of whom in the opinion of the Board shall be independent to the Corporation and as such shall not be officers (other than a non-executive Chairman or Corporate Secretary who is not an employee of the Corporation) or employees of or have a meaningful business relationship with the Corporation or any of the Corporations affiliates or be an immediate family member of any of the foregoing, to the extent required by applicable laws governing the Corporation. Each of the members of the Audit Committee shall satisfy the applicable independence and financial literacy of the laws governing the Corporation, the applicable stock exchanges on which the Corporations securities are listed and applicable securities regulatory authorities.

The Board of Directors shall designate one member of the Audit Committee as the Committee Chair. Each member of the Audit Committee shall be financially literate as such qualification is interpreted by the Board of Directors in its business judgment.

Any members of the Audit Committee may be removed or replaced at any time by the Board of Directors and will cease to be a member of the Audit Committee as soon as such member ceases to be a director. The Board may fill vacancies on the Audit Committee by appointment from among its members. If and whenever a vacancy exists on the Audit Committee, the remaining members may exercise all its powers so long as a quorum remains. Subject to the foregoing, following the

appointment as a member of the Audit Committee, each member will hold such office until the Audit Committee is reconstituted.

### **Structure and Operations**

The affirmative vote of a majority of the members of the Audit Committee participating in any meeting of the Audit Committee is necessary for the adoption of any resolution. In case of an equality of votes, the Chairman of the meeting shall be entitled to a second or casting vote.

The Chair will preside at all meetings of the Audit Committee, unless the Chair is not present, in which case the members of the Audit Committee that are present will designate from among such members the Chair for the purposes of the meeting.

The Audit Committee shall meet as often as it determines, but not less frequently than quarterly. A quorum for meetings of the Audit Committee will be a majority of its members and the rules for calling, holding, conducting and adjourning meetings of the Audit Committee will be the same as those governing the Board of Directors unless otherwise determined by the Audit Committee or the Board of Directors.

The Chief Financial Officer will attend meetings of the Audit Committee where matters relating to the functions of the Audit Committee are dealt with, unless otherwise excused from all or part of any such meeting by the Chairman. The Audit Committee may invite such officers, directors and employees of the Corporation as it sees fit from time to time to attend at meetings of the Audit Committee and assist in the discussion and consideration of the matters being considered by the Audit Committee.

The Audit Committee will meet with the external auditor at least once per year (in connection with the preparation of the year-end financial statements) and at such other times as the external auditor and the Audit Committee consider appropriate. The Audit Committee is expected to establish and maintain free and open communication with management and the independent auditor and shall periodically meet separately with each of them.

Agendas, approved by the Chairman, will be circulated to the Audit Committee members along with background information on a timely basis prior to the Audit Committee meetings. Minutes of all meetings of the Audit Committee will be taken. The minutes of the Audit Committee will be recorded and maintained and the Audit Committee shall report to the Board of Directors on its activities after each of its meetings at which time minutes of the prior Audit Committee meeting shall be tabled for the Board.

Any issues arising from these meetings that bear on the relationship between the Board and management should be communicated to the Chairman of the Board by the Audit Committee Chair.

### **Specific Duties**

#### ***Oversight of the Independent Auditor***

- Make recommendations to the Board for the appointment and replacement of the independent auditor.

- Responsibility for the compensation and oversight of the work of the independent auditor (including resolution of disagreements between management and the independent auditor regarding financial reporting) for the purpose of preparing or issuing an audit report or related work. The independent auditor shall report directly to the Audit Committee.
- Authority to pre-approve all audit services and permitted non-audit services (including the fees, terms and conditions for the performance of such services) to be performed by the independent auditor.
- Evaluate the qualifications, performance and independence of the independent auditor, including (i) reviewing and evaluating the lead partner on the independent auditors engagement with the Corporation, and (ii) considering whether the auditors quality controls are adequate and the provision of permitted non-audit services is compatible with maintaining the auditors independence.
- Obtain from the independent auditor and review the independent auditors report regarding the management internal control report of the Corporation to be included in any documents as required by the laws governing the Corporation, the applicable stock exchanges on which the Corporations securities are listed and applicable securities regulatory authorities.
- Ensure the rotation of the lead (or coordinating) audit partner having primary responsibility for the audit and the audit partner responsible for reviewing the audit as required by law (currently at least every 5 years).
- When there is to be a change in the auditor, review all issues relating to the change, including any reportable events, and all information to be included in the required notice to securities regulators of such change.

### ***Financial Reporting***

- Review and discuss with management and the independent auditor, as applicable:
  - prior to the annual audit the scope, planning and staffing of the annual audit,
  - the annual audited financial statements,
  - the Corporations annual and quarterly disclosures made in managements discussion and analysis,
  - approve any reports for inclusion in the Corporations Annual Report, as required by applicable legislation,
  - the Corporations quarterly financial statements, including the results of the independent auditors review of the quarterly financial statements and any matters required to be communicated by the independent auditor under applicable review standards,
  - significant accruals, reserves or other estimates such as the ceiling test calculation,
  - accounting treatment of unusual or non-recurring transactions,
  - compliance with covenants under loan agreements,



- disclosure requirements for commitments and contingencies,
  - adjustments raised by the external auditors, whether or not included in the financial statements,
  - significant variances with comparative reporting periods.
  - significant financial reporting issues and judgments made in connection with the preparation of the Corporations financial statements, any significant changes in the Corporations selection or application of accounting principles,
  - any major issues as to the adequacy of the Corporations internal controls and any special steps adopted in light of material control deficiencies, and
  - other material written communications between the independent auditor and management, such as any management letter or schedule of unadjusted differences.
- Discuss with the independent auditor matters relating to the conduct of the audit, including any difficulties encountered in the course of the audit work, any restrictions on the scope of activities or access to requested information and any significant disagreements with management.
  - Review the financial statements, prospectuses, managements discussion and analysis, annual information form and all public disclosure containing audited or unaudited financial information (including, without limitation, annual and interim press releases and any other press releases disclosing earnings or financial results) before release and prior to Board approval. The Audit Committee must be satisfied that adequate procedures are in place for the review of the Corporations disclosure of all other financial information and will periodically access the accuracy of those procedures.
  - Conduct an investigation sufficient to provide reasonable grounds for believing that the financial statements, managements discussion and analysis and any public disclosure documents containing financial information are complete in all material respects and consistent with the information known to Audit Committee members, and assess whether the financial statements reflect appropriate accounting principles.

### ***Risk Assessment and Risk Management***

- Discuss with Corporation management guidelines and policies governing the risk assessment and risk management processes.
- Review with Corporations management and the independent auditors, significant risks and exposures, including managements plans and processes to minimize these risks such as insurance coverage.
- Evaluate whether Corporations management is adequately communicating the importance of internal control to all relevant personnel.
- Periodically privately consult with the independent auditor about internal controls and the completeness and accuracy of the Corporations financial statements.

- Review whether the internal control recommendations made by the independent auditor are being implemented by the Corporations management and, if not, why not.

### ***Other Responsibilities***

- Periodically, as the Audit Committee deems appropriate, review the President, Chief Executive Officer and Chief Financial Officers expenses and perquisites.
- Review all consulting fees paid by the Corporation to any organization where such fees exceed \$25,000 annually.
- Institute special investigations, if necessary, and hire special counsel or experts to assist, if appropriate.
- Establish, and review annually, a procedure for:
  - the receipt, retention, and treatment of complaints received by the Corporation regarding accounting, internal accounting controls, or auditing matters;
  - and the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters and resolution of such concerns, if any.
- To comply with the procedure above, the Audit Committee shall ensure that the Corporation advises all employees, by way of a written code of business conduct and ethics (the "Code"), or if such Code has not yet been adopted by the Board of Directors, by way of written or electronic notice, that any employee who reasonably believes that questionable accounting, internal accounting controls, or auditing matters have been employed by the Corporation or their external auditors is strongly encouraged to report such concerns by way of communication directly to the Chair of the Corporation Governance Committee of the Corporation.
- Review with the Board, any issues that arise with respect to the quality or integrity of the Corporations financial statements, the Corporations compliance with legal or regulatory requirements and the performance and independence of the Corporations independent auditors.
- Perform other oversight functions as requested by the Board.

### **Audit Committee's Role**

The Audit Committee has the oversight role set out in this Charter. The Audit Committee shall review and assess the adequacy of this Charter periodically and, where necessary, will recommend changes to the Board of Directors for its approval.

Management, the Board of Directors, the independent auditor and the internal auditor (if any) all play important roles in respect of compliance and the preparation and presentation of financial information. Management is responsible for compliance and the preparation of financial statements and periodic reports. Management is responsible for ensuring the Corporations financial statements and disclosures are complete, accurate, in accordance with generally accepted

accounting principles and applicable laws. The Board of Directors in its oversight role is responsible for ensuring that management fulfills its responsibilities. The independent auditor, following the completion of its annual audit, opines on the presentation, in all material respects, of the financial position and results of operations of the Corporation in accordance with Canadian generally accepted accounting principles.

## **Funding for the Independent Auditor and Retention of Other**

### ***Independent Advisors***

The Corporation shall provide for appropriate funding, as determined by the Audit Committee, for payment of compensation to the independent auditor for the purpose of issuing an audit report and to any advisors retained by the Audit Committee. The Audit Committee shall also have the authority to retain such other independent advisors as it may from time to time deem necessary or advisable for its purposes and the payment of compensation therefore shall also be funded by the Corporation.

## **Approval of Audit and Remitted Non-audit Services**

### ***External Auditors***

Over the course of any year there will be two levels of approvals that will be provided. The first is the existing annual Audit Committee approval of the audit engagement and identifiable permitted non-audit services for the coming year. The second is in-year Audit Committee pre-approvals of proposed audit and permitted non-audit services as they arise.

Any proposed audit and permitted non-audit services to be provided by an external auditor to the Corporation or its subsidiaries must receive prior approval from the Audit Committee, in accordance with this protocol. The Chief Financial Officer shall act as the primary contact to receive and assess any proposed engagements from an external auditor.

Following receipt and initial review for eligibility by the primary contacts, a proposal would then be forwarded to the Audit Committee for review and confirmation that a proposed engagement is permitted.

In the majority of such instances, proposals may be received and considered by the Chair of the Audit Committee (or such other member of the Audit Committee who may be delegated authority to approve audit and permitted non-audit services), for approval of the proposal on behalf of the Audit Committee. The Audit Committee Chair will then inform the Audit Committee of any approvals granted at the next scheduled meeting.

## ***Procedure Governing Errors or Misstatements in Financial Statements***

In the event a director or an officer of the Corporation has reason to believe, after discussion with management, that a material error or misstatement exists in financial statements of the Corporation, that director or officer shall forthwith notify the Audit Committee and the auditor of the error or misstatement of which the director or officer becomes aware in a financial statement that the auditor or a former auditor has reported on.

If the auditor or a former auditor of the Corporation is notified or becomes aware of an error or misstatement in a financial statement on which the auditor or former auditor has reported, and if in the auditors or former auditors opinion the error or misstatement is material, the auditor or former auditor shall inform each director accordingly.

When the Audit Committee or the Board is made aware of an error or misstatement in a financial statement the Board shall prepare and issue revised financial statements or otherwise inform the shareholders of the Corporation and file such revised financial statements as required.

***Limitation on Audit Committee Members' Duties***

Nothing in this Charter is intended, or may be construed, to impose on any member of the Audit Committee a standard of care or diligence that is in any way more onerous or extensive than the standard required by law.