TECHNICAL REPORT SUMMARIZING THE TUGASKE PROJECT, SASKATCHEWAN

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1.1 Project Summary

Gensource Potash Corporation ("Gensource") is in the final stage of financing one of its vertically integrated, small-scale potash production facilities (referred to as "modules"), in its 100% owned "Vanguard Area" (or, the "Property") comprising Government of Saskatchewan potash mineral leases KL 244 and KL 245. The Vanguard Area is in the South-Central region of the province, and surrounds the Villages of Tugaske and Eyebrow in the Rural Municipality (R.M.) of Huron No.223 and R.M. of Eyebrow No.193 respectively.

The first module to be constructed in the Vanguard Area, named the "Tugaske Project" (or, the "Project") will be located on Section 4, Township 22, Range 02, West of the Third Meridian (4-22-2-W3M), approximately 6 kilometres (km) southeast of Tugaske. The plant site and well field are wholly within the R.M. of Huron No.223 on the KL 245 Lease. The Project is situated near the essential utilities and infrastructure required for an industrial project, including: rail, roads, natural gas, power, etc. See Figure 1 for the Vanguard Area and Project Location map. The Project is approximately 170 km south of Saskatoon and 150 km northwest of Regina (Saskatchewan's two largest cities), with the closest city being Moose Jaw, approximately 70 km to the southeast.

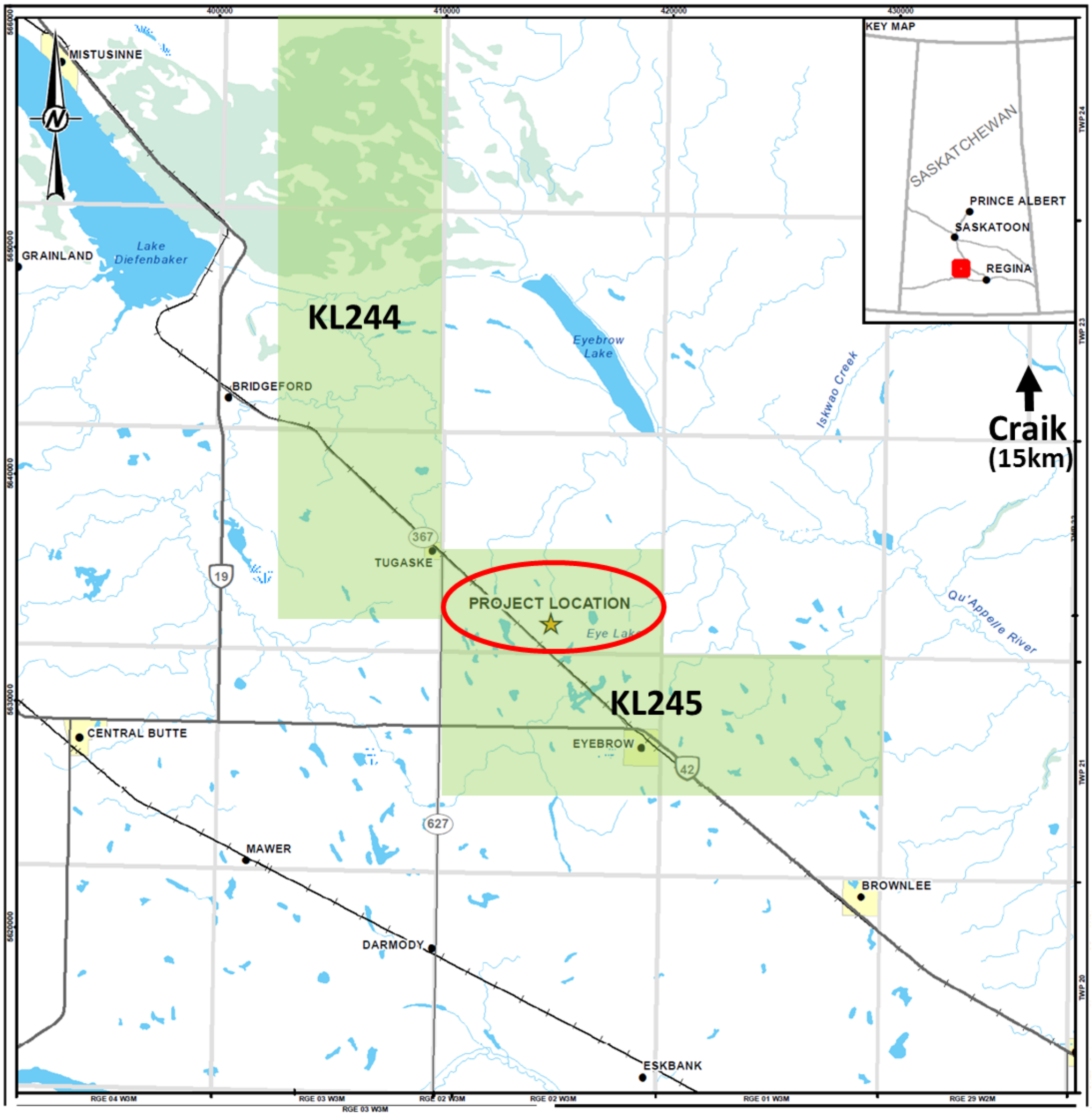

Figure 1: Vanguard Area & Tugaske Project Location Map

In 2017, Gensource completed the Feasibility Study for a module in the Vanguard Area, referred to at the time as the "Vanguard One Project". The Vanguard One Feasibility Study Report (Engcomp, 2017) was subsequently summarized and disclosed in a previous NI 43-101 Technical Report (Fourie et al., 2018). The Tugaske Project module is a minor modification to the Vanguard One Project module, as specific design parameters were adjusted to suit requirements of the intended potash market. The intent of the Tugaske Project (and its ownership partners) is to direct the pre-sold product from the Tugaske module to the North American potash market - predominantly in the Unites States of America (USA). Therefore, the Tugaske module was updated to suit the demands of these potash customers. Such modifications affected the final product specification, as well as the desired product storage, loading and hauling strategy. The details for the Tugaske Project are supported by the majority of the information initially developed for the Vanguard One Project, due to the similarity of the designs between these two modules.

1.2 Summary of Previous Work

To date, Gensource has completed the following five (5) NI 43-101 Technical Reports on the Property, which are all available on Sedar (www.sedar.com):

- an initial NI 43-101 Mineral Resource Report, dated April 22, 2016, which defined Inferred Mineral Resource and Exploration Targets on the Property based on geological work completed. See: *Technical Report for the Acquisition of Potash Dispositions KP 363 & KP 483, Saskatchewan (Fourie, 2016);*
- an NI 43-101 Preliminary Economic Assessment (PEA) dated July 15, 2016. This work indicated an economically positive and technically viable project and contained recommendations to proceed with further geological work, as well as a feasibility study. See: *Technical Report – Preliminary Economic Assessment for the Vanguard Project (Fourie et al., 2016);*
- an updated NI 43-101 Mineral Resource Report, issued on March 15, 2017, which defined a Mineral Resource in the Indicated and Inferred categories. See: *Technical Report for the Updated Resource on the Vanguard Potash Project, Saskatchewan (Fourie, 2017)*; and
- an NI 43-101 Technical Report, issued on February 23, 2018, summarizing the Feasibility Study for the Vanguard One Project, complete with Mineral Resource updates and Mineral Reserve – confirming the technical and economic feasibility of the Project. See: *Technical Report Summarizing the Feasibility Study for the Vanguard One Potash Project, Saskatchewan (Fourie et al., 2018)*
- an NI 43-101 Technical Report, issued on March 8, 2021, summarizing the Tugaske Project Feasibility Study and Front-End Engineering Design ("FEED") work, both completed by Gensource in 2020, including updates made to the Project since disclosing the preceding NI 43-101 Technical Report (Fourie et al., 2018). See*: Technical Report Summarizing the Tugaske Project, Saskatchewan (Fourie et al., March 2021).*

Gensource has advanced several aspects of the Project, successfully completing additional pre-requisite tasks and milestones required to move the Project to the next stage of development: financing, detailed engineering, procurement, construction and commissioning. Such efforts included additional exploration (Mineral Resource confirmation) drilling and geological studies, securing a buyer (referred to as the "Offtaker") for 100% of the intended production from the Project, arranging for senior debt, finding potential equity partners, and advancing engineering and design efforts to suit the requirements of the partners in the Project - specifically addressing the Offtaker's intended market. These efforts resulted in an updated Tugaske Project Feasibility Report (Gensource, 2020), followed by additional Front-End Engineering Design (FEED) work that was summarized in the Tugaske Project FEED Report (Gensource, 2020). Both reports were used by the debt and equity groups under non-disclosure agreements (NDAs), and reviewed as part of the debt due diligence process by independent consultants. The purpose of this NI 43-101 Technical Report is to reflect the most current financial information resulting from the project financing process, as well as correction to the base case Mineral Resource and Mineral Reserve numbers previously reported based on a discrepancy found in the March 2021 NI 43-101 Technical Report (Fourie et al., March 2021).

1.3 Summary of Project Financing Efforts

1.3.1 JV Ownership Group and Offtake

Gensource's business model is one of vertical integration – creating a direct link between an identified market and the facility that produces the product, allowing the end-user to have better control over its own supply chain. Additionally, under this model, only capacity that is spoken for, or pre-sold, will be constructed, thus eliminating market-side risk. In a news release, dated May 22, 2019, Gensource announced it had entered into a non-binding Memorandum of Understanding (MOU) to form a joint venture (JV) company to develop the Tugaske Project. The parties to the JV reached an agreement in principle on an offtake amount, duration of offtake, equity contribution and the JV operating structure.

In a subsequent news release dated January 30, 2020, Gensource officially announced HELM AG and its North American subsidiary, HELM Fertilizer Corp. (together "HELM"), as the Tugaske Project's Offtaker. HELM, founded in 1900, is a privately-owned company based in Hamburg, Germany. HELM is one of the world's largest chemical marketing companies and provides access to the world's key markets through its specific regional knowledge and more than 100 subsidiaries, sales offices, and participations in over 30 countries. The definitive offtake agreement for Tugaske has been executed between Gensource and HELM and will see HELM purchasing 100% of the production from the Project for 10 years, renewable for 5-year periods thereafter.

A news release dated September 2, 2021 announced that Gensource had created the joint venture project company: KClean Potash Corporation ("KClean"). KClean is a Saskatchewan corporation and will be the entity that is ultimately financed and will construct and own the Tugaske Project. At the time of this report, the shareholder agreement for KClean has been negotiated between Gensource and HELM and will be executed upon HELM's equity investment into KClean. Gensource has announced a binding conditional commitment letter form HELM for a $CAD 50 Million investment into KClean, which, in addition to other financing commitments as part of the debt financing package, will earn HELM a 33% ownership stake in KClean.

1.3.2 Debt Financing

In a news release dated October 18, 2019, Gensource announced it has formally mandated KfW IPEX-Bank GmbH ("KfW") to act as Lead Arranger for the senior debt component of the Tugaske Project finance package. KfW IPEX-Bank is responsible for international project finance within the larger KfW Bank Group, and is headquartered in Frankfurt, Germany. Further, in a news release dated May 19, 2020, Gensource announced that the French multinational investment bank, Société Générale ("SocGen"), had also joined the banking group for Tugaske as joint Lead Arranger of the debt facility. Together, KfW and SocGen are referred to as the "Senior Lenders".

As part of the debt financing, six due diligence ("DD") studies were initiated. Through a competitive bidding process, independent third-party consultants were engaged to review the following areas of the Project:

- Technical;
- Environmental & Social;
- Market;
- Legal;
- Insurance; and
- Financial Model Audit

Under the lead of KfW IPEX-Bank, the Project is eligible for insurance coverage under the German Export Credit Agency (ECA) Euler Hermes. "*Export Credit Guarantees and Untied Loan Guarantees have been well established and tried and tested foreign trade promotion instruments of the German Federal Government for decades. They are managed on behalf of the Federal Republic of Germany by Euler Hermes Aktiengesellschaft as mandatary of the Federal Government."* [1] By providing an export credit guarantee in the form of insurance on the exports of services, materials, equipment, etc. from Germany, the ECA helps protect German companies in the event of non-payment by foreign debtors. This insurance is seen as a risk-reduction of loan default by the Senior Lenders, and therefore often results in more favourable debt financing terms when a significant portion of the project can be insured through such a scheme.

The management of the guarantees are led by Euler Hermes; however, the decision to underwrite such transactions is ultimately made by an inter-ministerial committee (IMC): "*comprising representatives not only of the German Federal Ministry of Economics and Technology but also of the Federal Ministry of Finance, the German Foreign Office and the Federal Ministry for Economic Cooperation and Development*."[2]

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[1] https://www.tradefinanceglobal.com/export-finance/export-credit-agencies-eca/eha-germany-eca/

[2] https://en.wikipedia.org/wiki/Hermes_cover

Finally, as part of this overall debt financing and ECA scheme, an independent chartered accountant is engaged to compile all information from the Senior Lenders' DD process, advising and aiding Euler Hermes in the preparation of their application and final approval from the IMC to officially underwrite the project.

The JV intends to optimize the amount of ECA coverage available for the Project.

On September 23, 2021, Gensource announced that it had received commitment letters from the two mandated joint lead debt arrangers, KfW IPEX-Bank and Société Générale, to provide a senior secured debt facility for up to $CAD 280 Million. The debt facility is intended to fund, in part, the construction and ramp up of the Tugaske potash development project.

The commitment letter is based on an agreed and binding term sheet for the Debt Facility and is divided into two tranches, Tranche A and Tranche B.

<u>Tranche A Facility – $CAD 140 Million</u>

- Term of 11.5 years;
- Interest base rate of 3-month Canadian dollar offered rate ("CDOR") plus respective margin;
- Purpose is to fund key equipment and service provider contracts with German suppliers which are eligible for export credit cover;
- Export credit guarantee issued by Euler Hermes;
- Interest capitalized during construction;
- Fully amortizing loan facility, early repayment permitted without penalty, upon notice;
- Subject to standard bank fees.

<u>Tranche B Facility – $CAD 140 Million</u>

- Term of 10.5 years
- Interest base rate of 3-month CDOR plus respective margin;
- Purpose is to fund the remaining capital spend as identified in the detailed capital cost estimate;
- Interest capitalized during construction;
- Fully amortizing term loan facility, early repayment permitted without penalty, upon notice;
- Subject to standard bank fees. Conditions precedent to loan drawdowns include final approval of insurance coverage from Euler Hermes, execution and delivery of the Loan

Documentation, equity expenditure and other customary conditions for a project finance debt facility.

Work on the definitive loan agreement and associated documentation (the "Loan Documentation") is underway. Execution of the Loan Documentation is subject to completion of the remaining equity financing by the Gensource, Euler Hermes approval and other customary conditions typical for transactions of this nature - each of which is expected to be achieved in parallel with completion of the Loan Documentation.

1.3.3 German Content

To optimize qualifying German content in the Project, eligible for ECA coverage, Gensource explored several options; and ultimately, two approaches were defined and initiated as part of FEED: (1) the engagement of key design and fabrication companies from Germany, and (2) the engagement of a German procurement services company.

In November 2019, Gensource formally engaged K-UTEC AG Salt Technologies, Köppern GmbH & Co KG, and Ebner GmbH & Co KG (referred to as "KKE" for simplicity). Together, KKE represent world-class services in the area of potash and salt process design, equipment fabrication and supply. The main areas of expertise of the three companies within KKE, pertinent to the Tugaske Project, are as follows:

- K-UTEC AG Salt Technologies
  - Physical-chemistry, overall process development and engineering and, as far as necessary, practical bench scale tests
- Köppern GmbH & Co KG
  - Drying, compaction, granulation, and material sizing (screening)
- Ebner GmbH & Co KG
  - Crystallization and evaporation

Based on the combined experience and capabilities of KKE, Gensource saw an opportunity to not only work with these 3 select German companies and have this work qualify for ECA coverage, but also to simplify the number of Project interfaces by packaging the entire process plant into a single design-supply-commission contract package. Packaging the entire process plant into one export contract enables KKE to provide a process guarantee for the production quality and quantity specified for the Project, while making liquidated damages available for failure to meet critical Project objectives. As part of FEED, KKE was engaged to perform a value engineering exercise, with the main objective to identify further potential measures for process optimisation with respect to efficiency, capital and operating costs, and to provide a fixed technical and commercial offer for the process plant package.

In addition to KKE, Siemens AG has been engaged by Gensource to similarly provide a complete design-supply-commission package of the site-wide electrical, instrumentation and controls system. Siemens AG is a well known and respected German multinational conglomerate company headquartered in Munich, Germany, with branch offices all over the world.

Finally, Gensource has also engaged MAVEG Industrieausrüstungen GmbH ("MAVEG"), who is a procurement general contractor and content aggregator based in Ratingen, Germany. The role of MAVEG will be to help manage the German procurement and export process, acting as the "exporter of record" for any services, equipment, and/or materials outside the KKE & Siemens packages that Gensource wishes to have covered under the ECA scheme.

Integration of these key German vendors has resulted in both technical updates (e.g., mass balance, process flow diagrams, etc.) and commercial updates (e.g., CAPEX, OPEX, economics, and schedule) that were incorporated during FEED and summarized in the Tugaske Project FEED Report (Gensource, 2020) – as discussed below.

1.4 Summary of Tugaske Feasibility Report & FEED

As discussed in sub-section 1.1, the Tugaske Project has been updated to suit the demands of the potash customers in the USA, as driven by the Offtaker and marketing plan for the Project. Such modifications affected the final product specification (i.e., granular grade MOP, SGN 300, pink in colour), as well as the desired product storage, loading and hauling strategy (i.e., traditional bulk). The details for the Tugaske Project are supported by the relevant information developed as part of the Vanguard One Project Feasibility Study in 2017. A Tugaske Project Feasibility Report (Gensource, 2020) was prepared in February 2020, and shared confidentially through NDAs to support project finance DD reviews.

Concurrent to the project finance DD, follow-on work was completed by the project team to not only support DD, but to also continue to prepare the Project for full execution (i.e., detailed engineering, procurement, construction, commissioning and start-up). The work was completed by Gensource and key members of its integrated team: lead engineering consultant, ENGCOMP Engineering & Computing Professionals ("Engcomp"), and; the general construction contractor, South East Construction ("SEC"). These efforts formed part of FEED. FEED is defined as: "*the basic engineering that follows a conceptual design or feasibility study and is used as the basis for the detailed engineering phase*".[3] In order to help ensure the Project is ready for execution upon successful project financing, the FEED effort has accomplished the following:

- Completed key engineering trade-off studies and value engineering activities, finalizing any unresolved equipment selection and specification details for major components and systems;
- Obtained current pricing for majority of the capital costs previously estimated;

[3] https://www.processingmagazine.com/home/article/15586893/5-tips-for-feed-success

- Identified key procurement packages, and engaged proponents capable of delivering these packages;
- Incorporated additional risk mitigations into design, costing, scheduling, etc.;
- Advanced organizational details, and began early identification and recruitment for key project and operational roles;
- Began the development of project management systems, including tools and templates that will be used to plan, execute, and monitor and control the work;
- Began the negotiation of key contracts for the Project; and
- Continued engagement of the local communities, government agencies, third-party (offsite) utility providers, etc. – so that they are prepared and ready to support the Project when it officially moves forward.

"*A properly executed FEED is essential for helping determine a project's investment cost including the total cost of ownership. However, it is also crucial for detailing a project's technical requirements – such as the control system architecture, equipment lists, process flow diagrams, and motor and electrical specifications*". [3]

The efforts during FEED were summarized into the Tugaske Project FEED Report (Gensource, 2020) that was issued to the DD reviewers, to supplement the information contained in the Tugaske Project Feasibility Report (Gensource, 2020). The following are general highlights of the Tugaske Project.

Table 1: Tugaske Project Highlights

Parameter	Results
Production capacity & specification:	250,000 tonnes per year of final saleable product, 60% K_2O, granular grade (SGN 300), pink or white/clear ("MOP", or "potash")
Mine life:	56+ years based on Patience Lake sub-Member 1 (PLM 1) Mineral Reserve only (note: economics only considers 40 years of full production)
Mining method:	Selective solution mining using horizontal caverns
Processing:	Cooling crystallization incorporating innovative energy efficiency measures
Product storage and loadout:	22,700 tonnes (25,000 short tons) of combined on-site product storage capacity between a product storage warehouse and bulk rail car storage track. Ability to load and ship product via bulk rail and/or bulk truck

Parameter	Results
Product transport and logistics:	A rail spur is planned to the plant site to allow all product to be transported by rail. The Project's Offtaker will take title to the product FCA mine site; as such, there are no transportation and logistics costs (shipping) borne by Gensource or the Project. All transportation and logistics costs appear as deductions to the net-back price received for the product.
CAPEX:	$CAD 352.1 Million, including 10% contingency
Construction:	24-month construction period, including commissioning and start-up. Peak construction work force of approximately 150.
OPEX:	$CAD 64.09/t final product. The major components of OPEX are natural gas delivered to site at $CAD 3.12 /GJ and operating personnel count of 46 full-time staff.
Sustaining CAPEX:	Average annual sustaining capital of $CAD 20.99/t per year, including full cavern (6) and pipeline replacement every 12 years.

A fundamental product of the FEED effort was an updated capital cost estimate ("CCE"), which is also referred to as the capital expenditure (or, "CAPEX"). Key aspects incorporated into the updated Project CAPEX estimate are:

- The integration of German content (vendors) into the Project;
- Inclusion of escalation since the original CCE was completed, bringing procurement and pricing up to date; and
- Inclusion of a number of risk-mitigating items as deemed prudent by Gensource in consultation with the Senior Lenders' Independent Engineer.

The total CAPEX for the Tugaske Project is estimated at $CAD 352.1 Million, including $CAD 33.6 Million of contingency (approximately 10% of total cost). The CAPEX is based on engineering and cost estimating methods and levels of effort sufficient to support an AACE International (AACE) Class 3 CCE. The following is a summary of the CAPEX by Project Work Breakdown Structure (WBS) Area.

Table 2: CAPEX Estimate by WBS Area

WBS Area	CAPEX (M$CAD)
100 – Mining	$30.8
200 – Well Field	$17.1
300 – Process Plant	$96.9

WBS Area	CAPEX (M$CAD)
400 – Product Storage & Loadout	$15.8
500 – Site Infrastructure	$23.5
600 – Offsites	$7.9
700 – Non-Process Facilities	$29.9
900 – Project Indirects	$96.6
SUB-TOTAL (Pre-Contingency)	**$318.5**
980 – Contingency	$33.6
GRAND TOTAL	**$352.1**

No “management reserve” (also known as “risk reserve” or “owner’s reserve”) has been included in the CAPEX; but instead, a separate cost overrun account is being negotiated with the Senior Lenders as part of the debt financing package.

The financial performance of the Project was re-evaluated during FEED, once again using a discounted cash flow (“DCF”) analysis. While CAPEX and OPEX were added to the Project to account for both identified and unidentified risks, the overall project financing package has also been defined. The financing package includes costs for not only CAPEX, but also other financing costs, including: fees, closing costs, ECA premiums, interest during construction, cost overrun account, debt service reserve account, price protection account, and other senior lender credit enhancements. After incorporating these financing costs with the revised CAPEX and OPEX into the updated financial model, the Tugaske Project remains financially robust and demonstrates positive economics.

The resulting key financial performance indicators are as follows.

Table 3: Financial Performance Summary

Economic Indicator	Before Sask. Prof Tax	After Sask. Prof Tax*	Final After-Tax**
NPV_8 (M$CAD)	$635.4	$454.4	$310.4
IRR	21.74%	19.47%	17.10%

*Note: The Saskatchewan Potash Profit Tax calculated does not take into account new regulations regarding R&D credits announced by the Saskatchewan Government December 2020.

**Note: Final After-tax (Corporate rate of 27%) IRR and NPV to do not take into account Net Operating Losses (NOL) that may be available to the Project. These NOL’s may be used to offset corporate taxes. Thus, the published Final After-Tax IRR/NPV may be understated.

The DCF analysis for the Project uses the following input parameters and is based on the assumptions as described below:

- The economic analysis is based on the sources and uses of funds (as detailed in Section 22);
- Potash production is 100% granular grade and conforms to the specifications required by the Offtaker (i.e., SGN 300, granular grade MOP);
- Approximately 25,000 short tons of combined storage capacity on site;

- Default currency reported in $CAD;
- Annual OPEX costs of CAD 64.09/t KCl, as detailed in sub-section 21.2;
- Annual sustaining CAPEX costs of $CAD 20.99/t KCl as detailed in sub-section 21.2;
- Currency exchange ($US:$CAD) was carefully considered. In order to appropriately reflect the historical, current and future currency fluctuations, an exchange rate of 1:1.25 was used in the first 2 years of construction with a 1:1.30 conversion factor for life of mine. When converting any values established during FEED from $CAD to $US for the sake of reporting/comparison, the June 2021 Bank of Canada $US:$CAD of 1:1.21 was used;
- Base case pricing for granular product is the net-back price of product "Free Carrier" (Incoterms®: FCA) mine site forecast supplied by Argus Consulting Services (June 6, 2020, and updated September 2021) net of a 4% marketing fee for HELM. There was no price escalation applied after the 10-year forecast (i.e., flat forward pricing);
- Product delivery is FCA mine site (at Tugaske, SK), as per the terms of the detailed offtake agreement;
- There is no expansion assumed beyond 250,820 tonnes of saleable product per year;
- The economic mine life is estimated at 45 years, including 40 years of full production;
- Consideration was given to the expected timing and allocation of construction CAPEX;
- The cash flows include Saskatchewan Resource Surcharge (3% of revenue), Provincial Royalties (3% of K_2O net revenue) and Saskatchewan Potash Profit Tax (PPT), as well as other commercial royalties as per royalty agreements negotiated by Gensource;
- Head office general and administrative ("G&A") expenses of 1.50% of gross revenue are included, over and above the identified management and administration personnel accounted for in the Project OPEX; and
- Development costs of $US 4,000,000

1.5 Summary of Mineral Resource and Mineral Reserve

The Mineral Resource and Mineral Reserve estimates referred to in this report are based on historic drilling (including the 2 wells previously completed by Yancoal in 2012), the 4 wells completed by Gensource between 2016 and 2019, 2D and 3D seismic results, and the most recent mine planning and layout developed during FEED. The Mineral Resource and Mineral Reserve estimates are summarized in Table 4 and Table 5, respectively. Note that the base unit for tonnages is listed as the Système international d'unités (SI) unit of tonnes (t) - with a measurement of 1,000 kg (or approximately 2,204.6 lbs) per tonne. Tonnes are sometimes referred to as "metric tons" (or "metric tones") to differentiate from a "short ton" of 2,000 lbs.

As per CIM Definition Standards (2014), Mineral Resource was classified as: Inferred, Indicated, and Measured. The Mineral Resource categories were estimated for the Patience Lake and the Belle Plaine Members only. Due to the pervasive presence of carnallite, and lower KCl grades, no Mineral Resource was estimated for the Esterhazy Member.

Table 4 shows a sensitivity analysis of the sylvite tonnage based on a range of possible recovery rates (Effective May 16, 2021) – with the assumed "base case" recovery of 40% (outlined in red) resulting in over 289 Million tonnes of Measured and Indicated Mineral Resource in the Vanguard Area. Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves – for which Modifying Factors are considered and applied.

Table 4: Measured & Indicated Mineral Resource Estimate Summary (With Base Case Highlighted)

Resource Category	Total KCl Grade*	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
	Weight %	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Measured	35.7	1,223.8	1,162.6	124.5	166.0	207.5
Indicated	35.8	955.3	859.8	92.4	123.1	153.9
Total	**35.7**	**2,179.1**	**2,022.4**	**216.9**	**289.1**	**361.4**

*Note: The Total KCl Grade is the weighted mean.

The following assumptions were applied during the Mineral Resource estimation, with further details discussed in Section 14:

- K_2O cut off grade of 15% (this equates to 24.6% KCl).
- Maximum carnallite cut-off of 6%.
- No insoluble cut-off.
- No thickness cut-off.
- The following Radii-of-Influence (ROI) were used, consistent with previous NI 43-101 Technical Reports:
  - Inferred ROI = 6,000 m
  - Indicated ROI = 2,250 m
  - Measured = 1,500 m.
- A deduction of 25% for unseen / unknown anomalies was made in the Inferred Mineral Resource category and, based on the results of the 3D seismic, this deduction was reduced to 10% for the Indicated Mineral Resource, and 5% for the Measured Mineral Resource.

Assuming the base case recovery of 40%, as per Table 4, over 289 Million tonnes of Mineral Resource has been classified in the Measured and Indicated categories in the Vanguard Area. Based on the potential of future work to devise suitable engineering and economics for the conversion of this Mineral Resource into Mineral Reserve (as has been regularly accomplished in Saskatchewan's Prairie Evaporite Formation since mining began in the late 1950's), and subsequent application of the pertinent Modifying Factors, when using the baseline design capacity for annual production of 250,000 tonnes of saleable product for a Gensource module, it can be seen that the probable life of these modules could theoretically approach multiple centuries.

The CIM Definition Standards (2014) provide for a direct relationship between Indicated Mineral Resource and Probable Mineral Reserve, and between Measured Mineral Resource and Proven Mineral Reserve. For conservatism, the Mineral Reserve estimated for the Tugaske Project considers only continuous operation of the solution mining horizontal caverns focused on the lowest sub-member of the Patience Lake – referred to as the "PLM 1". Therefore, the Mineral Reserve represents only the base case for the Feasibility Study economics. Since the initial mine plan focuses specifically on the PLM 1, only a small portion of the overall Mineral Resource is converted to Mineral Reserve for the base case. In reality, mining of the PLM 1 is likely to progress upwards over time into other sub-members of the Patience Lake (i.e., PLM 2 through PLM 4); thus, increasing the potential amount of KCl tonnes recovered from each cavern. The PLM 1 is on average 3.9m thick, with average potash grades of 43% KCl, across the mining area.

Table 5 shows the Proven and Probable Mineral Reserve estimate of approximately 14.1 Million Tonnes of saleable Muriate of Potash (MOP) for the Tugaske Project (Effective May 16, 2021), based on the PLM 1 only, which indicates a minimum expected mine life of at least 56 years – based on the annual production of 250,000 tonnes of MOP, which is typically 98.1% KCl in the case of granular MOP produced from solution mining.

Table 5: PLM 1 Proven & Probable Mineral Reserve Estimate Summary

Reserve Category	Mean Cavern Thickness (m)	KCl Grade (wt. %)	Carnallite Grade (wt. %)	Insolubles Grade (wt. %)	Cavern Volume (Mm3)	Cavern Recovery (%)	Reduction for Unknown Anomalies	Recoverable Cavern Volume (Mm3)	Sylvinite Tonnage (Mt)	MOP Tonnage (Mt)
Proven	3.9	42.0	0.71	6.4	15.7	60.3	0.95	9.0	18.7	7.6
Probable	3.9	42.6	0.69	6.3	13.1	63.7	0.91	7.6	15.3	6.5
Total*					**28.7**			**16.5**	**34.0**	**14.1**
Weighted Mean	**3.9**	**42.3**	**0.70**	**6.4**		**61.8**	**0.93**			

*Note: Discrepancies between the sum of Proven and Probable and the listed Total are due to rounding.

1.6 Conclusions and Recommendations

The conclusions and recommendations made in this report, consistent with those discussed in the Tugaske Project Feasibility Report (Gensource, 2020) and Tugaske Project FEED Report (Gensource, 2020) are:

- The ongoing work on the Tugaske Project, which is summarized in this report, continues to demonstrate the technical and economic robustness of the Project - providing Gensource and its partners the confidence to continue to advance efforts to implement the Project;
- The next steps for implementing the Project include finalizing key financing and shareholder group activities, which are underway and nearing completion at the time of this report;

- Upon completion of the project financing efforts, the JV shall make the final decision to advance the Project to the next stage of development, which is initiation of detailed engineering, procurement, and construction activities (i.e., Project execution phase); and
- With this “construction decision” made, necessary resources (e.g., labour, equipment, materials, etc.) will be allocated to Project execution, at which point Gensource anticipates to achieve first production from the Project within approximately 2 years from construction start-up.

It is therefore the opinion of the authors of this report that the Project continues forward with development and implementation.

2 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report was prepared at the request of Gensource by a team consisting of Qualified Persons (QPs) from Terra Modelling Services Inc. ("TMS"), DFH Geoscience & Engineering LLC ("DFH"), ENGCOMP Engineering & Computing Professionals Inc. ("Engcomp") and its subconsultants and Gensource. The purpose of this NI 43-101 Technical Report is to reflect the most current financial information resulting from the project financing process, as well as correction to the base case Mineral Resource and Mineral Reserve numbers previously reported based on a discrepancy found in the March 2021 NI 43-101 Technical Report (Fourie et al., March 2021).

The information providing the basis for all interpretations and resulting conclusions and recommendations in this report primarily derive from:

- Historic drilling programs in the general area dating back more than half a century and contained within the public record;
- Six exploration (Mineral Resource confirmation) wells as follows:
  - 2 wells drilled on behalf of Yancoal in 2012 on former potash permit KP 483 (now potash lease KL 245), and the 2-D seismic program ordered by the same; and
  - 4 wells drilled by Gensource on the KL 245 lease, drilled between 2016 and 2019;
- 3D Seismic completed on KL 245 in 2017 by Gensource;
- The 5 previous NI43-101 Technical Reports produced for the Vanguard Area, listed in sub-section 1.2;
- The Vanguard One Project Feasibility Study Report (Engcomp, 2017); and
- The Tugaske Project Feasibility Report (Gensource, 2020) and Tugaske Project FEED Report (Gensource, 2020).

Site visits to the Vanguard Area have been performed by the team as follows:

- TMS:
  - An initial site visit to the locations of the Yancoal drill holes, Y-1-18 and Y-5-29, was made on 11 April 2016;
  - Several site visits were made during the drilling of V-1-16 and V-1-14 in 2016/2017, including during core recovery;
  - Several site visits were also made during the drilling of V-4-1 (2018) and V-8-4 (2019), including observation during core recovery; and
  - Site visits to the area also included examining the post-drilling sites.
- DFH:
  - DFH has not visited the Vanguard Area. However, it has visited Gensource's "Lazlo Area", situated near Craik, SK (to the northeast of Tugaske) in 2013 and is familiar with the terrain and geology in this part of Saskatchewan.

- Engcomp:
    - Several representatives from Engcomp visited the site during Gensource's "Town Hall" for the Project, held in Tugaske on February 1, 2017; and
    - Representatives of Engcomp have subsequently visited the site to view 3D seismic activities, accompany surface well pad and pipe line routing layout and planning, etc.

Common geological terms employed in this report are listed as follows.

Table 6: Common Geological Terminology

Term	Definition
Carnallite	Common evaporite mineral. Considered deleterious in a sylvite mine. $KMgCl_3.6(H_2O)$
Halite	Sodium Chloride, the majority constituent of most evaporites. NaCl
Insoluble	Constituent to soluble in water or brine. Generally referring to clay (especially illite), dolomite, anhydrite etc., the main components of the common clay
Sylvite	The main potash mineral, KCl
Sylvinite	Mechanical mixture of Sylvite and Halite – a Sylvite-rich salt

3 RELIANCE ON OTHER EXPERTS

The following is a list of information produced by other experts, relied upon for the creation of this report:

- Information on the Crown Potash Leases KL 244 and KL 245, provided in Section 4, was obtained from the Mining and Petroleum GeoAtlas made available online from the Saskatchewan Ministry of Energy and Resources. Official Lease certificates, and current freehold mineral leases obtained by Gensource have been visually reviewed by Louis Fourie, P.Geo., Owner and Principal of TMS.
- Information on environmental studies, permitting, and social or community impact summarized in Section 20 are based on studies performed for Gensource by Golder Associates Ltd., and due diligence review provided by the Senior Lenders' independent environmental, social and governance consultant.
- Gensource's construction contractor, South East Construction L.P., which has been involved in the Project since 2016, contributed to the updated capital cost estimate completed during FEED – including estimating construction labour and indirects for the Project, which are summarized in Section 21.
- Information from the confidential detailed reports, pertaining to potash supply and demand forecasts, price outlook, taxes, royalties, etc., and the evaluation of the resulting Project economics, was compiled by Gensource based on a variety of sources, including, but not limited to: HELM AG, Argus Consulting Services, KfW IPEX-Bank, CIBC World Markets, BMO Capital Markets, etc. To confirm the economic model, Gensource engaged an external financial consultant to complete an audit and 3rd party validation. The summary of this information is covered in Section 19 and 22.

4 PROPERTY DESCRIPTION AND LOCATION

Gensource's Vanguard Area in South-Central Saskatchewan comprises Crown Potash Mineral Extraction Leases KL 244 (formerly Potash Permit KP 363) and KL 245 (formerly Potash Permit KP 483); containing over 70,000 acres of Crown mineral rights available for mining. KL 244 is contained entirely within the Rural Municipality (R.M.) of Huron No.223, extending from the Village of Tugaske (towards the south end of the lease), and runs north past Lake Diefenbaker. KL 245 is situated in both the R.M. of Huron No.223 and the R.M. of Eyebrow No.193, extending southeast past the Village of Eyebrow. In addition to the Crown leases, Gensource has leased the private mineral rights to several freehold properties within the lease boundaries. The Project location is situated in Township 22, Range 2, West of the 3rd Meridian, located within Gensource's KL 245 lease. A regional property map is provided in Figure 2, indicating the location of the Project within the KL 245 lease.

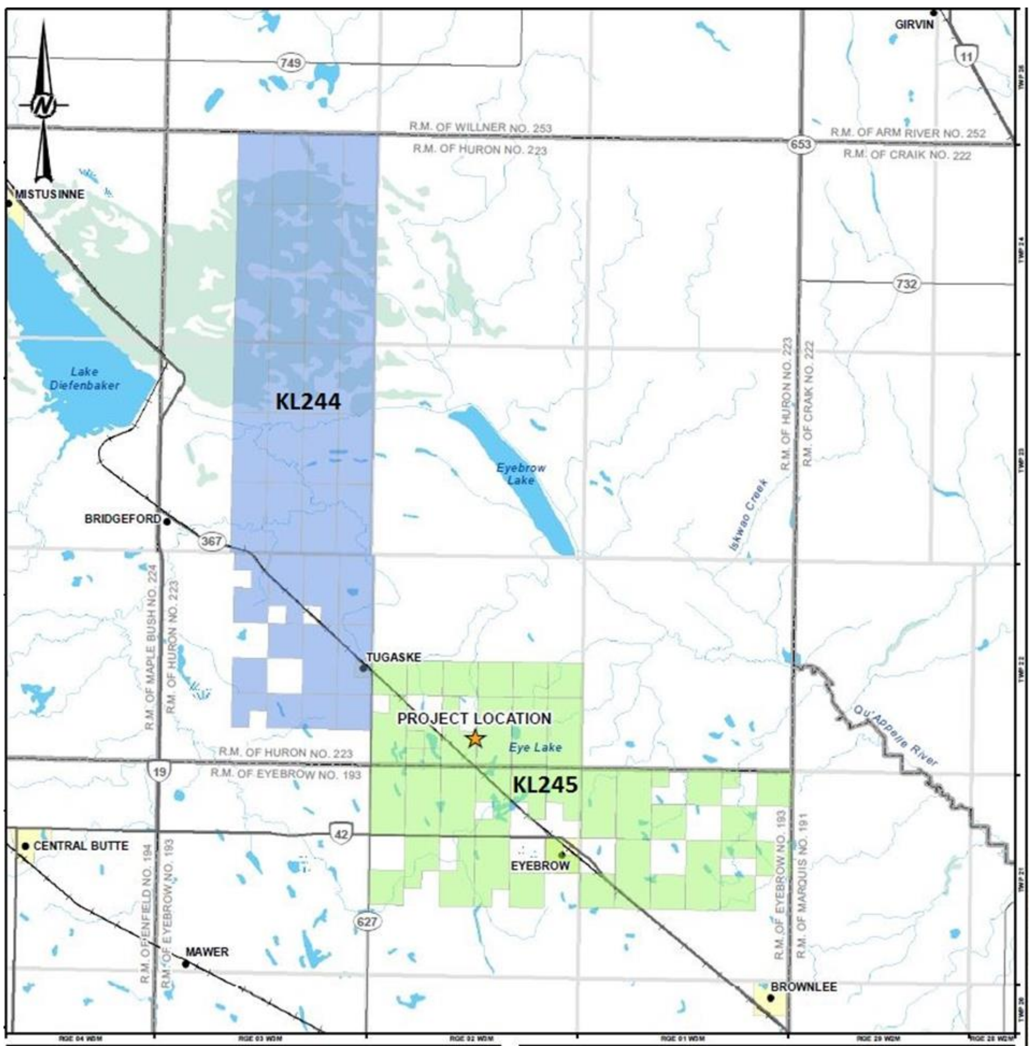

Figure 2: Project Locality Map

Mineral rights in Saskatchewan can be divided into Crown, Freehold, Indian, or split, depending on the ownership. The applicability of each of these different types of mineral rights as they relate to the Vanguard Area (KL 244 and KL 245) is discussed below.

4.1 Crown Mineral Rights

Crown mineral rights are the mineral rights belonging to the Province of Saskatchewan, or in some cases, the Federal Government (i.e., National Parks or First Nations reservations). Lease KL 244 has a total area of 16,562.832 hectares (40,927.649 acres), and KL 245 has a total area of 12,341.682 hectares (30,496.960 acres) of Crown mineral rights. Gensource is the sole lessee for these Crown mineral rights. Crown minerals leased to Gensource within the Vanguard Area are identified in the following tables.

Table 7: KL 244 Lease Description

KL 244						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
9	NE	22	3	3	32	An undivided one-half interest in Mineral Parcel Number 105681719
9	NW	22	3	3	65	
9	SW	22	3	3	65	
10	ALL	22	3	3	258	
11	ALL	22	3	3	258	
12	ALL	22	3	3	257	
13	ALL	22	3	3	248	
14	ALL	22	3	3	258	
16	ALL	22	3	3	258	
22	ALL	22	3	3	258	
23	NE	22	3	3	12	An undivided one-half interest in Mineral Parcel Number 164879948
23	NE	22	3	3	19	An undivided one-half interest in Mineral Parcel Number 164879937
23	NW	22	3	3	32	An undivided one-half interest in Mineral Parcel Number 105681696
23	SE	22	3	3	32	An undivided one-half interest in Mineral Parcel Number 104743403
23	SW	22	3	3	32	An undivided one-half interest in Mineral Parcel Number 105681708
24	ALL	22	3	3	257	
25	ALL	22	3	3	257	
26	NE	22	3	3	65	
26	NW	22	3	3	65	
26	SE	22	3	3	32	An undivided one-half interest in Mineral Parcel Number 105681685
27	ALL	22	3	3	189	
28	ALL	22	3	3	258	

KL 244						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
33	ALL	22	3	3	186	
34	ALL	22	3	3	257	
35	ALL	22	3	3	258	
36	ALL	22	3	3	259	
1	NE	23	3	3	65	
1	NW	23	3	3	33	An undivided one-half interest in Mineral Parcel Number 105555416
1	SE	23	3	3	66	
1	SW	23	3	3	33	An undivided one-half interest in Mineral Parcel Number 105555427
2	ALL	23	3	3	262	
3	ALL	23	3	3	263	
4	ALL	23	3	3	262	
9	ALL	23	3	3	262	
10	ALL	23	3	3	260	
11	ALL	23	3	3	260	
12	ALL	23	3	3	260	
13	ALL	23	3	3	261	
14	ALL	23	3	3	260	
15	ALL	23	3	3	259	
16	ALL	23	3	3	260	
21	ALL	23	3	3	258	
22	ALL	23	3	3	260	
23	ALL	23	3	3	260	
24	ALL	23	3	3	260	
25	ALL	23	3	3	259	
26	ALL	23	3	3	260	
27	ALL	23	3	3	261	
28	ALL	23	3	3	259	
33	ALL	23	3	3	258	
34	ALL	23	3	3	260	
35	ALL	23	3	3	260	
36	ALL	23	3	3	259	
1	ALL	24	3	3	258	
2	ALL	24	3	3	258	
3	ALL	24	3	3	259	
4	ALL	24	3	3	258	
9	ALL	24	3	3	260	
10	ALL	24	3	3	259	
11	ALL	24	3	3	259	
12	ALL	24	3	3	259	

KL 244						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
13	ALL	24	3	3	259	
14	ALL	24	3	3	259	
15	ALL	24	3	3	259	
16	ALL	24	3	3	260	
21	ALL	24	3	3	260	
22	ALL	24	3	3	260	
23	ALL	24	3	3	259	
24	ALL	24	3	3	259	
25	ALL	24	3	3	258	
26	ALL	24	3	3	258	
27	ALL	24	3	3	259	
28	ALL	24	3	3	260	
33	ALL	24	3	3	260	
34	ALL	24	3	3	260	
35	ALL	24	3	3	259	
36	ALL	24	3	3	258	
Total					**16,563**	

Table 8: KL 245 Lease Description

KL 245						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
14	ALL	21	1	3	259	
15	NE	21	1	3	32	An undivided one-half interest in Mineral Parcel Number 105663337
15	NW	21	1	3	32	An undivided one-half interest in Mineral Parcel Number 105663359
15	SE	21	1	3	32	An undivided one-half interest in Mineral Parcel Number 105663348
15	SW	21	1	3	32	An undivided one-half interest in Mineral Parcel Number 105663360
16	ALL	21	1	3	259	
17	ALL	21	1	3	254	Portion Freehold Right of Way of 12.83 acres
18	ALL	21	1	3	259	
20	ALL	21	1	3	259	
22	ALL	21	1	3	259	
23	NE	21	1	3	25	An undivided 3/8 interest in Mineral Parcel Number 105663056
23	NW	21	1	3	25	An undivided 3/8 interest in Mineral Parcel Number 105663067
24	ALL	21	1	3	259	
26	ALL	21	1	3	259	

KL 245						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
28	ALL	21	1	3	259	
29	ALL	21	1	3	258	
30	ALL	21	1	3	259	
31	NE	21	1	3	65	
31	NW	21	1	3	32	An undivided 1/2 interest in Mineral Parcel Number 105663168
31	SE	21	1	3	65	
31	SW	21	1	3	0	An undivided 1/2 interest in Mineral Parcel Number 164537466
31	SW	21	1	3	32	An undivided 1/2 interest in Mineral Parcel Number 164537499
32	ALL	21	1	3	259	
33	NW	21	1	3	65	
34	ALL	21	1	3	259	
35	NW	21	1	3	32	An undivided 1/2 interest in Mineral Parcel Number 105663382
36	ALL	21	1	3	259	
14	ALL	21	2	3	259	
15	NE	21	2	3	52	An undivided 4/5 interest in Mineral Parcel Number 104860694
15	NW	21	2	3	65	
15	SW	21	2	3	65	
16	ALL	21	2	3	258	
17	NW	21	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 105038085
18	ALL	21	2	3	258	
20	ALL	21	2	3	259	
21	NE	21	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 105038142
21	NW	21	2	3	1	
21	SE	21	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 105038153
22	ALL	21	2	3	258	
24	NW	21	2	3	65	
24	SE	21	2	3	65	
24	SW	21	2	3	65	
25	NE	21	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 104743021
26	NE	21	2	3	65	
27	NE	21	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 105038120
27	SE	21	2	3	33	An undivided 1/2 interest in Mineral Parcel Number 105038131

KL 245						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
27	SW	21	2	3	33	An undivided 1/2 interest in Mineral Parcel Number 105037871
28	ALL	21	2	3	259	
29	ALL	21	2	3	258	
30	ALL	21	2	3	258	
31	ALL	21	2	3	258	
32	ALL	21	2	3	259	
33	ALL	21	2	3	259	
34	ALL	21	2	3	259	
35	ALL	21	2	3	257	
36	ALL	21	2	3	258	
1	ALL	22	2	3	259	
2	ALL	22	2	3	259	
3	ALL	22	2	3	258	
4	ALL	22	2	3	258	
5	NW	22	2	3	64	
5	SE	22	2	3	64	
6	ALL	22	2	3	257	
7	NE	22	2	3	65	
7	SE	22	2	3	65	
7	SW	22	2	3	64	
9	NW	22	2	3	32	
9	SW	22	2	3	32	
10	ALL	22	2	3	258	
11	ALL	22	2	3	259	
12	ALL	22	2	3	258	
13	ALL	22	2	3	258	
14	ALL	22	2	3	258	
15	ALL	22	2	3	258	
16	ALL	22	2	3	258	
17	NE	22	2	3	65	
17	NW	22	2	3	64	
17	SE	22	2	3	32	An undivided 1/2 interest in Mineral Parcel Number 105279510
17	SW	22	2	3	64	
18	E	22	2	3	258	
TOTAL					**12,342**	

4.2 Freehold Mineral Rights

Freehold mineral rights are the mineral rights belonging to a private individual or corporation. These are historical in origin, mostly dating from the transfer of land from the Hudson Bay Company to the Dominion of Canada in 1870, and the subsequent grant of land and mineral rights to homesteaders between then and the latter part of that century, when the practice ended.

Freehold mineral rights do exist on both KL 244 and KL 245. Gensource has begun acquiring freehold mineral rights of interest in the Vanguard Area, on a prioritized basis, working with the mineral rights owners ("Freeholder(s)") to obtain the appropriate leases. At the time of this report, approximately 736 hectares (1,819 acres) of freehold mineral rights on KL 245 have been leased by Gensource. The following table shows the freehold mineral rights in KL 245, leased at the date of this report.

Table 9: Freehold Minerals Leased By Gensource To Date

Freehold Associated with KL 245						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
5	NE	22	2	3	2	
5	NE	22	2	3	62	
5	SW	22	2	3	64	
8	NW	22	2	3	10	
8	SE	22	2	3	14	
8	SW	22	2	3	59	
19	NE	21	1	3	32	
19	NE	21	1	3	8	
19	NE	21	1	3	8	
19	NE	21	1	3	8	
19	NE	21	1	3	8	
19	NW	21	1	3	8	
19	SE	21	1	3	65	
19	SW	21	1	3	4	
19	SW	21	1	3	21	
19	SW	21	1	3	1	
19	SW	21	1	3	2	
21	NW	21	1	3	2	
21	NW	21	1	3	63	
21	SW	21	1	3	65	
25	NE	21	2	3	16	
25	NE	21	2	3	16	
25	SE	21	2	3	32	
25	SE	21	2	3	32	
25	SW	21	2	3	6	
25	SW	21	2	3	1	

Freehold Associated with KL 245						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
25	SW	21	2	3	1	
26	SE	21	2	3	6	
26	SE	21	2	3	25	
26	SE	21	2	3	6	
26	SE	21	2	3	25	
31	NW	21	1	3	32	
31	SW	21	1	3	0.2	
31	SW	21	1	3	32	
TOTAL					**736.2**	

4.3 Indian Mineral Rights

Indian Mineral Rights are mineral titles on lands associated with Reservations of First Nations' Peoples. These mineral rights were granted to the First Nations of the Province by virtue of treaties signed during the 19th century or Treaty Land Entitlements (TLEs) awarded to settle land claims more recently. There are no Indian Mineral Rights in the immediate area of either KL 244 or KL 245.

4.4 Split Mineral Rights

Split mineral rights are mineral rights where there is more than one owner per quarter-section of land. Split mineral rights exist in the Vanguard Area. There are several quarter sections of land that are either partially owned by the Crown and Freeholder, or owned by multiple Freeholders on one title. For those partially owned by the Crown, they are listed by the respective interests registered to the Crown in Table 7 and Table 8. For any Split mineral rights owned entirely by Freeholders, as Gensource acquires any Freehold minerals, all Freeholders are approached to complete the lease agreements. Freehold mineral leased by Gensource to date are listed in Table 9.

5 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES AND INFRASTRUCTURE

5.1 General Setting

The Vanguard Area is located in South-Central Saskatchewan, surrounding the Villages of Tugaske and Eyebrow in the Rural Municipality (R.M.) of Huron No.223 and Eyebrow No.193 respectively, at an elevation of approximately 600 metres (m) above sea-level. The area is sparsely populated, and agriculture and ranching are the predominant land uses and means of wealth creation, which is typical for rural Saskatchewan.

5.2 Accessibility

The Vanguard Area is connected by an existing network of municipal grid roads, provincial highways, and rail line, which provide access among the various communities within the region. The Project can be accessed via Highway 19, 42, and 367, and the Canadian Pacific (CP) Railway rail line (Outlook Subdivision) which runs directly adjacent to the Project site.

Other than occasional small water bodies, no significant geographical surface access barriers exist, and surface access thus largely depends on favourable surface usage negotiations with local landowners.

5.3 Climate

The climate of South-Central Saskatchewan is typical of the Canadian prairies, with cold, long winters. The daily average temperatures are close to -15 degrees Celsius (°C) in mid-winter and 20 °C in summer. Snowfall is common from the months of October to March, but can also be experienced outside of these months. The area is accessible year-round, though drilling activities and seismic testing can be problematic during spring thaw (March-April, approximately) and fall freeze (November-December). Figure 3 shows monthly temperature data (daily maximum, minimum, and average temperature), along with precipitation, for the nearest city of Moose Jaw - collected over a 30-year period from 1981 to 2010.

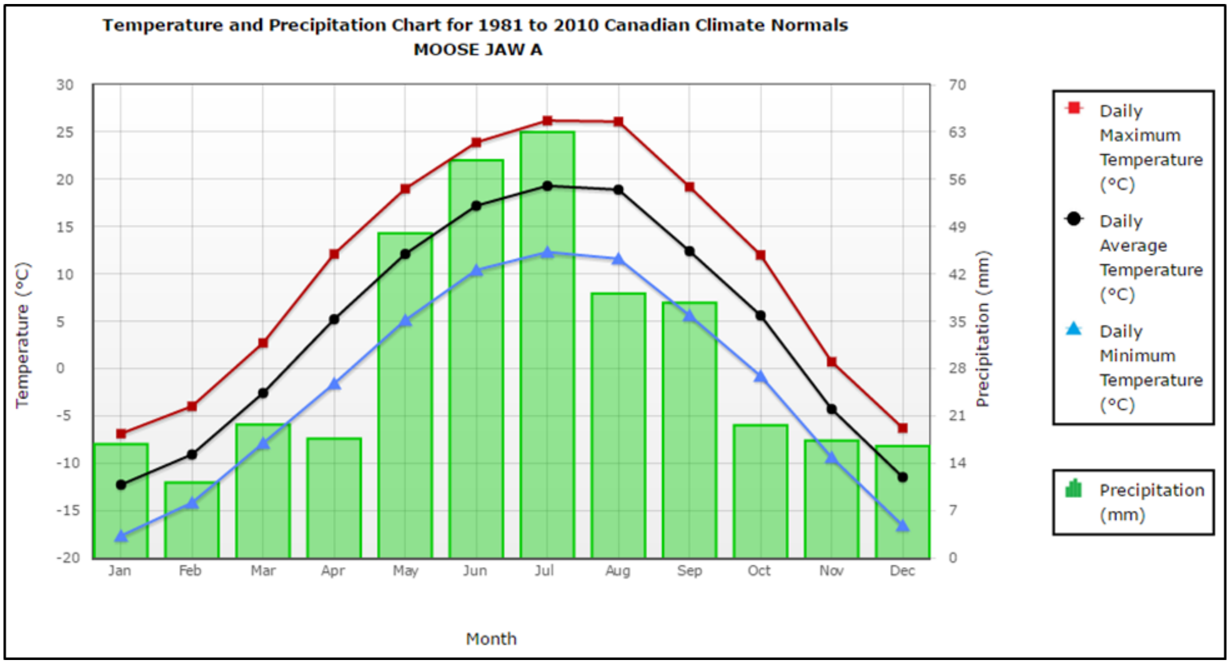

Figure 3: Climate Data For Moose Jaw, SK

5.4 Physiography

The area is at the northern edge of the Canadian prairie, in the biome known as the "moist, mixed grassland". As discussed, agriculture and ranching are the predominant land uses in the area, and as such, most of the land has been cultivated; however, there are patches of wetlands, woodland, and native grassland located in areas that are unsuitable for agriculture.

In general, the Vanguard Area is located in relatively flat terrain on the southwest side of the Upper Qu'Appelle River valley. The topography is gently undulating, post-glacial terrain with numerous small lakes and sloughs. The only known fish bearing watercourse or waterbody is the Qu'Appelle River located approximately 10 km northeast of the Project.

The Project is located in the Dark Brown soil zone of Saskatchewan.

The Project is located in the Eyebrow Plain Landscape Area within the Moist Mixed Grassland Ecoregion (Acton et al., 1998).

There are no plant species listed under the federal Species at Risk Act (SARA) or designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that have known historical occurrences within 1 km of the Project. No provincially listed plant species have been recorded within 1 km of the Project.

5.5 Local Resources

The Project is located within Township 22, Range 2, West of the Third Meridian. This is situated in R.M. of Huron No.223. The nearest surrounding communities include the Village of Eyebrow (approximately 6 km southeast of the Project), the Village of Tugaske (approximately 6 km northwest of the Project). Approximately 17 commercial businesses are located in the Village of Eyebrow that provide retail and services to people and businesses in the region (Village of Eyebrow, 2017). There are approximately 11 commercial businesses located in the Village of Tugaske (Village of Tugaske, 2017). The nearest large centre is the City of Moose Jaw, which is located 70 km southeast of the Project. The cities of Saskatoon and Regina are less than 2 hours drive away (< 200 km); and, a substantial workforce and service industry versed in the potash mining is available. Saskatchewan's most recent greenfield potash mine, K+S Potash Canada's Bethune Mine, is approximately 60 km southeast of the Project, and employs over 350 people.

There are no hospitals in the immediate area; however, there is a fire hall, volunteer fire department, and ambulance service in Eyebrow. The nearest primary health care facility is within the Town of Central Butte; however, it does not provide emergency care. The City of Moose Jaw, has full hospital care, ambulance, and fire services. The Royal Canadian Mounted Police provides law enforcement services to the communities. The nearest detachment is located in Elbow approximately, 20 km northwest of the Project. The site is accessible by STARS air ambulance.

The Project is located southeast of Lake Diefenbaker, which provides various outdoor recreation-related tourism opportunities, such as wildlife viewing, hiking, hunting, fishing, and camping.

5.6 Infrastructure

The R.M. of Huron No.223 and R.M. of Eyebrow No.193, and communities located within, are serviced by the provincial crown utility providers SaskEnergy (and TransGas) for natural gas and SaskPower for power. The provincial data and communications provider, SaskTel, supplies phone and internet services to the area, and has a cellular tower nearby the Project as well.

Waste disposal in the area includes the Eyebrow Waste Disposal Ground and the Tugaske and Waste Disposal Ground.

6 HISTORY

In the early 1960's, exploration for potash took place in the immediate vicinity of Gensource's Vanguard Area. Two wells were drilled northeast of the Village of Tugaske, and complete assays, as well as the original drill core were made available for this report. The first well, Sifto Salt Tugaske 4-10-23-02 W3M (SST-4), was spud on 10 October 1964. The second well, Sifto Salt Tugaske 14-34-22-02 W3M (SST-14), was spud on 21 November 1963. No ancillary information, such as drilling techniques, sample security etc., could be found on either of these wells.

Yancoal Canada Resources Co. Ltd ("Yancoal") took over existing potash exploration permits KP 363 and KP 483 from Devonian Potash Inc. in September 2011. There is no record of Devonian Potash Inc. undertaking any exploration work on these permits. Yancoal appointed North Rim Exploration Ltd. as project managers for an exploration program. Two wells were undertaken by Yancoal: The first well, 1-18-22-02 W3M (Y-1-18), was spudded on October 2, 2012, and completed on October 10, 2012. Wellsite logging, as well as further detailed logging were undertaken. Samples were assayed at the Saskatchewan Research Council ("SRC") in Saskatoon. Wireline geophysics was also undertaken to correlate the geological logs. The second well, 5-29-21-01 W3M (Y-5-29) was spudded on October 24, 2012 and abandoned (cemented in) in November 2012 before completing all core recovery, due to brine influx experience during drilling. Core recovery only included the Patience Lake Member – no further core was available. Wireline logs of the intermediate interval are available. As with the previous well, wellsite logging as well as further detailed logging were undertaken. Samples were assayed at SRC in Saskatoon. Wellsite geology was subcontracted to Shirkie Geological Consultants. The drilling contractor was Ensign Drilling. Wireline geophysics was provided by Weatherford.

2D Seismic was commissioned by Yancoal and undertaken by RPS Energy Canada Ltd. in the spring of 2012. A single 9.7 km line was completed over the southern part of potash permit KP 363 (now potash lease KL 244), while 9 lines totalling 98 km were undertaken in a grid pattern over permit KP 483 (now potash lease KL 245).

In April 2016, Gensource acquired the potash permits from Yancoal, as part of an Asset Purchase Agreement ("APA"). Conditions of the APA included conversion of the permits into mineral production leases by Yancoal, and transfer of all the geological and geophysical data collected by Yancoal on the Property. Gensource subsequently termed these two potash leases, KL 244 and KL 245, as their Vanguard Area.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

A generalised stratigraphy of Gensource's Vanguard Area, located in South-Central Saskatchewan, is presented in Table 10. The uppermost sequences, the Laurentide Drift is the remnant of Laurentian ice sheets, consisting of glacial tills, gravels clays, etc., and contains freshwater aquifers. The Laurentian Drift overburden is approximately 500 m thick in the area.

The rest of the succession is divided into a clastic dominated section stretching from below the glacial sediments to the Triassic – Mississippian boundary, with the lower section, down to the Cambrian Deadwood Formation being dominated by dolomites, limestones and evaporites. The entire sedimentary succession rests unconformably on Precambrian Basement, which itself contains a significant Archean crustal component, affected by the Trans-Hudson Orogeny (Collerson et al., 1988).

The Elk Point Group, of Middle-Devonian age, is laterally quite extensive stretching over 400 km from East-central Alberta to Western Manitoba. It contains the evaporite beds that host deposits of halite, sylvite, carnallite and anhydrite. It lies unconformably on the Interlake Formation, and is itself unconformably overlain by the Middle-Devonian Dawson Bay Formation. The Evaporites of the Elk Point Group are contained within the Prairie Evaporite Formation. The contact between the Prairie Evaporite Formation and the overlying Dawson Bay Formation is marked by a red shale formation, called the "Second Red Beds".

Table 10: Modified Stratigraphy Of The Vanguard Area

South-Central Saskatchewan Stratigraphy (Modified)			
Period	**Group**	**Member**	**Lithology**
Quaternary	Laurentide Drift		Glacial Sediments
		Lea Park Formation	Shale, siltstone
Cretaceous	Colorado Group	1st White Speckled Shale	Shale
		Shale	Shale
		2nd White Speckled shale	Shale
		Shale	Shale
		Fish Scale Zone	Shale
		Viking Formation	Sandstone, conglomerate
		Joli Fou Formation	Shale, minor sandstone
	Mannville Group	Pense Formation	Shale
		Cantuar Formation	Sandstone, shale, siltstone
Jurassic		Upper Shaunavon Formation	Sandstone, limestone, shale
		Lower Shaunavon Formation	Limestone, shale
		Upper Gravelbourg Formation	Sandstone, limestone, mudstone
		Lower Gravelbourg Formation	Dolomitic limestone, shale
		Upper Watrous Formation	Evaporites (masive anhydrite)
Triassic		Lower Watrous Formation	Red shales, mudstones
Mississippian	Madison Group	Lodgepole / Souris Valley Formation	Limestone, chert
	Three Forks Group	Bakken Formation	Siltstone
Devonian		Big Valley Formation	Shale, chert
		Torquay Formation	Dolomite, siltstone, shale
	Saskatchewan Group	Birdbear Formation	Limestone
		Duperow Formation	Limestone, dolomite, anhydrite
	Manitoba Group	Souris River Formation	Limestone, dolomite, anhydrite
		Davidson Evaporite	Halite, anhydrite, dolomite
		Basal Souris River Formation	Limestone, shale
		1st Red Bed	Red shales
		Dawson Bay Formation	Limestone
		2nd Red Bed	Red shales
	Elk Point Group	Prairie Evaporite Formation	Evaporites
		Winnipegosis Formation	Carbonates (with reefs)
		Ashern Formation	Dolostone, shale, siltstone, anhydrite
		Meadow Lake Formation	Dolostone, mudstone, limestone, sandstone
Silurian		Interlake formation	Dolomite
		Stonewall Formation	Dolomite, sandstone, anhydrite
Ordovician		Stony Mountain Formation	Dolomite
		Herald Formation	Limestone, dolomite
		Yeoman Formation	Dolomite
		Winnipeg Formation	Sandstone
Cambrian		Deadwood Formation	Sandstone, conglomerate, shale, limestone
Precambrian			Granite, gneiss

7.2 Local Potash Member Geology

In Saskatchewan, the target beds for potash are the potash-bearing members of the Prairie Evaporite sequence contained within the Elk Point Group; a Devonian Aged sedimentary sequence in Western Canada, Montana and North Dakota. There is a total of three (3) significant potash-bearing members that make up the Prairie Evaporite Formation (in descending order): the Patience Lake member (PLM), the Belle Plaine member (BPM) and the Esterhazy member (EZM), which are situated at the top of a halite-dominated sequence, overlying the dolomitic Winnipegosis Formation. The halite-dominated evaporite sequence is itself overlain by the Dawson Bay Formation, another dolomitic-dominated formation, with the Second Red Beds, red dolomitic shales, as the boundary between itself and the underlying evaporites. The potash-bearing members are relatively flat lying, with a very slight regional southward dip. “Mounds” may occur in the Winnipegosis, corresponding to ancient reefs in the carbonates, and are sometimes associated with thinning or “leaching” anomalies in the overlying potash members.

In addition to the three main potash-bearing members, two smaller sylvinitic units, the “White Bear Marker”, present between the Esterhazy and the Belle Plaine members, and the “Allan Marker”, present between the Belle Plaine and the Patience Lake members, are present, but generally not thought to be of commercial value. A more detailed stratigraphy of the Prairie Evaporite Formation is presented in Table 11.

Table 11: Detailed Stratigraphy Of The Prairie Evaporite Formation (Modified From Holter, 1969)

Detailed Stratigraphy of the Prairie Evaporite Formation	
Second Red Beds	Red shales
Prairie Evaporite Formation	Halite
	Patience Lake Member
	Halite
	Allan Marker
	Halite
	Belle Plaine Member
	Halite
	White Bear Marker
	Halite
	Esterhazy Member
	Halite
	Middle Anhydrite
	Halite
	Lower Anhydrite
Winnipegosis	Carbonate with reefs

As confirmed by six exploration drill holes completed within the boundaries of Gensource’s KL 244 and KL 245 potash leases (the Vanguard Area), and also evidenced in two historical wells drilled outside the Vanguard Area discussed in Section 6, all three main potash members are present in the Vanguard Area.

An approach appropriate for Gensource’s selective mining application, is to distinguish between the various potash beds (or “sub-members”) of the three major potash-bearing members. Mineralisation in potash beds, especially in the Prairie Evaporite Formation, doesn’t present itself as a single, discrete event, but rather as a collection of cycles, bounded by clay horizons, with great consistency over large areas, within a single member. The mineralisation (and hence the determination of Mineral Resource) in the individual sub-members was analyzed in order to build a better understanding of the nature of the members as a whole. What follows is a description not only of the potash members, but also the sub-members, where relevant.

The potash sub-members as identified in this report, especially for the Patience Lake and the Belle Plaine, correspond broadly to those identified by Phillips (1982), see Table 12. In the case of the Patience Lake, due to the diffused nature of many of the clay seams, the correspondence is not 1:1, but rather along major recognisable clay seams corresponding to sets of potash mineralisation events and clay seams as identified by Phillips (1982). Insofar as the Belle Plaine is concerned, the correspondence is much better defined. Table 12 indicates the correspondence between the nomenclature used in this report and that of Phillips (1982).

Table 12: Nomenclature Correspondence Between Phillips (1982) And This Report

Member	Sub-Member (This Report)	Phillips (1982) - Sylvite Mineralisation Unit	Floor Clay Seam
Patience Lake	PLM 4	I(middle) - L	411
	PLM 3	H - I(lower)	409
	PLM 2	E - G	406
	PLM 1	A - D	401
Belle Plaine	BPM 7	G	306
	BPM 6	F	305
	BPM 5	E	304
	BPM 4	D	303
	BPM 3	C	302
	BPM 2	B	-
	BPM 1	A	301

Under the more accurate identification, it is notable that PLM 4 virtually disappears on the margins of the Vanguard Area, in terms of sylvite mineralisation, although the clay seams are still present.

In the Belle Plaine the presence of the clay seams is highly regular, and can be traced throughout the exploration area. While the uppermost potash mineralisation for the Belle Plaine as identified by Phillips (1982) is not present at all in the area, the associated clay seams are present in the Belle Plaine salt back. Thus, all clay seams associated with the Belle Plaine are present throughout.

7.2.1 Patience Lake Member & Associated Halite Beds

The halite interval between the Patience Lake and the overlying Second Red Beds (commonly termed the “Patience Lake Salt Back”) is not clear in the historical Sifto Salt wells, as the core appears to start in halite. In the wells completed by Yancoal, and those completed by Gensource, it ranges from ~5.41 m to 10.2m; noting that the former utilises non-depth corrected logs, as core recovery appears to have started below the Second Red Beds only (potentially contributing to the brine problem noted earlier).

The Patience Lake was found to range from 9.4 m (represented in Y-5-29, including the weakly mineralised PLM 4) to 15.66 m (represented in V-4-1), with an average thickness of 12.72 m. The Patience Lake presented four sub-members. A summary of these is given in Table 13.

Table 13: Patience Lake Sub-Members, Thickness (In Metres)

Patience Lake Sub-Members			
Thickness (m)			
Sub-Member	Average	Minimum	Maximum
PLM 4*	2.16	0.37	3.83
PLM 3	2.59	1.61	3.47
PLM 2	4.32	2.22	6.09
PLM 1	3.92	3.30	4.26

*Note that the PLM 4 thicknesses excludes data from SST-14, for which little mineralisation was noted

The halite bed below the Patience Lake, the Patience Lake Floor Salt, is extremely regular, ranging between 2.85 m and 3.66 m. The Allan Marker, present throughout the Vanguard Area, is a bit more variable, ranging between 0.3 m and 0.67 m.

7.2.2 Belle Plaine Member & Associated Marker Beds

The Belle Plaine Salt Back, situated between the Allan Marker and the Upper Belle Plaine (here formed by the uppermost sub-member, BPM 7, except in V-1-14 and V-1-16) ranges between 2.91 m and 3.13 m thickness. The Belle Plaine itself ranges from 8.7 m for V-1-16 to 10.3 m at SST-4.

The Belle Plaine presented seven sub-members. A summary of these is given in Table 14.

Table 14: Belle Plaine Sub-Members, Thickness (In Metres)

Belle Plaine Sub-Members			
Thickness (m)			
Sub-Member	Average	Minimum	Maximum
BPM 7	0.39	0.05	0.98
BPM 6	1.60	0.16	2.47
BPM 5	1.67	1.02	2.70
BPM 4	2.07	1.74	2.71
BPM 3	1.24	0.89	1.53
BPM 2	1.82	0.98	2.49
BPM 1	1.10	0.74	1.68

The Belle Plaine Floor Salt is the interval between the Belle Plaine and the thin marker bed called the White Bear Marker, situated between the Belle Plaine and the Esterhazy Members. The White Bear Marker is present as an Upper and Lower White Bear in Y-1-18, V-1-16, V-4-1, V-8-4 and V-1-14, whereas it is present as a single lithological unit in SST-14. The Belle Plaine Floor Salt is very regular within the Vanguard Area, ranging between 4.46 m and 5.92 m, while increasing to 11.89 m in SST-14. Note that SST-4 did not penetrate below the Belle Plaine Member.

7.2.3 Esterhazy Member

The Esterhazy Salt Back ranges from 4.32m to 6.18 m. The Esterhazy itself is quite variable across the Vanguard Area. An “Upper Esterhazy”, divided into 5 sub-members is present throughout, ranging between 6.34 m and 10.49 m in thickness. An intra-Esterhazy Salt (IES), with a very weakly mineralised lower Esterhazy Member (LEZ) is present in SST-14. A summary of these is given in Table 15.

Table 15: Esterhazy Sub-Members, Thickness (In Metres)

Esterhazy Sub-Members			
Thickness			
Sub-Member	**Average**	**Minimum**	**Maximum**
EZM 5	1.26	0.91	1.49
EZM 4	1.23	0.4	1.98
EZM 3	1.37	0.61	2.43
EZM 2	1.69	1.17	2.33
EZM 1	2.02	0.59	4.27
IES	0.61	0.61	0.61
LEZ	1.22	1.22	1.22

7.3 Geological Cross-Sections

The overall thickness of each potash-bearing member is consistent, as expected, across the Vanguard Area. The cross-section in the following figure shows good correlation of the 3 main Prairie Evaporite potash-bearing members in drill holes Y-1-18, V-1-16, and V-1-14, as depicted from a west-to-east (W-E) direction (i.e., as you move from left-to-right in the figure). These consistencies were confirmed by the logging and assaying of the core for these holes, along with the analysis of the geophysical logs collected during drilling and exploration.

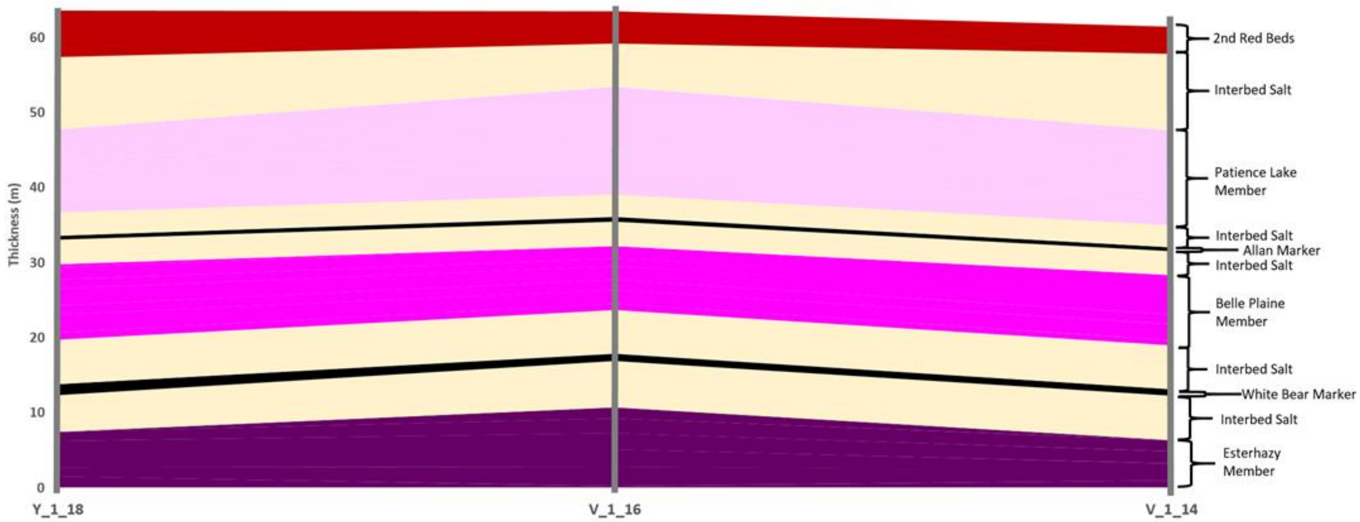

Figure 4: Cross Section (Esterhazy Floor Set Horizontal)

7.4 Mineralisation, XRD & Density Analysis

The potash mineralisation within the Prairie Evaporite Formation is relatively uncomplicated. The dominating constituents are halite (NaCl), sylvite (KCl) and carnallite ($KMgCl_3.6(H_2O)$); sylvite being the main ore mineral. Efforts to mine carnallite have not proven to be economical in the past. Even in the main sylvite-rich rock, sylvinite, halite remains the largest constituent. Iron-oxide staining is common in the potash members of the Prairie Evaporite Formation, giving rise to the common misnomer of "pink potash"; as sylvite is in fact translucent to dull and/or milky in appearance, while carnallite itself is often difficult to distinguish from sylvite, especially when dull in colour. Carnallite distinguishes itself by making a "squeaky" sound when scratched.

The only other soluble component of any significance in the Prairie Evaporite Formation is anhydrite. Clay horizons are frequent within the Prairie Evaporite Formation, and especially within the main potash members. Interstitial clay is also found. This, together with other minor components are generally termed the "insoluble", as they are not water soluble like the other salt minerals. The most common insoluble are clay minerals (about one third) and in decreasing order of abundance: anhydrite, dolomite, hematite, quartz, K-feldspar and hydrocarbon. The clay mineral suite is dominated by Fe-Mg chlorite, illite and Mg-septechlorite (Mossman et al., 1982).

To ascertain the mineralogy other than from the assays, samples from V-1-14 and V-1-16 were submitted for Bulk Quantitative X-Ray Diffraction (XRD) analyses to the laboratories of the Saskatchewan Research Council ("SRC"). Note that quantitative XRD is less accurate than assays, in terms of the total weight percent of the various constituents.

The salt (i.e., non-clay seam) is generally confined to halite, sylvite and minor anhydrite, as well as carnallite (mostly in the Esterhazy member). The anhydrite content in the salt ranges from absent to 2.7 % (Patience Lake) and 3% (Belle Plaine).

The mineralogical contents of the clay seams are more varied, and are summarized in Table 16.

Table 16: Clay Seam Mineralogy

	Ankerite*	Dolomite	Clinochlore	Quartz	Anhydrite	Illite
	weight %					
Patience Lake	16.7	6 - 28.8	2.1 - 11.8	5.1 - 20.1	3.7 - 12.1	0 - 8.1
Belle Plaine	0.0	4.9 - 19.4	0 - 3.4	8.6 - 9.1	1.5 - 3.7	0 - 12.3
Esterhazy	0.0	8.7 - 14.9	0 - 2.1	4.8 - 9.0	2.5 - 2.6	0.0 - 1.6

*Ankerite is present only as a replacement for dolomite in one Patience Lake Clay sample.

As shown here, and corroborated from assays in Table 17, anhydrite is present in much higher concentration in the Patience Lake than in the other potash members.

Carnallite in general is undesirable in the sylvite solution mining environment, as it complicates the phase diagram for KCl-solution mining. A maximum cut-off for carnallite is thus desirable. It should also be noted that carnallite commonly presents differently in the different members of the Prairie Evaporite Formation - while either nearly absent, or present as a strong “carnallitization” event in the Patience Lake, it occurs in the lower Belle Plaine in hole Y-1-18, and through most of the Belle Plaine in drillhole V-8-4 (see Table 17), and often occurs interstitially at higher average grades within the Esterhazy Member.

A summary of the Property mineralogy is given in Table 17, shown in chronological order by the wells drilled. The grades given are entire sub-member composites, and that the values for the Esterhazy member are not provided as the Esterhazy member has been excluded from all Mineral Resource estimates as discussed in Section 14.

Table 17: Mineralisation Within The Vanguard Area

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
SST-14	Patience Lake	PLM 3	32.42	0.64	9.42	-
		PLM 2	27.16	0.66	7.06	-
		PLM 1	42.54	0.44	6.70	-
	Belle Plaine	BPM 7	16.444	1.007	8.853	-
		BPM 6	44.636	0.559	8.685	-
		BPM 5	24.166	0.562	1.453	-
		BPM 4	35.772	0.616	5.748	-
		BPM 3	35.259	1.112	5.036	-
		BPM 2	30.436	0.554	2.628	-
		BPM 1	43.472	0.593	1.455	-
SST-4	Patience Lake	PLM 4	27.61	0.85	17.19	-
		PLM 3	47.55	0.20	6.36	-
		PLM 2	24.31	0.58	7.26	-
		PLM 1	41.51	0.29	5.24	-
	Belle Plaine	BPM 7	47.29	-	1.29	-

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
		BPM 6	46.36	-	3.30	-
		BPM 5	29.30	1.47	3.84	-
		BPM 4	25.84	1.18	3.98	-
		BPM 3	38.19		4.51	-
		BPM 2	26.67	4.63	3.28	-
		BPM 1	40.04	15.64	0.82	-
Y-1-18	Patience Lake	PLM 3	42.21	0.71	10.03	1.449
		PLM 2	49.37	0.40	4.42	0.929
		PLM 1	21.33	0.79	8.42	1.351
	Belle Plaine	BPM 7	31.24	1.30	7.64	0.489
		BPM 6	32.95	1.38	7.90	1.796
		BPM 5	36.22	0.53	1.68	0.484
		BPM 4	25.25	1.03	3.18	0.852
		BPM 3	31.59	9.75	4.10	0.806
		BPM 2	31.44	19.34	3.80	0.593
		BPM 1	53.80	17.71	0.93	0.309
Y-5-29	Patience Lake	PLM 3	13.45	0.77	3.87	0.855
		PLM 2	34.59	1.11	12.10	0.777
		PLM 1	29.70	1.23	16.36	2.41
V-1-16	Patience Lake	PLM 4	30.67	0.77	15.66	2.003
		PLM 3	51.27	0.36	5.65	1.038
		PLM 2	24.35	0.60	7.24	1.36
		PLM 1	38.88	0.60	6.26	1.432
	Belle Plaine	BPM 6	40.81	0.61	4.59	0.593
		BPM 5	46.60	0.30	1.75	0.551
		BPM 4	27.90	0.45	3.00	0.59
		BPM 3	31.03	0.77	6.71	1.044
		BPM 2	23.35	0.32	1.87	0.265
		BPM 1	59.55	0.18	0.52	0.316
V-1-14	Patience Lake	PLM 4	30.54	0.98	11.23	2.031
		PLM 3	42.66	0.51	6.71	1.294
		PLM 2	26.82	0.49	5.12	0.919
		PLM 1	45.12	0.94	6.10	1.051
	Belle Plaine	BPM 6	37.58	0.40	3.79	0.864
		BPM 5	28.78	0.29	1.89	1.151
		BPM 4	31.12	0.40	3.91	0.756
		BPM 3	39.59	0.40	3.45	0.907
		BPM 2	27.56	0.30	1.93	0.483
		BPM 1	54.48	0.21	0.64	0.527

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
V-4-1	Patience Lake	PLM 4	38.73	0.61	8.09	0.34
		PLM 3	30.17	1.03	16.84	1.90
		PLM 2	29.27	0.53	7.77	0.87
		PLM 1	40.92	0.45	6.49	0.99
	Belle Plaine	BPM 7	48.82	0.47	4.38	0.53
		BPM 6	56.60	0.27	2.30	0.69
		BPM 5	34.66	0.26	2.19	0.58
		BPM 4	36.40	0.38	3.93	0.64
		BPM 3	34.33	0.45	4.71	0.91
		BPM 2	21.99	0.35	2.30	0.42
		BPM 1	49.70	0.21	0.79	0.40
V-8-4	Patience Lake	PLM 4	56.94	0.37	3.45	0.17
		PLM 3	36.94	0.68	12.00	1.62
		PLM 2	31.72	0.36	5.47	1.17
		PLM 1	33.88	0.63	7.62	1.43
	Belle Plaine	BPM 6	35.29	22.42	2.08	0.45
		BPM 5	18.96	41.31	2.09	0.69
		BPM 4	19.15	27.25	4.21	0.91
		BPM 3	14.34	25.19	5.27	1.08
		BPM 2	17.65	20.21	2.07	0.27
		BPM 1	11.30	18.28	2.77	0.69

It is common practice to apply a “standard density” of 2.08 (unit = tonnes/m^3) to potash mineralisation. Where actual core samples are not available to perform density measurements, using a standard density of 2.08 is therefore deemed sufficient. However, where possible, generally accepted values for standard density can be validated (and/or modified) by performing testing on actual core sample recovered from the specific deposit. As such, representative samples were taken from the core recovered from the Vanguard Area, for all 3 potash members, and submitted to SRC to complete bulk density measurements (the methodology is described in sub-section 11.4.4). The results of SRC’s analyses are summarised in Table 18.

As shown in Table 18, the average density as measured from SRC was higher than the standard density of 2.08. This is primarily driven by the amount of anhydrite that is present in the core samples (anhydrite has a density of 2.97), with the average amounts of anhydrite in the core samples analyzed (by weight %) shown in Table 17. The average anhydrite content varies across the 3 members – it is lowest in the Esterhazy member (0.69 weight %), and it is the highest in the Patience Lake member (1.23 weight %).

Table 18: Bulk Density

Member	Number of Samples	Density Range tonnes*/m³	Average Density tonnes*/m³
Patience Lake Member	4	2.08 - 2.18	2.12
Belle Plaine Member	4	2.05 - 2.12	2.095
Esterhazy Member	2	2.08	2.08

***tonnes = metric tons**

To further substantiate the selection of density applicable to the potash within the Vanguard Area, the data presented in Table 18 was subjected to a small sample T-test to examine their statistical significance. While the overall mean (2.10) had a standard deviation of 0.037, implying the outcome to be within one standard deviation of the standard density of 2.08, the T value (0.0613) indicates that there is a significant difference of the mean to the standard density of 2.08. However, due to the small sample size, it is the QP's opinion that using the standard density of 2.08 is a reasonable and conservative approach.

7.5 Factors Affecting Mineralisation

Several factors commonly affect potash grade syn/post-mineralisation. These were best summarised by Halabura and Hardy (2007). Briefly, they are: (1) Salt Dissolution and Collapse, (2) Leaching, and (3) Washout. Each are discussed further below, and a helpful graphic from Halabura and Hardy (2007) depicting each is shown in Figure 5.

7.5.1 Salt Dissolution & Collapse

This factor could be the most widely spread, and occurs where the salt has been dissolved and replaced by overlying material. These anomaly types can be seen in the rapid thinning of the evaporite beds in seismic surveys. Such a large anomaly does indeed occur in the southern part of KL 245; which is well outside the mining area for the Project.

7.5.2 Leach Anomaly

This factor affects the potash beds, and are often associated with "mounds", representing reef systems in the underlying Winnipegosis. The sylvite has been removed, resulting an overall thinning of the salt horizons. However, these are also often correlated with sylvite-enriched zones around the flanks of the mound structures. As such, the identification of Winnipegosis mounds is important during seismic surveys. Several mounds in the area have been identified by the seismic surveys and are discussed in sub-section 9.4.

7.5.3 Washout Anomaly

The least understood of the anomaly types, these consist of halite and clay replacement of sylvite beds, interpreted as occurring contemporaneously with or shortly after sylvite mineralisation.

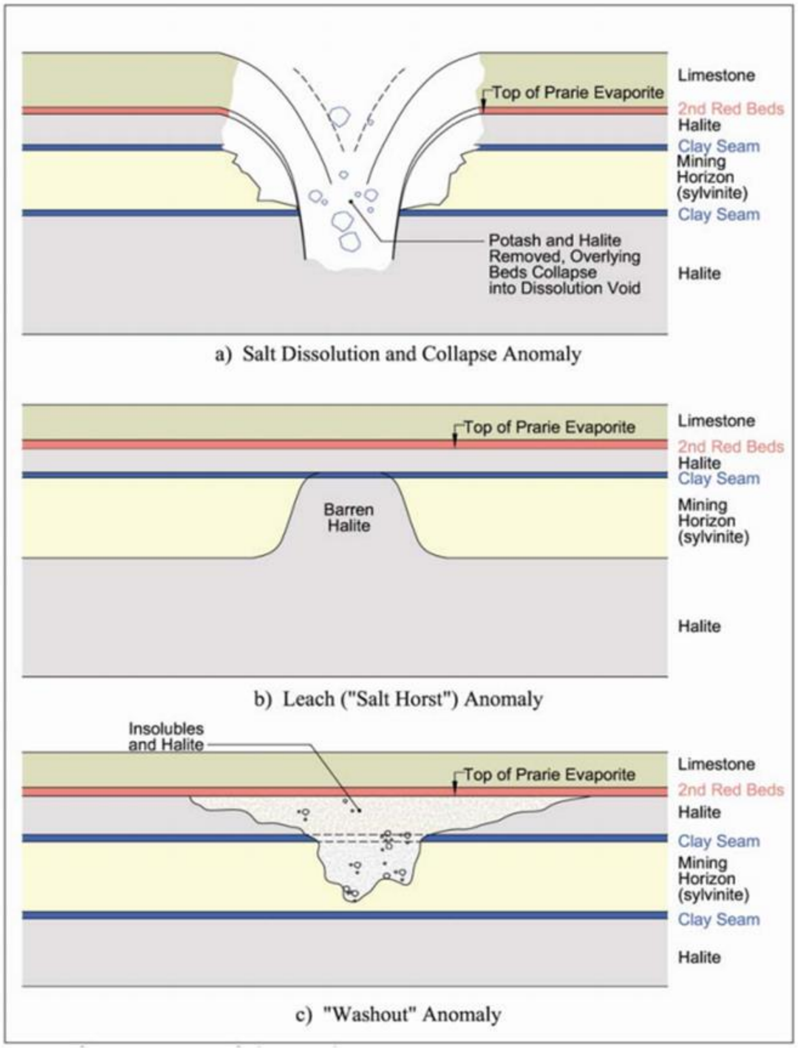

Figure 5: Factors Influencing Potash Grade Post-Mineralisation (From Halabura & Hardy, 2007)

7.6 Structure

The deposit in the Vanguard Area is largely flat lying, with very slight undulations, as is the case with most potash deposits of the Prairie Evaporite Formation. There are a small number of Winnipegosis mounds present below the Prairie Evaporite. While these have the potential to affect mineralisation locally, one needs to look to area specific geological and geophysical information, to provide evidence to support not excluding them from the Mineral Resource calculations. Such was the case in the Vanguard Area.

Also, as discussed in the sub-section 9.4, there is the presence of a small number of dissolution anomalies. A major structural feature is the edge of the regional salt dissolution edge. This affected the presence of all salt, and thus potash mineralisation in the southern edge of the Vanguard Area. As mentioned, this is well outside the proposed mining area for the Tugaske Project.

The minor undulation of the potash seams is well illustrated in Figure 6, with the elevation of the floor of the Patience Lake sub-member 1 (PLM 1) shown – as denoted by the elevation of the 401 floor clay seam of Phillips (1982). As discussed elsewhere in this report, the PLM 1 is the initial mining target for the Project, and thus is the basis of the Mineral Reserves.

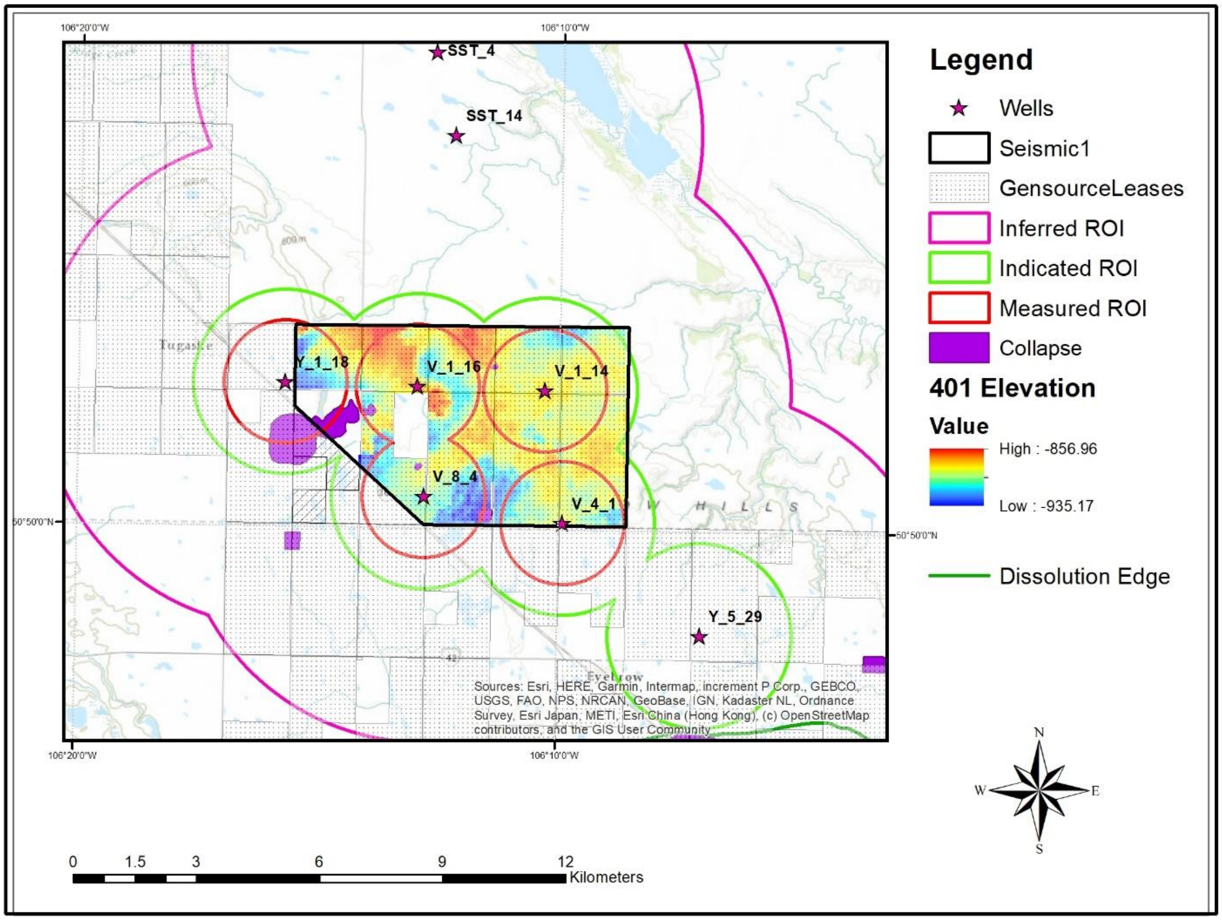

Figure 6: Floor Elevation Of The PLM 1

8 DEPOSIT TYPE

Potash generally refers to “muriate of potash” (“MOP”), or potassium chloride (KCl), geologically known as sylvite. While sylvite is not the only potassium-bearing salt mineral, it is the most commonly mined, and sylvite dominated salt beds are termed sylvinite.

Sylvinite deposits primarily occur within evaporite sequences, themselves the result of shallow, restricted basins such as intra-cratonic seas, evaporitic lakes, etc. By their nature they are very soluble, and generally confined to narrow sections of the stratigraphic column, where, in addition to being a potential source for potassic minerals, they can also play a role in oil traps, etc. Due to the depositional nature, and depending on post-depositional processes, such as dissolution and deformation, they can exhibit considerable lateral continuity. Such is generally the case in the Prairie Evaporite Formation. See the following figure for a graphical representation of the Prairie Evaporite in Saskatchewan.

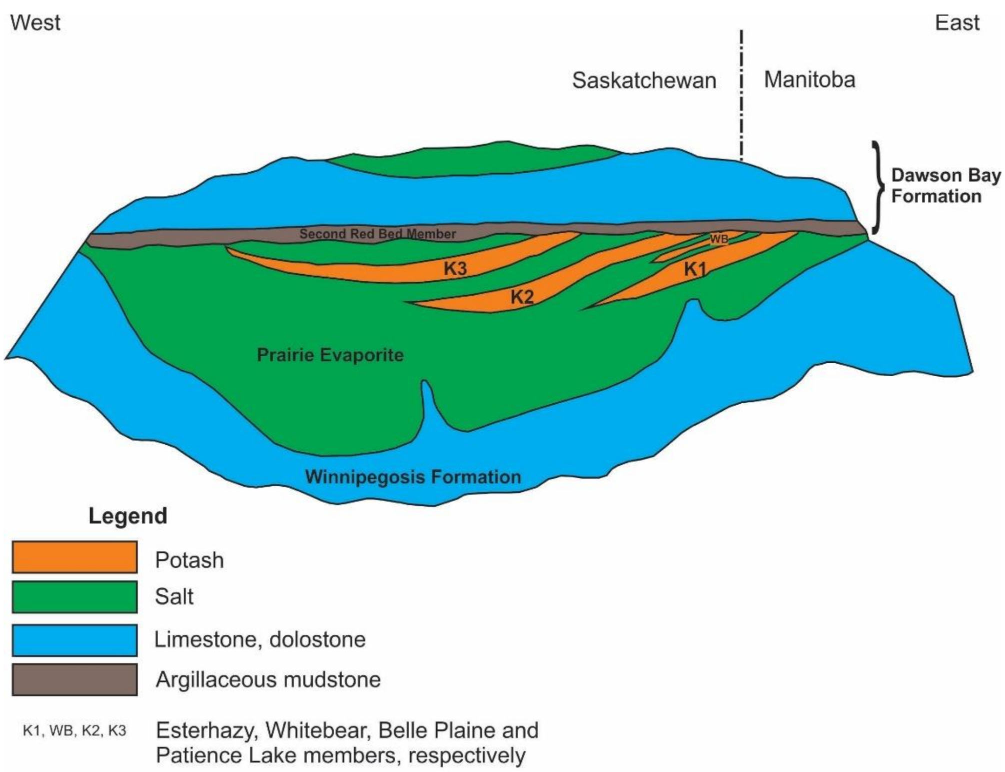

Figure 7: Potash Deposition In Saskatchewan (Source: PotashWorks, December 16, 2014)

9 EXPLORATION

9.1 Historical Exploration

Very little information could be found about the exploration programs conducted in the early 1960's, which resulted in the two historic wells discussed in Section 6 (i.e., SST-4 and SST-14). The assays for these wells are available in the provincial archives, with little to no additional data. The assays represent samples from the Patience Lake Salt Back through to the Lower Esterhazy for SST-14, and from the Patience Lake Salt Back to below the Belle Plaine for SST-4. A small number of API (gamma-ray) measurements were also available below the Belle Plaine for SST-4, reaching the Upper Esterhazy, but the quality was such that it could not be correlated to the mineralisation in the other wells. As with most potash wells, these wells are presumed to have been drilled vertical.

The drill core however is still preserved at the Core and Sample Repositories, Subsurface Laboratory, Saskatchewan Geological Survey, Regina, Saskatchewan. The QP had occasion to inspect both drill cores, specifically all the recovered core from the Prairie Evaporite Formation, and compare it to the assays and logs compiled from assays as previously received. The correspondence was excellent, with visual correspondence between sylvite abundance and KCl grade, as well as other aspects such as the occurrence of clay seams corresponding to insoluble peaks in the assays, etc. The QP is therefore confident that the assays and logs compiled from the assays are reasonably representative of the drilled core. An example of the preserved core can be seen in the following photos.

Figure 8: Preserved Potash Core From The 1960's Exploration Programs In The Tugaske Area

9.2 Yancoal Exploration

Yancoal Canada Resources Co. Ltd. ("Yancoal") undertook an exploration program on its KP 363 and KP 483 potash permits - which preceded Gensource ownership of the Property. The exploration was managed and directed by North Rim Exploration Ltd. of Saskatoon, SK., Canada.

The program consisted of a 2D seismic component, and the 2 potash wells discussed in Section 6 (Y-1-18 and Y-5-29). The program is outlined in detail in Fourie (2016). An example of core from this program is shown in the following photo.

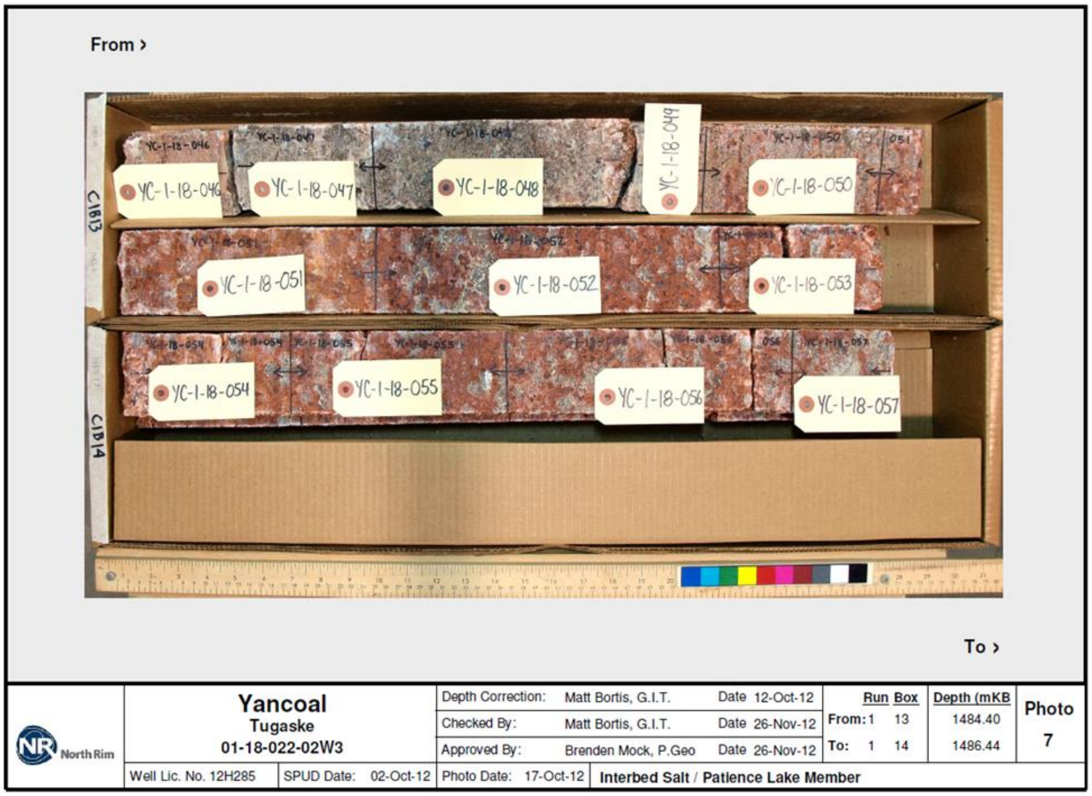

Figure 9: Example Of Core Photo By North Rim

The following is a summary of the 2 wells drilled by Yancoal.

Table 19: Yancoal Exploration Drilling Summary

Unique Well ID (UWI)	Abbreviation	Date Spudded	Date Rig Released
111/1-18-22-2W3/00	Y-1-18	02-Oct-2010	11-Oct-2012
131/5-29-21-1W3/00	Y-5-29	24-Oct-2012	11-Nov-2012

9.3 Gensource Exploration

Since acquiring the Property from Yancoal in 2016, including converting the potash permits to potash leases, Gensource has completed four exploration drill holes at the time of this report, complete with core recovery, geological assays, and geophysical (wireline) data collection. A summary of these four wells, in chronological order, is provided in the table below.

Table 20: Gensource Exploration Drilling Summary

Unique Well ID (UWI)	Abbreviation	Date Spudded	Date Rig Released
101/01-16-022-02W3/00	V-1-16	21-Nov-2016	12-Dec-2016
102/01-14-022-02W3/00	V-1-14	13-Dec-2016	03-Jan-2017
101/04-01-022-02W3/00	V-4-1	17-Oct-2018	01-Nov-2018
102/08-04-022-02W3/00	V-8-4	23-Nov-2019	13-Dec-2019

These wells furthered Gensource's definition of the Prairie Evaporite Formation in the Vanguard Area, and support the basis for the Mineral Resource and Mineral Reserve discussed in Section 14 and 15 respectively.

9.4 Seismic

9.4.1 Initial 2D Seismic Program

An initial 2D seismic program was shot across the two leases (then permits) of the Vanguard Area by RPS Energy Canada Ltd. ("RPS"). The acquisition of seismic data over KP 483 (now KL 245) was called the Eyebrow 2D Seismic program, and consisted of nine 2D lines totalling 98 km. The survey was shot by Eagle Canada Inc. A single 9.7 km line was shot across the KP 363 (now KL 244), called the Bridgeford 2D program, also by Eagle Canada Inc. This program was executed by the previous permit holder, Yancoal, from which the data was subsequently transitioned to Gensource after conversion of the permits to leases, and the subsequent Asset Purchase Agreement for the leases in 2016, as discussed elsewhere in this report.

While a number of Winnipegosis mounds were found, these are not necessarily indicative of loss of Mineral Resource (unless clear thinning or folded beds are noted), and as such these were not subtracted from the Mineral Resource. A few collapses were discovered as well (online and offline), which were noted for exclusion from the Mineral Resource.

The biggest feature identified by the seismic surveys is the existence of a major salt dissolution anomaly that occurs within the southern section of the area. The salt dissolution edge is not entirely unexpected, as both leases are relatively close to a zone previously identified as a large area of salt dissolution within the Elk Point Group (Halabura and Hardy, 2007). This dissolution edge, as indicated by 2D seismic, is depicted in Figure 10; and, the QP notes that the dissolution edge has no adverse impacts on the Tugaske Project or the Vanguard Area (as it exists outside the Vanguard Area lease boundaries). The dissolution edge is mentioned to provide an understanding of the regional geology and the Prairie Evaporite Formation.

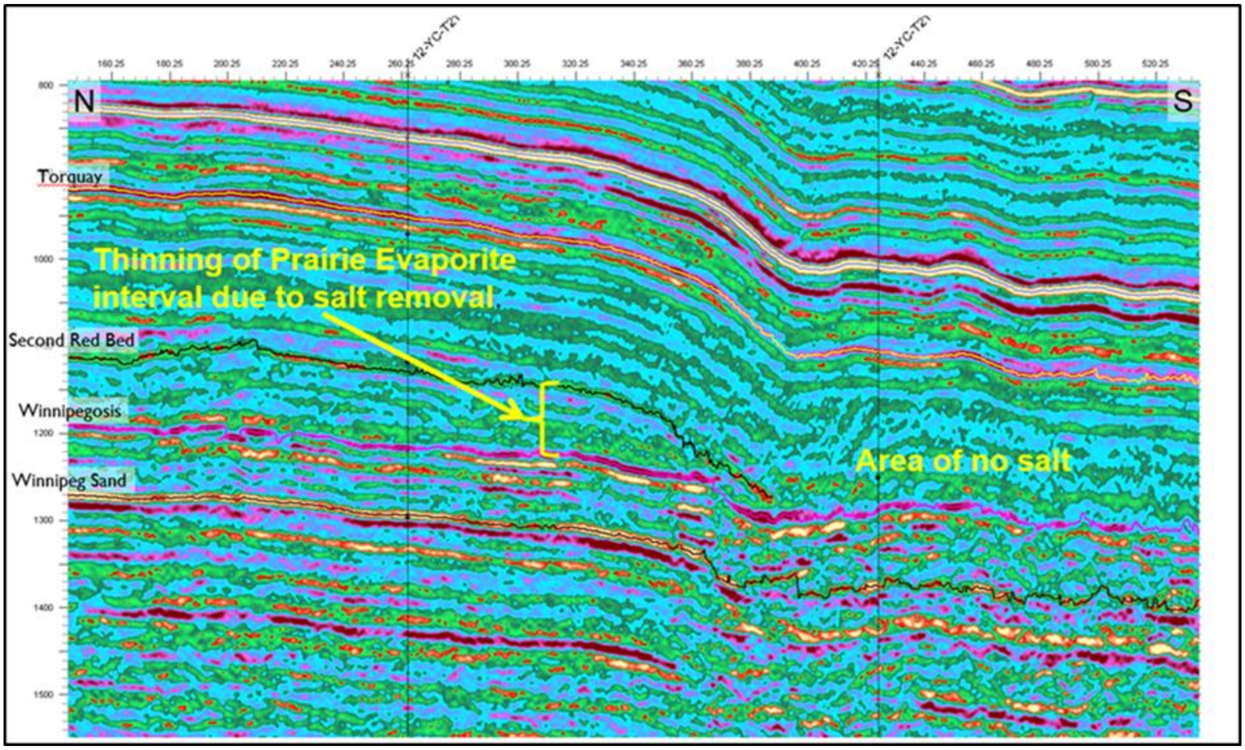

Figure 10: Floor Salt Dissolution Edge

9.4.2 2D Seismic Reinterpretation

RPS, which was responsible for the initial 2D seismic survey, added the pertinent geophysical logging information from the new drilling completed in late 2016/early 2017 to the initial surveys for further elucidation. The new drilling confirmed the initial surveys, and no new collapses, mounds or other features of concern were defined. With the integration of new well data, the existing 2D seismic data provides subsurface information that facilitates the assessment of the geologic conditions that future mining operations may encounter on KL 245. Maps created from the 2D data can be used to assist mine planners in assessing hazard potential in this area, to assist in delineating future seismic and drilling programs, as well as to assess potash potential.

9.4.3 3D Seismic Program

In February, 2017, Gensource engaged RPS, as the prime contractor for the 3D seismic program. RPS has a unique understanding of the Prairie Evaporite section gleaned from tens of thousands of kilometres of 2D and 3D seismic acquired and interpreted in Saskatchewan, Canada and other basins around the world. As previously discussed, RPS was responsible for the 2D seismic previously completed on KL 244 and KL 245.

The 3D seismic area focused on a portion of KL 245 only (i.e., northeast, within Township 22 Range 2), which was selected to be as focused as possible to define the Mineral Resource to the extent necessary while being large enough to provide many options in terms of the selection of the initial mining area for the Project. Overall, the 3D seismic program covered an area of 34.37

square kilometres (13.27 square miles). Figure 11 illustrates the areal extent of the 2017 Vanguard 3D program.

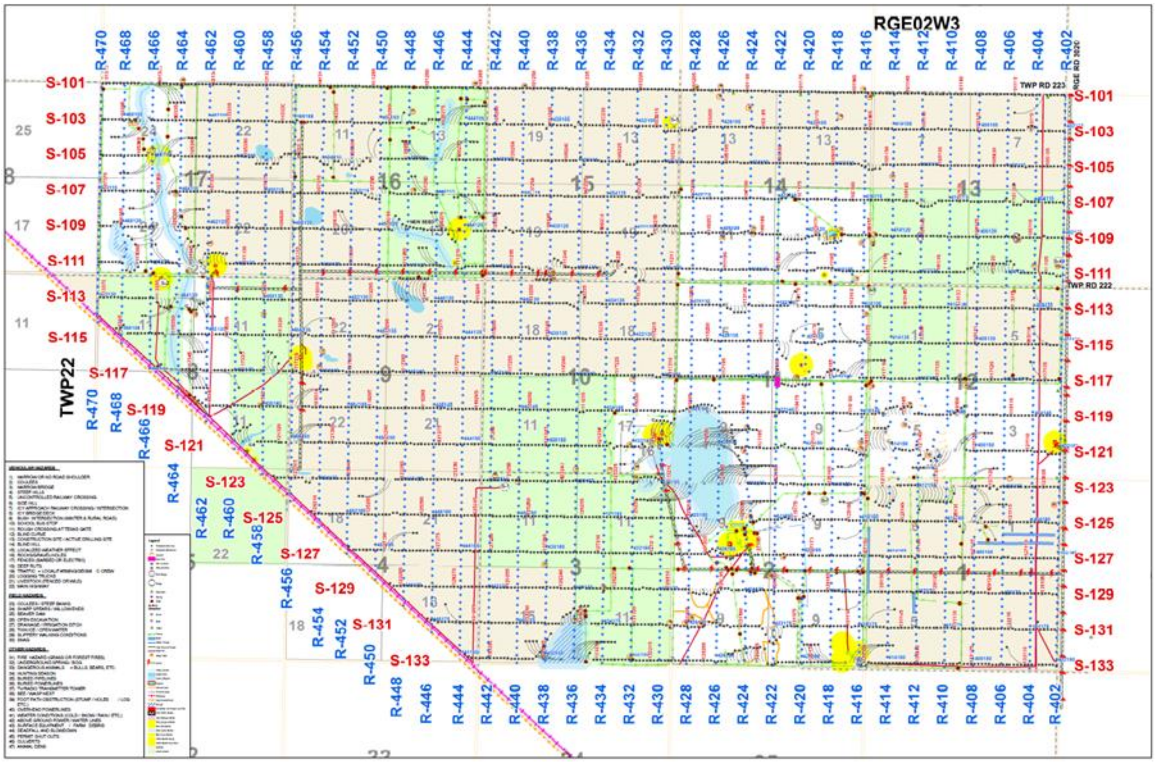

Figure 11: 2017 Vanguard 3D Program (KL 245)

The final interpretation by RPS was completed in Q2, 2017, matching the schedule required by the Vanguard One Feasibility Study. Data quality of the 2017 Vanguard 3D data is good and consistent with data previously collected in the area. In general, the data has usable frequencies up to 110 Hz, and provides sufficient resolution for the objectives of the Project. A copy of this report was made available to the QP. The 3D seismic interpretation provided a solid basis to carry forward with well field location and layout and will support the locating of future drilling activities.

In general, the stratigraphy in the Vanguard Area dips regionally from northeast to southwest. Several features are identified within the Vanguard 3D dataset and range from the loss of Davidson Evaporite, to the identification of Winnipegosis mounds, as well as the presence of Prairie Evaporite collapse features.

Based on the 3D seismic program, confirmation of the presence of geological anomalies was completed. These anomalies are identified in the following figure.

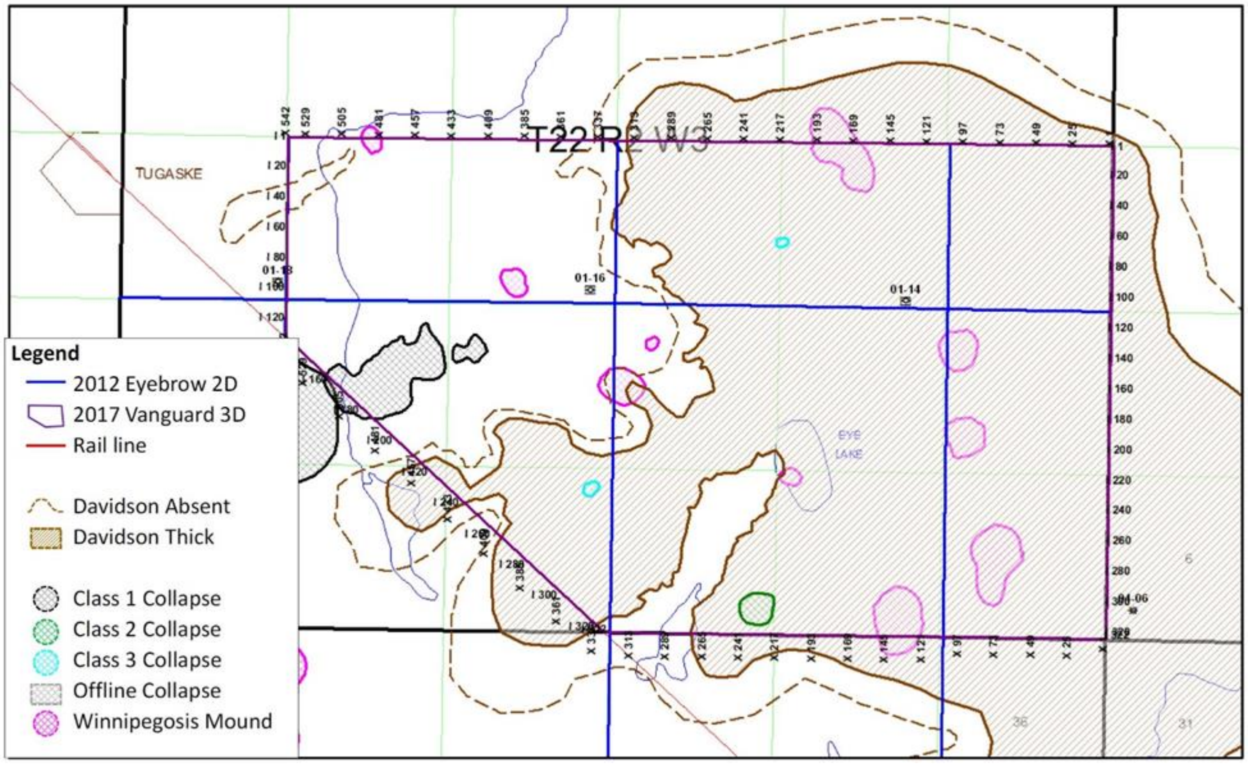

Figure 12: Geological Anomalies In 3D Seismic Area

In the 3D seismic area, the presence of several collapse features, as well as mounds, were identified. Based on 3D data, collapses are categorized into three classes based on their size, vertical extent and the amount of Prairie Evaporite loss. Two (2) Class 1 collapse features, one (1) Class 2 collapse feature, and two (2) Class 3 collapse features have been identified within the 2017 Vanguard 3D area. These collapses will be considered and avoided as they relate to mine planning and location of any drilling or mining activities. Several mounds in the Winnipegosis were identified in the lease area. However, these mounds are well below the zone of interest for mining, and do not impact the mining cavern design and mine plan layouts.

Previously, a Prairie Evaporite solution edge was defined based on total salt thickness and dip of the Second Red Bed. The delineation of a solution edge is consistent with local wells that show thinning and or absence of the Prairie Evaporite. No changes were made to the Prairie Evaporite dissolution edge.

The 2017 Vanguard 3D data was evaluated using both the seismic data and the inversion volume, and showed no evidence of the typical seismic response to massive carnallite. It should be noted that no direct well ties are available to be utilised as part of the carnallite investigation.

10 DRILLING

As indicated in sub-section 9.3, at the time of this report, Gensource has successfully completed exploration drilling of four wells in its 100% owned Vanguard Area, spanning from 2016 to 2019. Building upon the two wells drilled on the Property by Yancoal in 2012, these four wells enabled Gensource to advance the determination of the Mineral Resource extent, grade, etc.; ultimately allowing for advancement of the Project towards full implementation, as well as subsequent NI 43-101 Technical Reports summarizing such advancements (including this report). The following figure shows the location of the exploration drill holes on KL 245, including the four wells completed by Gensource, and the 2 wells completed by Yancoal.

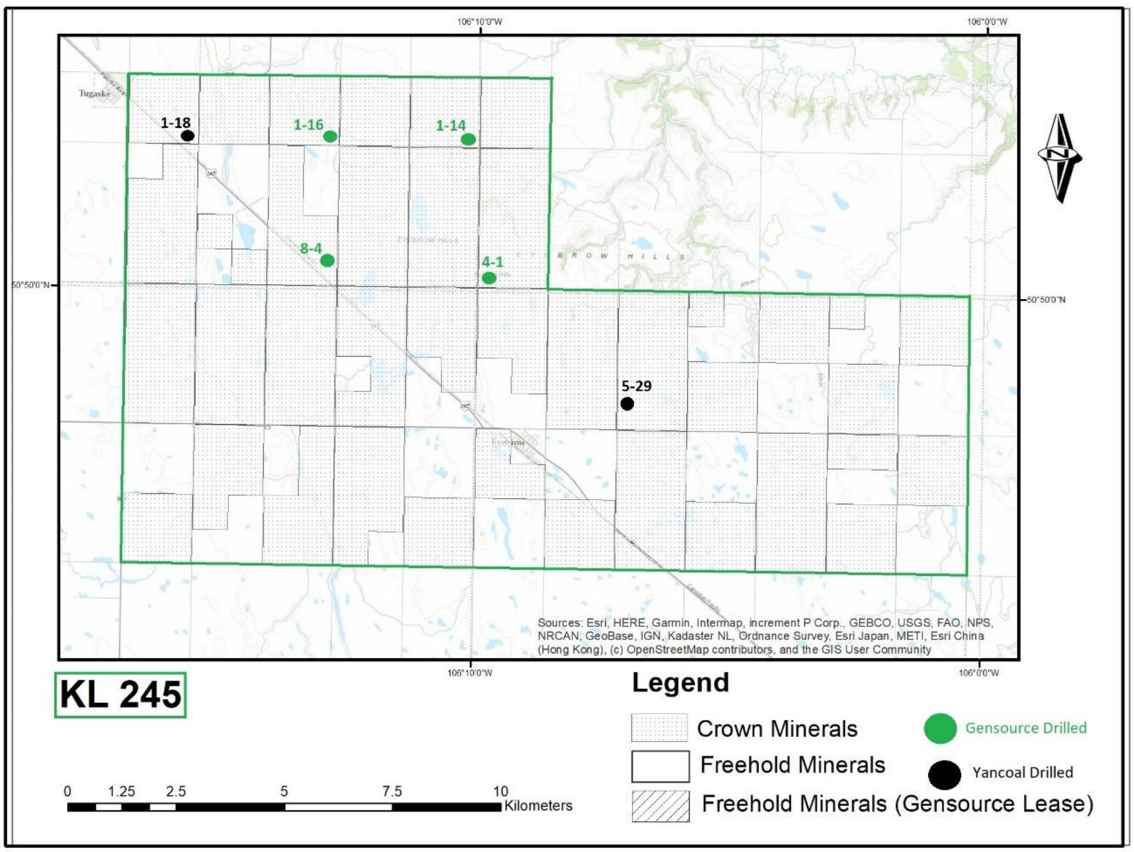

Figure 13: Exploration Drilling Locations

10.1 Environmental Monitoring

For all exploration drill holes completed by Gensource, a pre-disturbance site assessment (PDSA) was completed, as well as the checklist for development on private land, as required by the Saskatchewan Ministry of Environment in order to obtain well licenses. For the two wells drilled in 2016/2017, this effort was completed by Golder Associates Ltd., and for the two wells in 2018 and 2019 EDI Environmental Dynamics Inc. completed the PDSAs.

Three of the four wells drilled by Gensource (V-1-16, V-1-14, and V-4-1) have been reclaimed beginning in 2018. Each well was regraded and revegetated, back to its pre-disturbance conditions. As per the requirements of the Government of Saskatchewan, in order to obtain an Acknowledgement of Reclamation (AOR), the licensee of a drilling well must submit a report which substantiates the satisfactory reclamation of the site. This includes monitoring the growth of the vegetation on the site over multiple growing seasons. Therefore, it typically takes 3 to 5 years to obtain all the documentation required for an AOR application. Gensource continues to monitor and record information for these three reclaimed sites as part of the AOR process.

10.2 Drilling Procedures

For all 4 exploration wells drilled by Gensource, Gensource engaged Artisan Consulting Services Ltd. ("Artisan"), to provide drill program design, drilling consulting, and onsite supervision and management of the drilling. As part of their execution expertise, Artisan developed drilling programs and stick diagrams for each of the exploration wells, all utilizing similar drilling procedures. A summary of the typical drilling procedures for these wells is as follows (extracted from the 2016/2017 drilling program for V-1-16 & V-1-14):

- **Cellar/Conductor**
  - Surface cellar 1.8m minimum diameter cribbing was installed approximately 1.2m deep.
- **Conductor**
  - 406.4mm (16") conductor set with a conductor rig to a depth of 12m. No RH / MH required
- **Surface Hole: 0-160m**
  - Surface riser: Utilized a 406.4mm (16") conductor riser equipped with air bag for drilling surface hole.
  - Surface hole: 349mm Re-run center jetted insert bit to approximately 160m and survey every 30m, max 1 degree between surveys.
  - Surface drilling fluids: 0 - 160m fresh water bentonite slurry
  - Possible potential surface problems: gravel, sand, rocks and minor losses. Losses reported on offsetting well, however no depth given.
  - Major sand zone at 30m on 1-16-22-2 W3 well.
  - Surface casing: 244.5mm, 48.07kg/m, H40, ST&C, Range 3 to +/-160m
  - Surface cement: SURFACE mix LW Pro cement + additives as per Sanjel Cementing Program.
- **Intermediate Hole: 160-1440m**
  - Drill out with a 222mm PDC bit & performance drilling motor down to core point of approximately 1430m.
  - Intermediate drilling fluids: A fresh water polymer system from 160m to 1430m. Short circuit system and clean cuttings from tanks prior to Davidson (particularly pertains to well V-1-14).

- Pick up a 159mm core bit to cut 88.9mm core from 1430m to 1440m as per Geology requirements – 2m to 3m above the Prairie Evaporite – 2nd Red / Prairie on 2nd core run planned.
- Once geophysical logging is complete, run in to top of rat hole, circulate hole clean, ream rat hole 222mm to 1437m and trip to run 177.8mm casing as per specifications.
- Intermediate casing: 177.8mm, 34.2 kg/m, J55 LT&C casing string with Float Shoe and Float Collar to 1437m.
- Intermediate cement: circulate and cement casing as per Sanjel Cementing Program. Wait on cement for minimum of 12 hours.

- **Main Hole: 1440m to 1537m**
  - Drill out with an 156mm PDC bit after WOC. Once at the shoe change over to Invert oil fluid. Ream from 1437m to 1440m. Trip out for core barrel. Core the bottom section of the well from 1440m to 1520m with weighted invert oil and conventional 18m coring equipment.
  - Continue coring till clear salt is present below the Esterhazy.
  - Main hole drilling fluids: The section of the main hole will be cored utilizing weighted invert fluid only (estimate of 1180 to 1220 kg/m3).
- **Abandonment**
  - Abandonment plugs: 0:1:0 “G” + 37% NaCl BWOW + additives or equivalent as per Cement Program to 150 m above Prairie Evaporite.
  - Well will be left with a protective plate tack welded over the wellhead

The drilling procedures for V-4-1 were augmented slightly, as it was decided by Gensource to continue drilling this well below the potash horizons within the Prairie Evaporite formation, in order to examine the potential for using this well as a future disposal well. The additional procedures for the V-4-1 well, from the Main Hole down, were as follows:

- Main Hole (1489-2121m)
  - Run in with 159mm bit and drill out ACP & float shoe. Be cautious on the drill out as the casing is not cemented. Avoid any torque spikes or added pressure.
  - Trip out and pick-up core barrels.
  - Begin cutting conventional core from 1489m down to 1588m.
  - Cut Core #2 and all subsequent cores as per Geology requirements & core company instructions. Core depths to be confirmed by on site geology.
  - Trip out and recover cores follow instructions on core recovery as this is the most important part of the operations. A full core recovery procedure will be reviewed with everyone on site by the onsite geology team.
  - Verify with the wellsite geologist and Gensource that the end of core is complete before releasing coring services.
  - Lay out core barrels and prepare to recover the temporary 177.8mm casing string.

- Confirm total depth with wellsite geologist
- Rig in Wireline unit and perforating guns.
- Run in with perforation guns and prepare to shoot the guns across the ACP to release the ACP.
- Reconnect to the casing stump and prepare to lay out the 177.8mm casing.
- Make up a 222.2mm PDC bit and directional assembly and ream do to 1489m and begin reaming rat hole down to 1588m.
- Continue to drill ahead to total depth of 2121m which is 15m into the Precambrian.
- Wiper trip the well back to the surface casing shoe, condition the hole for running open hole wire line logs.
- Trip out of the well, lay out BHA and prepare to run open hole logs.

10.3 Geophysical Logging

A suite of geophysical (wireline) logging was completed on all Gensource exploration wells. The wireline program for each of the four wells was completed by Weatherford International. The following downhole geophysical logs were run as part of the suite, typical for all wells:

- **Intermediate Hole Open Hole Logging**
  - Photoelectric Density Logging
  - Resistivity Logging (Dual Laterolog if/where Davidson Salt was present, or Induction)
  - Compensated Neutron Logging
  - Gamma Ray Logging
  - Dual Axis Caliper Logging
  - Compressional and Shear (Dipole) Sonic Logging
  - Borehole Volume & Navigation
- **Main hole open hole logging**:
  - Photoelectric Density Logging
  - Resistivity Logging (Dual Laterolog if/where Davidson Salt was present, or Induction)
  - Compensated Neutron Logging
  - Spectral Gamma Ray Logging
  - Dual Axis Caliper Logging
  - Compressional and Shear (Dipole) Sonic Logging
  - Borehole Volume & Navigation
  - Sector Bond Log

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Core Recovery & Handling Procedures

For Gensource wells V-1-16 and V-1-14, wellsite geology was provided by Heelstone Resources Inc., and coring completed by Blackie's Coring Services Ltd. For Gensource wells V-4-1 and V-8-4, wellsite geology was provided by Terra Modelling Services Inc. ("TMS"), and coring was completed by Baker Hughes. For all 4 wells, the lead independent geologist was Louis Fourie, P. Geo., Owner and Principal of TMS.

Again, because the similarity of the wells and the drilling programs for all 4 wells, the following summary of the core recovery and handling procedures was used on site (written for V-1-16 and V-1-14), typical for each well; with the exception being that Baker Hughes was able to use tools and methods that allowed for longer lengths of core recovery (i.e., > 9m) per coring run for the V-4-1 and V-8-4 wells, as instructed by Gensource and TMS.

- **Core Recovery Procedure**
  - 10 to 18 metre core intervals:
    - Core was recovered from the top half (top 9 metres - shallow to deepest depth) of the barrel first (due to the inability of the rig to hang an 18-metre-long core barrel above the floor)
    - Core was boxed starting around box 9 and boxed up to box one.
    - The core was marked with chalk on the base
    - Core was broken with a hammer at lengths that would fit half a box, if possible. Natural breaks occur often, so shorter pieces were common
    - The broken piece(s) were set down on a clean saw dust sack, with the base facing the mud tanks and up hole facing the doghouse
    - Core was then wiped down with rags to clean the drilling mud off the core
    - Core was boxed from the bottom up, and once boxes were full, they were placed inside the dog house
    - Lids were placed on the full boxes as they were put in the dog house
    - Once a 9-metre section was completed, those boxes were taken to the core trailer
    - The second half (bottom 9 metre) of the core barrel was then recovered, just as the first 9 metres was, but boxing started at box 15 or 16 and ending at box 10.
    - Once all the boxes were in the core trailer, the core was re-boxed as necessary to eliminate any short boxes and, when required, if breaks were not matching up to ensure pieces were not accidentally boxed incorrectly.
    - The core was wiped down again as required to be clean enough to see member contacts.

  - Stickers were then made with the well name, core run and core interval and placed on the box and the box lid.
  - Core was then photographed and measured for core recovery numbers and member interval depths
  - Member intervals were then logged
  - Once all the measuring, logging and photography was done, the boxes had the lids placed on them and were taped closed and stacked on the side table to make room for the next core run.
- 9 Metre or less core Intervals:
  - For core intervals that were 9 metres or less, the same process was used as was for 18-metre-long core intervals, except the empty top half of the core barrel was laid down and then the bottom half was brought to surface to recover the core.

For all core recovery, two core hands and two geologists were present, as well as the drilling consultant. One core hand held the core brake handle and the other broke the core. One geologist cleaned and boxed the core while the other watched for correct boxing (core ends being flipped top to bottom and vice versa) and placed lids on the boxes.

11.2 Core Transport & Security

After all core was recovered, logged, and securely packaged at site, core was transported to the Geoanalytical Laboratories of the Saskatchewan Research Council ("SRC") facility in Saskatoon, SK for further logging and assaying. The core boxes were signed off by the wellsite geologist, and signed for by the QP in Saskatoon, after inventory was taken. Once logging and assaying was complete, the core was then shipped from SRC and received for archival in the Subsurface Geological Laboratory of the Saskatchewan Geological Survey in Regina, SK.

11.3 Core Logging Procedures

All drill holes were both logged in detail by TMS at the SRC facility in Saskatoon. The entire cored section was split out into intervals of similar lithology, grade and crystal size. For each interval, a core description was recorded which included the rock name, color, crystal size and shape, carnallite content if present, insoluble content, and the type of contact at the base of the interval. For the intervals with high sylvite content, crystal size was recorded in detail instead of a visual average. For each halite and sylvite, 15 crystals were measured in a line along the core and an average was taken between the 15 crystals. This was done to provide a more detailed crystal size for the mining intervals.

Half-core samples were taken for assaying of all potash members, marker beds, the salt interbed between the Patience Lake and the Belle Plaine, as well as a shoulder above the Patience Lake, below the Belle Plaine, above and below the Esterhazy, as well as above and below the White Bear Marker. Samples were selected at breaks along changes in mineralogy – for example at clay seams, but a maximum length of 30 cm was used for each sample in all cases. An example of the core boxes is shown in Figure 14.

Figure 14: Split Core From V-1-14

11.4 SRC Assaying Procedures

11.4.1 Sample Preparation

All samples are kept in their original bags throughout all preparation procedures. If samples require drying, the samples are dried in their original bags. Rock samples are jaw crushed to 95% at -2mm and 100 to 200g sub sample split out using a riffler. The sub sample is then pulverized to 95% at -106 microns using a puck and ring grinding mill. All crushed “rejects” are vacuum sealed and returned to the original pails. A portion of the homogenized aliquot is transferred to a barcode labeled plastic snap top vial. Remaining ground material (pulp) is sealed in the pulp bag.

11.4.2 Soluble & Insoluble Digestion and ICP-OES Analysis

An aliquot of pulp is placed in a 100 mL volumetric flask with DI water; the volumetric flask is placed in a water bath. The sample is shaken and then vacuum filtered. The filters are dried in a low temperature oven then cooled in a desiccator and weighed. The soluble solution is then analyzed by a technique known as ICP-OES (inductively coupled plasma – optical emission spectrometry).

11.4.3 Moisture

An aliquot of sample is placed into a pre-weighed crucible and heated overnight. The sample is then reweighed and the moisture is calculated as weight % (wt. %). The detection limit is 0.1 wt. %.

11.4.4 Density

To complete bulk density analyses, samples are dried and weighed, then coated with an impermeable layer of wax and re-weighed. The samples are then weighed while submersed in water. All weights are entered into a database and the rock's density calculated for the sample. The temperature of the water is recorded at the time of all measurements and included in the calculations.

12 DATA VERIFICATION

The only available quality control procedures are those of the Saskatchewan Research Council ("SRC"). Further quality assurance / quality control (QA/QC) is covered in sub-section 12.2. SRC is ISO17025 certified for potash analysis and is independent of both Yancoal and Gensource.

No database was provided – all data came as a collection of Excel spreadsheets and other documentation. The review of the data here serves as a verification of the data, and was correlated across the various data types and documents (logs, assays, etc.).

12.1 SRC QA/QC

SRC Geoanalytical Laboratories has been providing high quality analysis to the exploration and mining industry since 1973. SRC Geoanalytical Laboratories management system operates in accordance with ISO/IEC 17025:2005 (CAN-P-4E), General Requirements for the Competence of Mineral Testing and Calibration Laboratories. The Management System, Caustic Fusion Method for the Determination of Diamonds, the Determination of U3O8 wt. % in Solid Samples and the Potash Method for Analysis of Major Water Soluble Components of Evaporites are accredited by the Standards Council of Canada (Scope of Accreditation #537).[4]

At SRC, specific quality control measures and data verification procedures applied include the preparation and analysis of standards, duplicates, and blanks. All glassware is calibrated per ISO/IEC 17025 requirements. Instruments are recalibrated after every 20 samples; multiple standards are analyzed before and after each recalibration. All quality control results must be within specified limits otherwise corrective action is taken.

12.2 Drilling QA/QC

12.2.1 Historic Drilling

The historic drill core was checked against the received assays for said core. TMS examined the cores of the 2 historic drill holes, SST-4 and SST-14 at the Subsurface Geological Laboratory of the Saskatchewan Geological Survey in Regina, SK, on April 11, 2016. Visual confirmation of the correlation of clay horizons with increased insoluble content, increased sylvite presence with higher grade intervals, and the contact of the Members with halite inter-beds corresponding with the drop in KCl content was obtained. Insofar as it is possible the correspondence between the core and the assays can be affirmed (See Figure 15). While assays were available for these wells in the government database, no information as to drilling, sampling or assaying procedure was available.

12.2.2 Yancoal Drilling Program

The QP examined the Yancoal drill core at Subsurface Geological Laboratory of the Saskatchewan Geological Survey in Regina, SK, and visual confirmation of drill logs received from Yancoal was

[4] https://www.src.sk.ca/labs/quality-assurance

made. Standards and repeats for the drilling were examined, plotted and found satisfactory (Fourie, 2016).

Assays for the 2012 Yancoal drill holes were made available to TMS for the previous NI 43-101 Technical Reports. The drilling of the 2012 holes was done under supervision of North Rim Exploration Ltd., and logged and sampled by North Rim personnel. Assaying was done at the SRC Facility in Saskatoon, Saskatchewan.

Figure 15: Wrapped Drill Core From Yancoal Tugaske 1-18-22-2 W3M

12.2.3 Standards & Repeats

Figure 16 and Figure 17 demonstrate the accuracy of the assaying through standard verification and repeat correlation, for the four wells drilled by Gensource between 2016 and 2019 (combined).

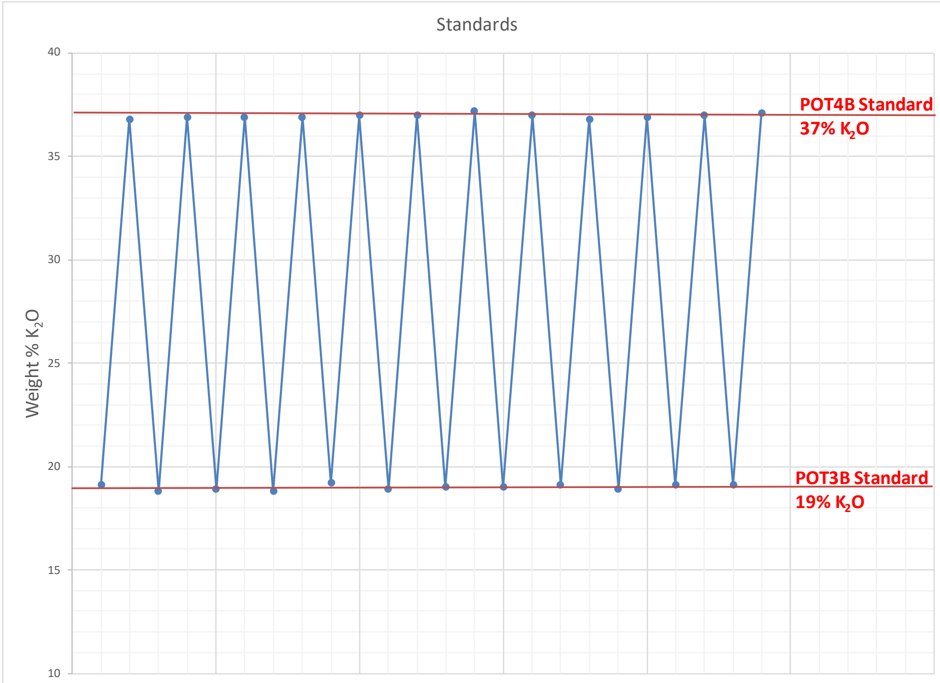

Figure 16: Standard Verification (4 Wells)

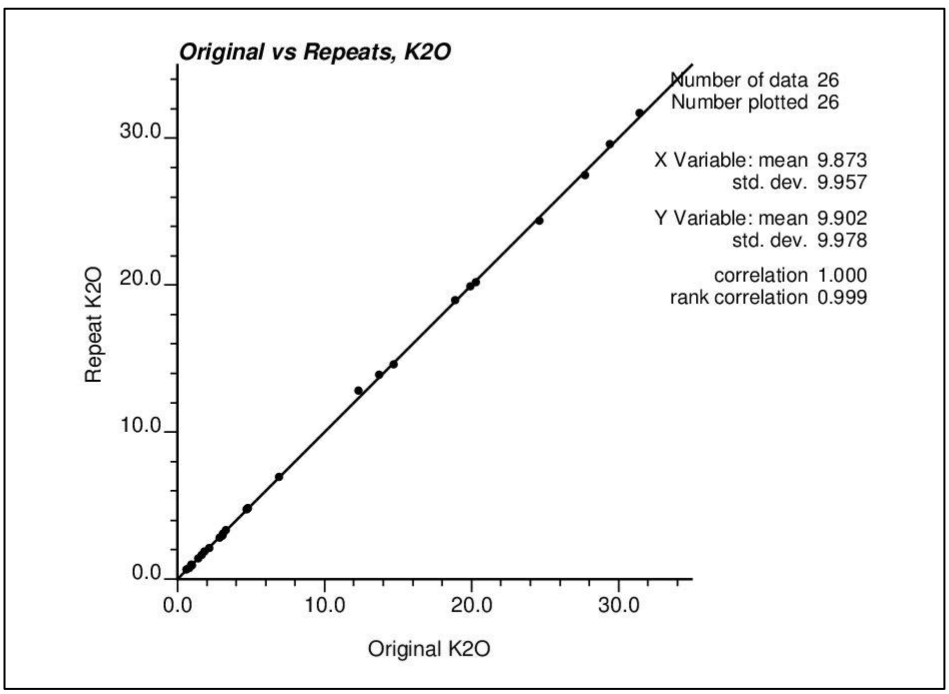

Figure 17: Correlation Of Original Assays With Repeats

Although both of the above figures indicate well established and reliable assaying techniques, the strong repeat-correlation in Figure 17 is highly commendable.

12.2.4 Adequacy of Quality Assurance/Quality Control Program

The geological QP is satisfied with the sample preparation and analytical procedures.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Overview

The process plant is designed to produce 250,000 tonnes per year of saleable Muriate of Potash (“MOP”), granular grade, potash product, pink or clear (white). Return brine from processing will be heated to 100 °C and pumped to the wellfield for re-injection into the underground horizontal mine caverns, for selective dissolution and recovery of potassium chloride (KCl), from the underground sylvinite ore deposit containing both KCl and sodium chloride (NaCl) minerals. Heating the return brine will increase the dissolving capacity for KCl.

The production of a MOP potash product (nominally 96% purity KCl) is accomplished by the removal of KCl from the recirculating brine stream by temperature reduction. Temperature reduction is primarily accomplished by a 6-stage mechanical cooling crystallization process. The brine stream continuously recirculates between the solution mining caverns and the process plant, picking up KCl in the caverns and crystallizing it into solid KCl in the process plant.

13.2 Process Design

The original process design for the Project was completed by process engineers at ENGCOMP Engineering Computing Professionals Inc. (“Engcomp”) and Innovare Technologies Ltd. (“Innovare”). Engcomp and Innovare relied on the crystallization design and fabrication expertise of Whiting Equipment Canada Inc. (“Whiting”) to develop the mass balance and process arrangement for the crystallization circuit. Whiting utilized proprietary modelling software for sizing pumping equipment, crystallizer vessels and piping diameter. The remainder of the “wet-end” of the process was modelled and managed by Innovare. The “dry-end” of the process, from brine de-watering up to the final KCl product loading, was modelled by Engcomp on METSIM. This tool simulates the expected KCl product particle size distribution at different stages during the process, allowing the proper sizing of all conveyances, chute work, screens, ducts, crusher and compactor. A heat and material balance model, developed by Innovare, incorporated Whiting’s scope of supply modelled parameters, as well as Engcomp’s, and also simulated the wellfield circulation and all auxiliary equipment (including steam and electrical generation, water cooling and chilling, etc.).

In November 2019, Gensource formally engaged K-UTEC AG Salt Technologies, Köppern GmbH & Co KG, and Ebner GmbH & Co KG (referred to as “KKE” for simplicity). Together, KKE represent world-class services in the area of potash and salt process design and equipment fabrication and supply. The main areas of expertise of the three companies within KKE, pertinent to the Tugaske Project, are as follows:

- K-UTEC AG Salt Technologies
  - Physical-chemistry, overall process development and engineering and, as far as necessary, practical bench scale tests

- Köppern GmbH & Co KG
  - Drying, compaction, granulation, and materials sizing (screening)
- Ebner GmbH & Co KG
  - Crystallization and evaporation

KKE took over from Engcomp and Innovare for the process design of the process plant for the Tugaske Project, and optimized certain parameters based on their collective expertise. These updates were made in collaboration with Engcomp and Innovare, and have resulted in the most current mass balance and process flow diagrams (PFDs) for the Project. The mass balance and PFDs of KKE were included in the Tugaske Project FEED Report (June, 2020). This information supports the development of equipment datasheets and specifications, necessary for procuring the equipment for the process plant.

Engcomp remains responsible for the development of the overall heat and mass balance for the Project, including supply of necessary utilities to the process plant. Engcomp will be responsible to integrate KKE's efforts into the overall process design for the Project.

More details on the potash recovery and processing methods, including a brief description by main process area (or circuit) are discussed in Section 17.

13.3 Testing

As discussed in Section 16, selective solution mining (or "selective dissolution") of potash consists of using an almost saturated salt (NaCl) brine, injected into a horizontal mining cavern, to selectively dissolve only the potash (KCl) from the targeted potash bed (sylvinite ore made up of both NaCl and KCl). Although selective dissolution of potash as the primary mining method has not yet been deployed in a commercial operation in Saskatchewan, it has been successfully implemented by Intrepid Potash at their Cane Creek mine in Moab, Utah (USA) for over 15 years. It should also be noted that selective dissolution of potash has been commercially leveraged in Saskatchewan for decades, but as a secondary mining method in solution mines using the conventional "Belle Plaine mining method" as the primary mining method. These mines begin mining with fresh water, dissolving both the NaCl and KCl in the sylvinite ore, and then complete the mining cycle within the cavern using selective dissolution with partially saturated brine. Such practices are utilized at Mosaic's Belle Plaine mine and the now-operational K+S Bethune mine in Saskatchewan.

Substantial data and knowledge exist regarding the chemistry and solubility of KCl and NaCl brines, and the application of selective dissolution of salts. To support the existing knowledge base of selective dissolution, dissolution test work using site specific core was performed to better understand the KCl dissolution rate and the relationship of KCl grade to permeability that will be created as the KCl crystals are selectively dissolved. To facilitate test work core samples of all three members of the Prairie Evaporite (which include samples from all sub-members, including the PLM 1) were collected during Gensource's exploration drilling program. These cores were examined, and representative cores were selected for testing.

Gensource contracted Hazen Research, Inc. ("Hazen") of Golden, Colorado, USA, an established and reputable testing and research facility, to conduct an experimental program to examine the dissolution rates of KCl and NaCl using half-core samples collected from Gensource's Property. The experimental program developed by Hazen, with guidance from Gensource, was structured into two phases. The Phase 1 work determined the KCl saturation concentration in synthetic solution mining brine at three temperatures: 60, 77.5, and 95°C. In Phase 2, a dissolution apparatus was assembled and used to measure KCl and NaCl dissolution rates using half-core samples provided by Gensource. Experiments were conducted at the same three temperatures as in Phase 1 for each sample. The dissolution data were then used to determine the mass-transfer coefficients. The resulting mass-transfer coefficients ranged between 1.3 × 10-6 m/s and 1.1 × 10-5 m/s based on the initial area of the half-core section. In general, the order of magnitude of the measured mass transfer coefficients appears reasonable based on modelled results and industry-available information. The detailed results of this study, completed in 2019, were included with the Tugaske Project Feasibility Report (Gensource, 2020).

The Project team is very comfortable with the existing industry data, in-house knowledge and expertise in the mining and processing techniques, test work completed specifically for the Project, and conservative assumptions and factors applied in the engineering and design. Included in the engineering work completed to-date, several process design features have been implemented to address and mitigate potential risks due to varying geology, brine concentrations, potential contaminants, impurities entering the process, etc. For instance, an over-design factor of 10 to 15 percent was incorporated into the plant process design (and therefore equipment sizing) to enable processing lower than expected KCl concentrations. Various purge streams have been incorporated in the design to mitigate brine contamination (most notably by $MgCl_2$). Additionally, CAPEX contingency funds are identified to accommodate increased capital cost that might be associated with design changes based on optimizations determined as part of detailed engineering.

14 MINERAL RESOURCE ESTIMATES

14.1 Geological Model

A geological model of the deposit was constructed in Maptek Vulcan. The model was constructed as a 3D integrated stratigraphic grid model, using all available drilling information. Grid cells 20 m x 20 m were utilized. All available overburden horizons were included in this model (from the First White Speckled Shale downwards). In addition, 3D seismic data was incorporated from 10 horizons (upper contacts, except for the Davidson Salt, for which both upper and lower contacts were available, as well as the underlying Winnipegosis Formation, for which both upper and lower contacts were available as well). The incorporation of the seismic data enabled the construction of a particularly robust geological model.

Interpolation for the stratigraphic model was by Inverse Distance Squared (IDS) methodology.

An example of thickness grid is shown in Figure 18, which was modelled in Vulcan and displayed in Arc Map.

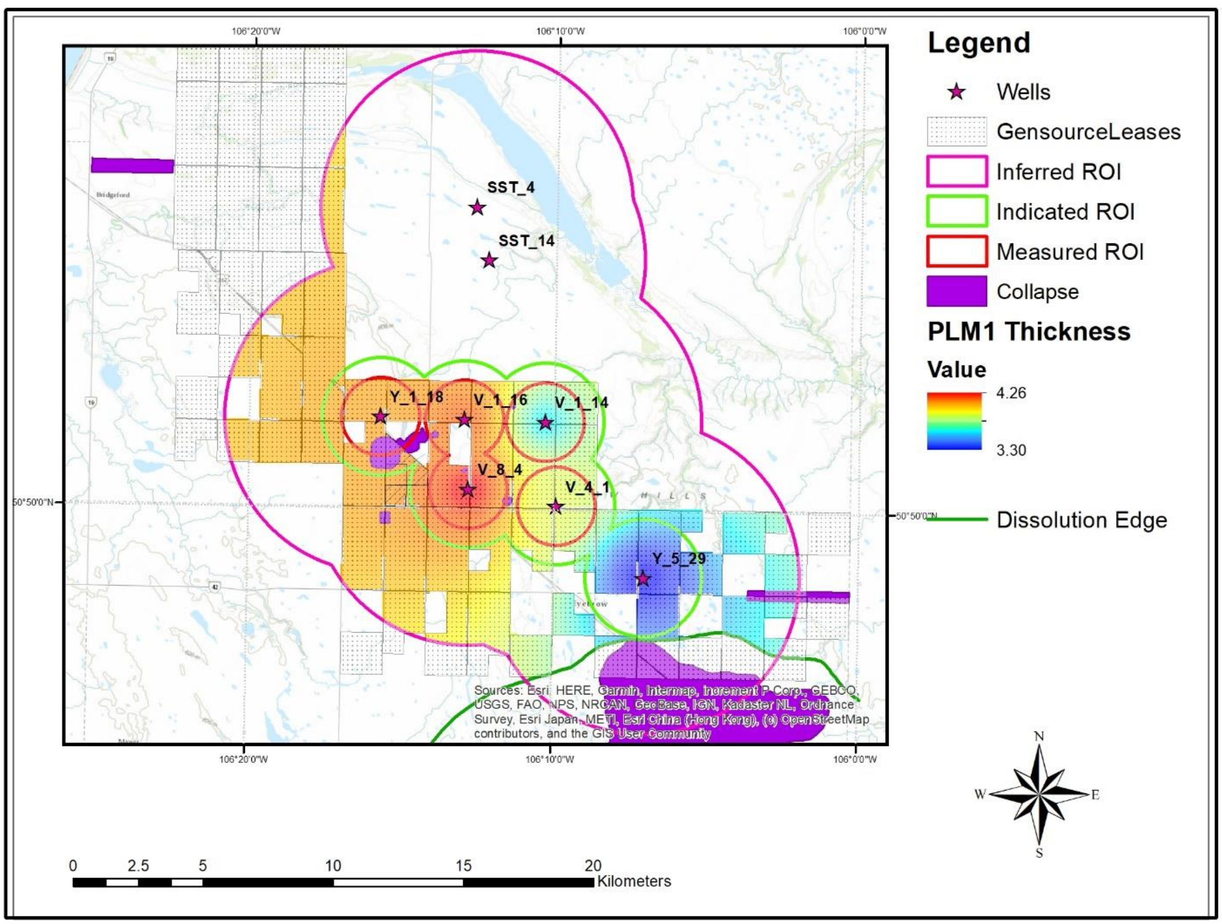

Figure 18: Vanguard Area Thickness Grid For The PLM 1 Sub-Member

14.2 Grade Interpolation & Assumptions

Grade interpolation was done using IDS methodology. Re-examining the previous variography, as well as the variography of subsequent drilling campaigns, the QP is of the opinion that IDS is a more appropriate interpolation method than kriging in this case.

A resultant KCl grade grid for the PLM 1 sub-member is shown in Figure 19. Comparative statistics of the seam composites and the model grade of the PLM 1 sub-member indicate the efficacy of the interpolation: the mean grade of the well composites is 41.42 % KCl, while the weighted mean grade of the entire Mineral Resource estimate is 41.51% KCl.

Given the low number of wells, as well as the relatively low variability within all members, grade capping was deemed unnecessary.

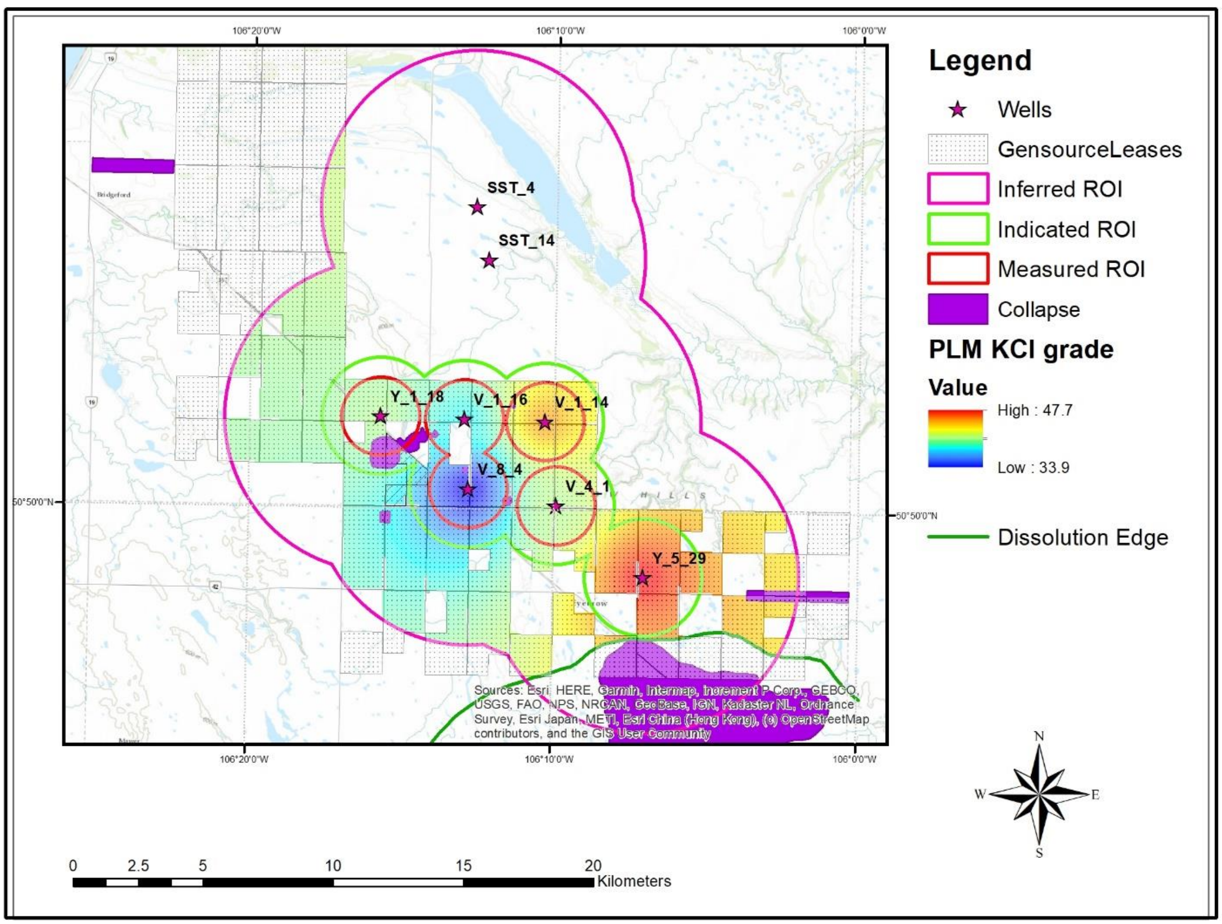

Figure 19: Vanguard Area KCl Grade Grid For The PLM 1 Sub-Member

The following assumptions were applied during the Mineral Resource estimation:

- K_2O cut off grade of 15% (which equates to 24.6% KCl).
- Maximum carnallite cut-off of 6%.
- No insoluble cut-off.

- No thickness cut-off.
- The following Radii-of-Influence (ROI) were used, consistent with previous NI 43-101 Technical Reports (for a more detailed discussion on classification, see sub-section 14.3):
  - Inferred ROI = 6,000 m
  - Indicated ROI = 2,250 m
  - Measured = 1,500 m. Note that for Y-5-29, no Measured was assigned, due to its isolated location. The potential Measured for Y-5-29 was reclassified as Indicated.
- The seismic survey indicated a relatively stable Prairie Evaporite Formation, with the notable exception of the dissolution edge in the south, and the thinning in the northwest, well outside the 6,000 m Inferred interpolation range. The former was removed from the model altogether.
- All other anomalies were also removed from the model, except for Winnipegosis Mounds where these did not necessarily indicate anomalous salt.
- A further deduction of 25% for unseen / unknown anomalies was made in the Inferred Mineral Resource category, and based on the results of the 3D seismic, this deduction was reduced to 10% for the Indicated Mineral Resource, and 5% for the Measured Mineral Resource.
- Recovery rates: Based on the preliminary horizontal cavern selective solution mining design assumptions, and typical potash extraction ratios at project depth, it is estimated that the overall percentage recovery of the targeted horizontal cavern potash zone will range between 30% to 50%. As such, Gensource proceeded with a "base case" of a 40% extraction, with 30% and 50% used for sensitivity analyses purposes (Fourie et al., 2016).
- The densities used are as reported in Table 18.

14.3 Radii of Influence (ROI)

There are substantially different methodologies and justifications for determining ROI, whereas the only consistent practice in literature is to employ Measured Mineral Resource in association with 3D seismic survey areas. Indicated Mineral Resource is commonly classified with or without 3D seismic, with varying ROI values depending on drillhole spacing and whether the radii are applied on the inside or outside of the drilling field.

Seismic surveys (2D or 3D) can indicate the presence of salt deposition, and with well understood and identified geological markers, the beds can be correlated to sylvinite horizons (including the continuity of this sedimentation). In addition, such surveys are indicative of some discrete distortion events, such as those previously described in Section 7. However, such surveys are of little use when determining the continuity of potash mineralisation, which is the main object of this study, and again a critical part of the Mineral Resource definitions as employed by the CIM Definition Standards (2014).

The 2018 and 2019 drilling campaigns confirmed the geological and grade described in the previous NI 43-101 Technical Reports. As outlined above, grade continuity as well as geological continuity are key factors in Mineral Resource classification. The 3D seismic program indicates geological continuity, while the drilling indicates strong grade continuity. Based on these subsequent results the continued use of the previous ROI definitions is utilised in this report.

14.3.1 Comparison to Established ROI Practices in Saskatchewan

A summary of traditional practices was provided by senior potash geologist Dave Mackintosh, in an article published by the CIM in August 2011, titled: "*Let the discussion begin: Are potash technical reports meeting the intent of NI 43-101?*". The following is an extract from this article:

"Comparisons may be drawn between the low seam complexity of potash and some coal deposits. The CIM Standards refers to the 1989 GSC Paper 88-21, "A Standardized Coal Resource/Reserve Reporting System for Canada," which states a "resource tonnage is always calculated on an in-place basis; that is, mining or other recovery factors are not applied.

A review of several technical reports shows that the "measured" category largely utilizes 3D seismic coverage and radius of influence (ROI) varying from 0.8 to 2.5 kilometres. The "indicated" ROI ranges from 1.6 to 2.5 kilometres, usually with 2D; however, the "inferred" category ranges from 3.2 to more than eight kilometres.

GSC Paper 88-21 suggests that for relatively flat lying or gently dipping (0 to 5 degree) deposits where drill hole data can be correlated with confidence, the distance from the nearest data point for resources classified as measured be <0.8 kilometres, indicated 0.8 to 1.6 kilometres, and inferred 1.6 to 4.8 kilometres. It must be remembered that these guides were put forth prior to the widespread use of 3D seismic programs." (Mackintosh, 2011)

Given the availability of 3D seismic programs in this instance, and the continued grade continuity as indicated by further drilling, the QP considers the classification outlined here as reasonable in the light of established practice.

14.4 Mineral Resource Estimate & Classification

The CIM Definition Standards (2014) defines Mineral Resource as:

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. With respect to the CIM Definition Standards (2014), definition of Mineral Resource, the phrase '*reasonable prospects for eventual economic extraction'* implies a judgement by the QP in respect of the technical and economic factors likely to influence the prospect of economic extraction. Therefore, the exact extraction method or specific mine plan does not constrain the QP from classifying Mineral Resource. Also, what is worth noting is that the interpretation of the word '*eventual*' in the context of the Mineral Resource definition may vary depending on the commodity or mineral involved. As further elaborated by the CIM

Definition Standards (2014): "*For example, some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years*." Again, this explanation further substantiates the classification of the deposit as Mineral Resource, where grades and tonnages of the potash could be extracted by several different means, at an indefinite point in the future.

Mineral Resource can subsequently be sub-divided, in order of increasing geological confidence, into: Inferred, Indicated, and Measured categories. Based on the criteria outlined in sub-section 14.2, Inferred, Indicated, and Measured Resource quantities were defined for the sub-members of the Patience Lake and Belle Plaine Members (Effective May 16, 2021). Due to the pervasive presence of carnallite, and lower KCl grades, no Mineral Resource was defined for the Esterhazy Member.

Each of the tables presented herein represent a sensitivity analysis of the sylvite tonnage based on a range of possible recovery rates. An assumed recovery rate of 40% is highlighted as the "base case". Note that the base unit for tonnages is listed as the Système international d'unités (SI) unit of tonnes (t) - with a measurement of 1,000 kg (or approximately 2,204.6 lbs) per tonne. Tonnes are sometimes referred to as "metric tons" to contrast with a "short ton" being equivalent to 2,000 lbs (or approximately 907.2 kg).

14.4.1 Inferred Mineral Resource

The CIM Definition Standards (2014) defines an Inferred Mineral Resource as:

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

Based on these guidelines, and the assumptions listed in sub-section 14.2, the following Inferred Mineral Resource was estimated, with the base case of an assumed 40% recovery from the sensitivity analysis (outlined in red) in Table 21. As shown, 230.3 Million tonnes of sylvite Mineral Resource have been classified in the Inferred category.

Table 21: Inferred Mineral Resource Estimate (With Base Case Highlighted)

INFERRED RESOURCE										
Member	Sub-Member	Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
		Weight %	Weight %	Weight %	metres	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Patience Lake Member	PLM1	40.9	0.6	6.2	3.9	586.6	439.9	54.0	72.0	90.0
	PLM2	28.0	0.7	8.7	4.4	441.4	331.0	27.8	37.0	46.3
	PLM3	40.7	0.7	9.4	2.5	369.4	277.1	33.8	45.0	56.3
	PLM4	41.4	0.7	9.2	1.7	203.2	152.4	18.9	25.2	31.5
Sub-Total		37.3	0.6	8.0	3.4	1,600.5	1,200.4	134.5	179.3	224.1
Belle Plaine Member	BPM1	45.6	4.6	1.1	1.3	44.0	33.0	4.5	6.0	7.5
	BPM2	25.6	3.0	2.1	1.8	0.3	0.2	0.0	0.0	0.0
	BPM3	32.0	4.8	4.7	1.2	34.2	25.6	2.5	3.3	4.1
	BPM4	27.9	4.2	3.6	1.9	166.7	125.0	10.5	13.9	17.4
	BPM5	34.0	5.1	2.1	1.7	93.0	69.8	7.1	9.5	11.9
	BPM6	42.4	4.0	4.2	1.3	118.3	88.8	11.3	15.1	18.8
	BPM7	29.3	0.7	4.2	0.3	36.3	27.3	2.4	3.2	4.0
Sub-Total		34.5	4.1	3.4	1.5	492.8	369.6	38.3	51.0	63.8
Total						2,093.4	1,570.0	172.7	230.3	287.9

14.4.2 Indicated Mineral Resource

The CIM Definition Standards (2014) defines an Indicated Mineral Resource as:

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions.

Based on these guidelines, and the assumptions listed in sub-section 14.2, the following Indicated Mineral Resource was estimated, with the base case of an assumed 40% recovery from the sensitivity analysis (outlined in red) in Table 22. As shown, 123.1 Million tonnes of sylvite Mineral Resource have been classified in the Indicated category.

Table 22: Indicated Mineral Resource Estimate (With Base Case Highlighted)

INDICATED RESOURCE										
Member	Sub-Member	Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
		Weight %	Weight %	Weight %	metres	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Patience Lake Member	PLM1	42.2	0.6	6.1	3.8	255.7	230.1	29.2	38.9	48.6
	PLM2	28.1	0.7	9.2	3.9	253.2	227.9	19.2	25.6	32.0
	PLM3	38.3	0.8	10.6	2.4	167.3	150.6	17.3	23.1	28.9
	PLM4	34.9	0.7	8.7	1.9	92.0	82.8	8.7	11.6	14.5
Sub-Total		35.9	0.7	8.4	3.3	768.3	691.4	74.4	99.2	123.9
Belle Plaine Member	BPM1	47.8	3.2	1.0	1.2	21.6	19.4	2.8	3.7	4.6
	BPM2	25.5	2.7	2.1	1.8	11.8	10.7	0.8	1.1	1.4
	BPM3	33.6	3.4	4.6	1.2	20.9	18.8	1.9	2.5	3.2
	BPM4	29.2	3.2	3.6	2.0	50.4	45.4	4.0	5.3	6.6
	BPM5	34.2	3.8	1.9	1.7	36.9	33.2	3.4	4.6	5.7
	BPM6	43.0	2.9	3.9	1.4	39.7	35.8	4.6	6.1	7.7
	BPM7	32.8	0.8	4.8	0.3	5.7	5.1	0.5	0.7	0.8
Sub-Total		35.6	3.2	3.1	1.6	187.1	168.3	18.0	24.0	30.0
Total						955.3	859.8	92.4	123.1	153.9

14.4.3 Measured Mineral Resource

The CIM Definition Standards (2014) defines a Measured Mineral Resource as:

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 Proven Mineral Reserve or to a Probable Mineral Reserve.

Based on these guidelines, and the assumptions listed in sub-section 14.2, the following Measured Mineral Resource was estimated, with the base case of an assumed 40% recovery from the sensitivity analysis (outlined in red) in Table 23. As shown, 166.0 Million tonnes of sylvite Mineral Resource have been classified in the Measured category.

Table 23: Measured Mineral Resource Estimate (With Base Case Highlighted)

MEASURED RESOURCE										
Member	Sub-Member	Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
		Weight %	Weight %	Weight %	metres	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Patience Lake Member	PLM1	40.1	0.7	6.4	4.0	260.1	247.1	29.7	39.6	49.5
	PLM2	27.6	0.5	6.8	4.9	273.2	259.5	21.5	28.7	35.8
	PLM3	40.5	0.6	9.9	2.7	177.6	168.7	20.5	27.3	34.1
	PLM4	35.6	0.7	10.3	2.0	132.5	125.9	13.4	17.9	22.4
Sub-Total		35.4	0.6	7.9	3.7	843.4	801.2	85.1	113.5	141.9
Belle Plaine Member	BPM1	50.3	2.0	0.8	1.1	44.0	41.8	6.3	8.4	10.5
	BPM2	26.3	1.8	2.0	2.0	28.9	27.5	2.2	2.9	3.6
	BPM3	33.9	2.4	4.8	1.2	48.6	46.2	4.7	6.3	7.8
	BPM4	29.7	2.1	3.6	1.9	97.1	92.2	8.2	11.0	13.7
	BPM5	35.0	2.4	1.9	1.6	76.2	72.4	7.6	10.1	12.7
	BPM6	43.3	2.0	3.8	1.5	76.5	72.7	9.4	12.6	15.7
	BPM7	37.2	0.8	5.3	0.4	9.1	8.6	1.0	1.3	1.6
Sub-Total		36.3	2.1	3.0	1.6	380.3	361.3	39.4	52.5	65.6
Total						1,223.8	1,162.6	124.5	166.0	207.5

14.4.4 Summary of Measured & Indicated Mineral Resource

A summary of the Measured and Indicated Mineral Resource is as follows:

Table 24: Measured & Indicated Mineral Resource Estimate Summary (With Base Case Highlighted)

Resource Category	Total KCl Grade*	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
	Weight %	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Measured	35.7	1,223.8	1,162.6	124.5	166.0	207.5
Indicated	35.8	955.3	859.8	92.4	123.1	153.9
Total	**35.7**	**2,179.1**	**2,022.4**	**216.9**	**289.1**	**361.4**

*Note: The Total KCl Grade is the weighted mean.

The Measured and Indicated Mineral Resource estimates are inclusive of those Mineral Resources modified to produce the Mineral Reserves – for which Modifying Factors are considered and applied. Mineral Reserves are discussed in more detail in Section 15.

15 MINERAL RESERVE ESTIMATES

The CIM Definition Standards (2014) defines a Mineral Reserve as:

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.

International definitions of Mineral Resources and Mineral Reserves, including the CIM Definition Standards (2014) provide for a direct relationship between Indicated Mineral Resource and Probable Mineral Reserve, and between Measured Mineral Resource and Proven Mineral Reserve. However, Measured Mineral Resource do not automatically convert to Proven Mineral Reserve and may become Probable Mineral Reserve based on the "Modifying Factors" (as shown in Figure 20 by the dashed line). In other words, the level of geoscientific confidence for Probable Mineral Reserve is comparable to that required for the determination of Indicated Mineral Resource, and the level of confidence for Proven Mineral Reserve is comparable to that required for the in-situ determination of Measured Mineral Resource.

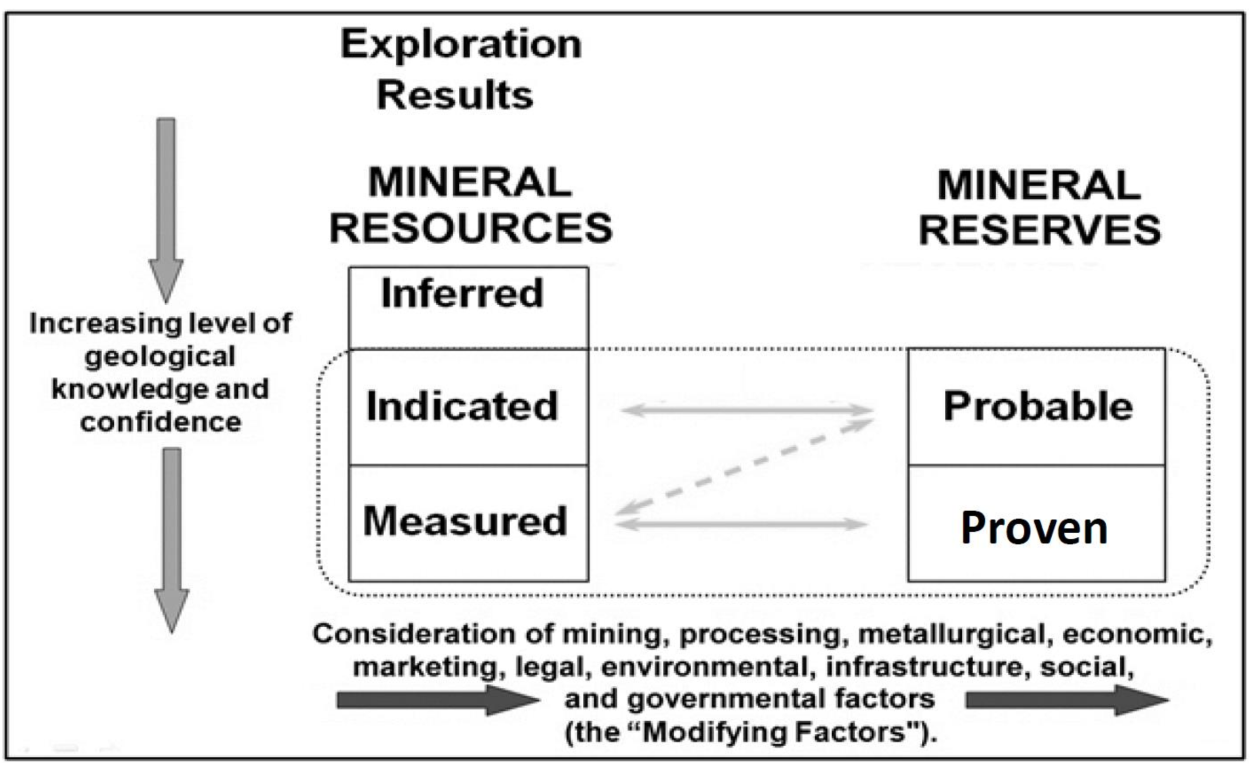

Figure 20: Relationship Between Mineral Resources & Mineral Reserves (CIM Definition Standards, 2014)

Because of the Modifying Factors, which are defined by the CIM Definition Standards (2014) as considerations used to convert Mineral Resource to Mineral Reserve, the tonnages of Mineral Reserves are smaller than those of Mineral Resources. The Modifying Factors applied to the Mineral Reserves estimated for the Tugaske Project include:

- the cavern extraction ratio;
- the cavern brine recovery percentage;
- the processing plant recovery (including downstream transportation losses);
- the potash content in the salable Muriate of Potash (MOP) product; and
- a tonnage reduction allowance for unknown anomalies.

The cavern extraction ratio accounts for the cavern volume actually dissolved and accounts for both the semi-elliptical shape of the caverns compared to the tabular shape of the seams as well as the pillars between caverns and between the laterals within the caverns. This factor is incorporated implicitly by estimating the volumes of the active portions of the caverns.

The assumed cavern brine recovery percentage ranges from 50% to 70% depending on the dip of the cavern – 50% for "high" dip angle, 60% for "intermediate" dip and 70% for "low" dip -- and is based on the ability to steer the horizontal well to keep it in the potash seam. Note that the terms "high," "intermediate," and "low" are subjective.

The processing plant recovery is given by the processing design as 97.2% including transportation losses and is included in the percentage recoveries discussed in the preceding paragraph. The KCl content in MOP produced from solution mining is typically 98.1% (62% K_2O).

To support the determination of Mineral Reserves, an initial mine plan was developed during the Vanguard One Feasibility Study, which has been subsequently updated as more geological data and information regarding the Tugaske Project have been obtained from additional exploration using exploration wells and a 3D seismic survey. The Life of Mine Plan, as presently configured and discussed in more detail in Section 16, consists of a layout of 36 triangular caverns within the radii of influence (ROIs) for Indicated Mineral Resource surrounding the exploration wells shown in Figure 13.

For conservatism, only continuous operation of the solution mining cavern, which is focused on the lowest sub-member of the Patience Lake ("PLM 1"), is being considered. Therefore, the Mineral Reserve represents only the base case for the feasibility economics. Since the initial mine plan focuses only on the PLM 1, only a small portion of the overall Mineral Resource is converted to Mineral Reserve for the base case. In reality, mining of the PLM 1 is likely to progress upwards over time into other sub-members of the Patience Lake; thus, increasing the potential amount of KCl tonnes recovered from each cavern.

The completion of the work done to date, as discussed in this report, confirms favorable economic results for the Tugaske Project and its selective solution mining and enhanced recovery process. As such, Measured and Indicated Mineral Resources defined were upgraded to Proven and Probable Mineral Reserve, respectively. The following estimated tonnages for Mineral Reserves have been updated from those disclosed in a previous NI 43-101 Technical Report (Fourie et al., 2018). Furthermore, these estimates have been updated based on a discrepancy found in the estimates reported in the March 2021 NI 43-101 Technical Report (Fourie et al., March 2021).

The following tables show the Proven and Probable Mineral Reserve estimated for the Tugaske Project (Effective May 16, 2021). Note that the base unit for tonnages is listed as the Système international d'unités (SI) unit of tonnes (t) - with a measurement of 1,000 kg (or approximately 2,204.6 lbs) per tonne. Tonnes are sometimes referred to as "metric tons" to contrast with a "short ton" being equivalent to 2,000 lbs (or approximately 907.2 kg). In addition, Mineral Reserves are defined in terms of saleable Muriate of Potash (MOP), which is typically 98.1% KCl in the case of granular MOP produced from solution mining.

15.1 Proven Mineral Reserve

The CIM Definition Standards (2014) define Proven Mineral Reserve as:

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

Table 25: PLM 1 Proven Mineral Reserve Estimate

No. of Caverns	Mean Cavern Thickness (m)	KCl Grade (wt. %)	Carnallite Grade (wt. %)	Insolubles Grade (wt. %)	Cavern Volume (Mm^3)	Cavern Recovery (%)	Reduction for Unknown Anomalies	Recoverable Cavern Volume (Mm^3)	Sylvinite Tonnage (Mt)	MOP Tonnage (Mt)
19	3.9	42.0	0.71	6.4	15.7	60.3	0.95	9.0	18.7	7.6

15.2 Probable Mineral Reserve

The CIM Definition Standards (2014) define Probable Mineral Reserve as:

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.

Table 26: PLM 1 Probable Mineral Reserve Estimate

No. of Caverns	Mean Cavern Thickness (m)	KCl Grade (wt. %)	Carnallite Grade (wt. %)	Insolubles Grade (wt. %)	Cavern Volume (Mm^3)	Cavern Recovery (%)	Reduction for Unknown Anomalies	Recoverable Cavern Volume (Mm^3)	Sylvinite Tonnage (Mt)	MOP Tonnage (Mt)
16	3.9	42.6	0.69	6.3	13.1	63.7	0.91	7.6	15.3	6.5

15.3 Summary of Mineral Reserves

A summary of the Proven and Probable Mineral Reserve estimate, as quantified for the Tugaske Project, is as follows.

Table 27: PLM 1 Proven & Probable Mineral Reserve Estimate Summary

Reserve Category	Mean Cavern Thickness (m)	KCl Grade (wt. %)	Carnallite Grade (wt. %)	Insolubles Grade (wt. %)	Cavern Volume (Mm3)	Cavern Recovery (%)	Reduction for Unknown Anomalies	Recoverable Cavern Volume (Mm3)	Sylvinite Tonnage (Mt)	MOP Tonnage (Mt)
Proven	3.9	42.0	0.71	6.4	15.7	60.3	0.95	9.0	18.7	7.6
Probable	3.9	42.6	0.69	6.3	13.1	63.7	0.91	7.6	15.3	6.5
Total*					**28.7**			**16.5**	**34.0**	**14.1**
Weighted Mean	**3.9**	**42.3**	**0.70**	**6.4**		**61.8**	**0.93**			

*Note: Discrepancies between the sum of Proven and Probable and the listed Total are due to rounding.

16 MINING METHODS

16.1 Overview

Selective solution mining (or "selective dissolution") of potash consists of using a brine solution mostly consisting of salt (NaCl), and a minor amount of sylvite or potash (KCl), to selectively dissolve the KCl from a potash bed within a solution mining cavern. The selective dissolution process is currently being utilized by Mosaic for secondary recovery of potash from vertical caverns at their Belle Plaine facility in Saskatchewan, by K+S at their Bethune Mine, and by Intrepid Potash for primary recovery of potash in horizontal caverns at their Cane Creek Mine in Moab, Utah.

Because only KCl crystals are dissolved by the NaCl brine, the KCl mineral grade in the potash bed must be high enough to provide a continuous KCl crystal to KCl crystal flow path within the potash bed. The goal of the selective dissolution process is to dissolve the KCl without dissolving additional NaCl or causing precipitation of NaCl on cavern surfaces.

Based on geologic data from the six exploration boreholes and 3D seismic survey within KL 245, the Tugaske Project is targeting, as a base case, a continuous potash zone ("sub-member") at the base of the Patience Lake member, which is being referred to as the "PLM 1". The PLM 1 averages 3.9 metres thick, with an average potash grade of 43% KCl, across the mining area.

Analysis of the relative economics of a range of approaches for the selective dissolution at the Project indicated that the most capital-efficient approach is a multi-lateral horizontal cavern arrangement consisting of a single (1) horizontal injection well that connects to seven (7) horizontal lateral extraction wells (thus forming one cavern system) that are drilled along the base of the target potash bed in a "fan-style" configuration as shown in Figure 21. This method is similar to a current solution mining method that has been utilized by Intrepid Potash at their Cane Creek Mine in Moab, Utah since 2003 (Ryan, 2012), and is described in more detail in subsequent sub-sections.

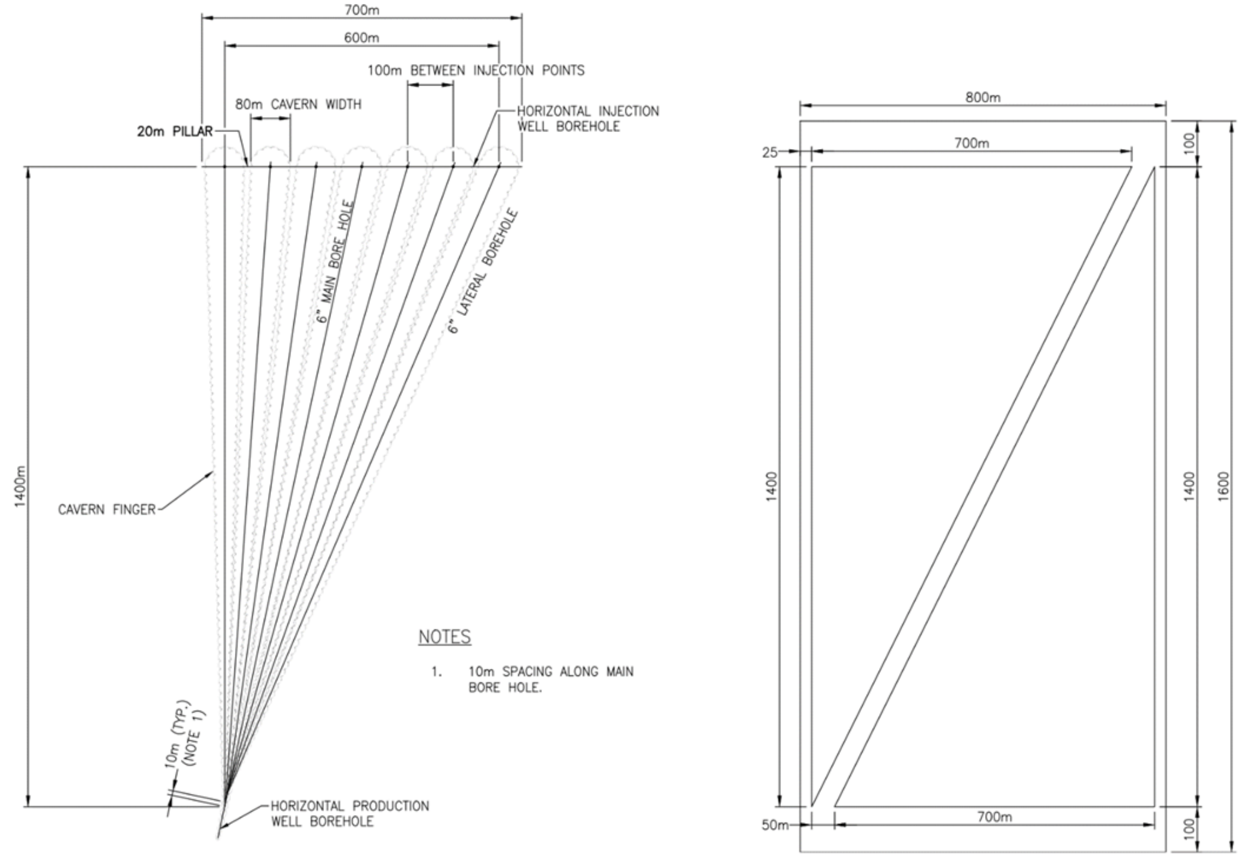

Figure 21: Cavern Configuration

To attain the design production rate of 250,000 tonnes of KCl product per year (t/y) of saleable MOP, six (6) solution mining caverns are required. On this basis, each cavern will produce about 45,000 t/y of saleable MOP and has a design cavern life of approximately 12 years within the PLM 1 sub-member only.

16.2 Cavern Dimensions & Layout

The multi-lateral horizontal cavern selective mining arrangement is designed to fit within a typical Saskatchewan land section (i.e., 1.61 km by 1.61 km, or 1 mile by 1 mile). The layout provides a 100-m-wide pillar along two edges of the section, to protect the solution mining wells and to minimize surface subsidence above the pillar.

As shown in Figure 21, the solution mining cavern consists of a single (1) 600-m-long horizontal well that intersects seven (7) horizontal lateral wells in a fan-style pattern with lengths ranging from 1,390m to 1,483 m. For area planning purposes, a solution mining cavern can be represented by an 800-m by 1,600-m right triangle. More details on the layout of the initial mining area, and solution mining caverns, are presented in sub-section 16.6, while specific design parameters for the caverns are shown in Table 28.

16.3 Cavern Production & Cavern Life

The flow through each of the 7 cavern laterals is to be equal so that growth of the caverns on the laterals proceeds evenly. This will be accomplished by incorporating flow control measures at the injection points for each lateral.

Table 28: Horizontal Cavern Assumptions

Parameter	Unit	Value
Average Lateral Cavern length	m	1,363
Number of Lateral Caverns	each	7
MOP KCl Percentage	%	98.1
Cavern Width Minimum	m	0
Maximum Cavern Width	m	80
Cavern Height	m	3.97
% KCl	%	43.0
Borehole size	mm	158.75
Lateral Cavern Cross Section Shape		Semi-elliptical
Lateral Cavern Planar Area		Triangular
Average Cavern Recovery	%	59.2
KCl Sylvinite Density	Tonnes/m^3	2.08
Individual Lateral Cavern Volume	m^3	138,895
Injection Point Cone Volume	m^3	3,350
Total Recoverable Cavern Volume	m^3	589,463
Reduction for Unknown Anomalies	%	93
MOP Tonnes per Cavern	Tonnes	499,807
Average Dissolution Rate Prod Factor	Tonnes/Year/m^2	12.3
Selective Tonnes per Year per Lateral	Tonnes/yr/Lateral	6,429
Cavern life	Years	12.1
Tonnes MOP per cavern per year	Tonnes	45,000
Caverns Systems required	each	6
Production Capacity	Tonnes	270,000
% of Required	%	105%

Based on the cavern plan dimensions discussed in the previous Section, the following conservative factors were applied to develop the cavern production and resulting cavern life estimates. Using an elliptical cavern with an average height of 3.9 m and maximum width of 80 m per lateral and an average potash grade of 43% KCl within each horizontal cavern with an average cavern brine recovery factor of about 60% (based on dip of the PLM 1 floor, as discussed in Section 15 and Section 16.6), it is estimated that each solution mining cavern will produce an average of about 499,000 tonnes. The planned cavern production is 45,000 t/y per cavern so that each cavern has an estimated operating life of approximately 12.1 years.

16.4 Injection & Production Well Drilling

Using directional drilling techniques, multiple wells can be drilled from a single drilling pad. Each well will contain a 406.4-millimetre (mm) (16 inches) conductor casing that will be installed before drilling is initiated. The drill pad is temporary; hence drill mats will be used for the central portion of the drill pad and will be surrounded by gravel. Each well pad will be finished upon drilling completion, for long-term access and operations of the wells.

Each solution mining cavern will be composed of a directionally drilled injection well and a directionally drilled multi-lateral production well. Solution mining will be initiated at the intersection of the injection well and each lateral of the production well. The drilling procedures for both wells will be very similar, and is detailed in the Tugaske Project Feasibility Report (Gensource, 2020).

With a single drilling rig, drilling for the initial six (6) caverns will require approximately 12 months to complete. Upon completion of the initial drilling phase, drilling activities will be suspended until extraction from these caverns nears completion in approximately 12 years.

16.5 Cavern Development

Upon completion of the drilling operation, the caverns could be required to remain inactive for up to six (6) months before the plant operations can be initiated. To minimize solution mining start-up difficulties, preliminary plans include 30 days circulating unheated, fresh water in each solution mining cavern to flush the drilling muds and slightly enlarge the individual lateral borehole diameters. It is planned to inject unheated fresh water down each lateral for a period of 3 to 4 days. The resulting production brine will then be injected into the potash disposal well. Upon completion of each cavern development, it is planned to pressurize each solution mining cavern to a surface pressure of about 69 bar (6.9 MPa or 1,000 psi).

A service rig and the necessary temporary equipment, services, and tie-ins may be required to support cavern development, because all of the necessary permanent project infrastructure (i.e., pipelines, pumps, tanks, etc.) may not be in place when cavern development is occurring. As such, allowances for these items have been included in total project capital cost estimate.

A detailed solution mining cavern start-up procedure will be created as part of the cavern drilling program.

16.6 Well Field Initial Solution Mining Area & Caverns

The initial solution mining area in Gensource's KL 245 lease was selected for the Tugaske Project based upon exploration well confidence, 3D seismic survey results, Gensource Potash controlled mineral rights, and necessary setbacks. The initial solution mining area is bounded on the north from the northern lease line, on the east from the eastern lease line, on the west by the eastern boundary of unleased freehold mineral rights, and on the south by the southern boundaries of Sections 1 through 3 in Township 22, Range 2 West of the Third Meridian – all of which fall within the bounds of the 3D seismic survey. Although this initial area is entirely contained with the Rural

Municipality (R.M.) of Huron No.223, Lease KL 245 also includes both Crown and acquired Freehold mineral rights to the south and east of the initial mining area – extending into the R.M. of Eyebrow No.193.

The initial solution mining area was divided into 18 rectangles approximately 800 m by 1,600 m in size. The 800 m by 1,600 m rectangles were bisected to create two 800 m by 1,600 m triangles within each rectangle. A mining cavern will be arranged within each 800 m by 1,600 m triangle. Figure 22 shows the triangle locations within the initial solution mining area, which is marked by the black square. The contours represent the KCl grades.

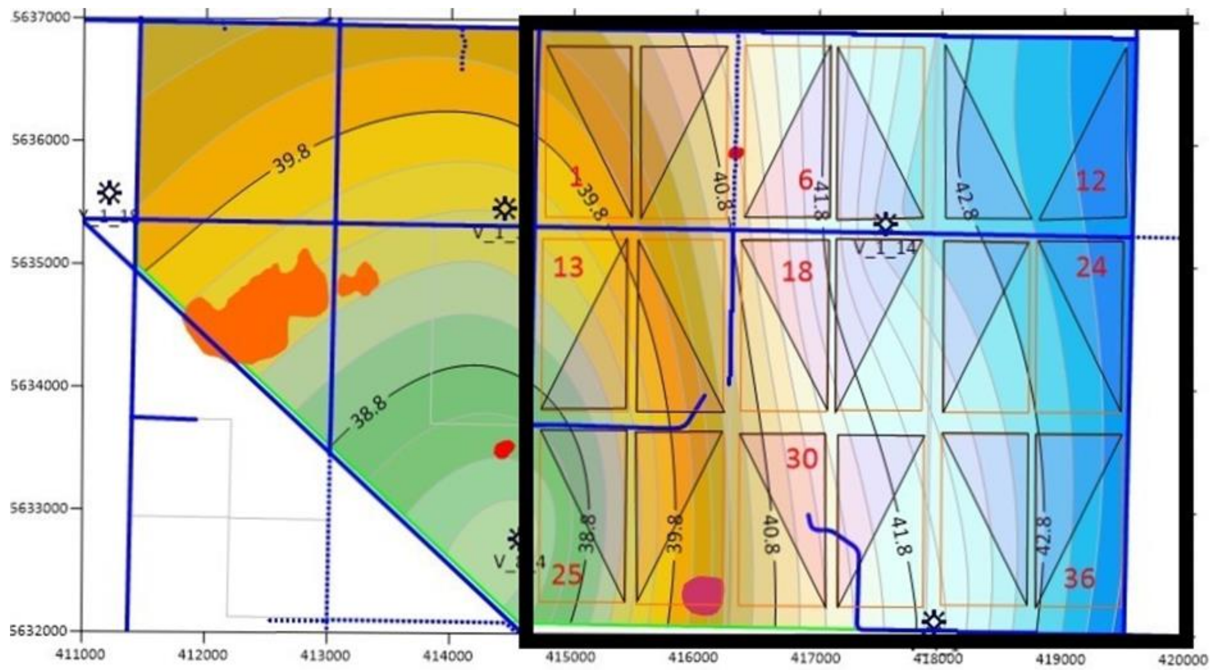

Figure 22: Initial Solution Mining Area

Figure 23 shows the caverns together with the Radii of influence (ROI) for Proven (inner circle, green in colour) and Probable (outer circle, yellow in colour) Mineral Reserves. The background shows the area covered by 3D seismic survey, and the contours represent the elevation of the floor of the PLM 1.

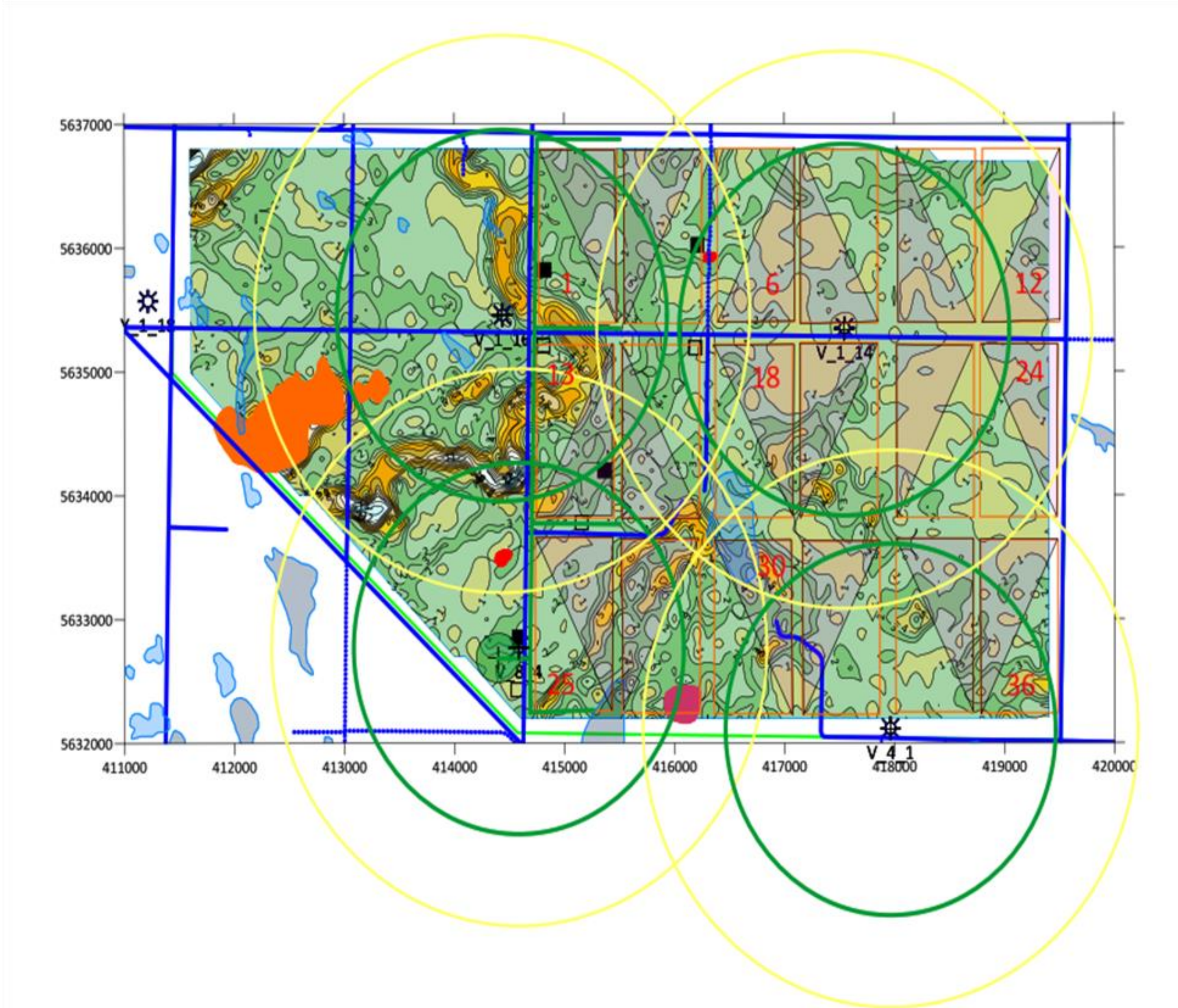

Figure 23: Life of Mine Plan (Showing Limits of Proven and Probable Mineral Reserves)

A maximum cavern dissolution radius of 40 meters (80 m cavern width) and a maximum cavern height of the PLM 1 thickness were estimated for each cavern lateral for the continuous production phase based upon experience from similar solution mining caverns. Cavern brine recovery factors ranging from 50% to 70% were estimated based on the apparent dip of the floor of the caverns and the difficulty of maintaining the path of the horizontal borehole along the NaCl/KCl contact at the base of Patience Lake sub-member PLM 1. Utilizing an average cavern height and average KCl grade, and assuming 4 solution mining caverns per Saskatchewan land section, the continuous solution mining phase is estimated to last over 12 years and result in the overall mining recovery of the PLM 1 sub-member of about 23%. Gensource anticipates that the batch mining phase will last an additional 5 to 15 years. For the combined continuous production and batch production phases, the overall mining recovery of the PLM 1 sub-member is estimated to approximately 30%. As site-specific solution mining experience in the Tugaske Area is gained, the mine plan will be re-evaluated and updated as appropriate, with strategies developed for improving the recovered tonnes per cavern.

Table 29 tabulates the estimated MOP tonnage that can be solution mined from each cavern.

Table 29: Initial Solution Mining Cavern MOP Tonnage Estimates

Cavern Number	Thickness (m)	KCl (wt %)	Average Lateral Length (m)	Maximum Cavern Lateral Width (m)	Volume per Lateral (m^3)	Injection Cone Volume (m^3)	# of Laterals	Total Cavern Volume (m^3)	Bottom of PLM1 Dip Magnitude	Estimated Cavern Recovery (%)	Unknown Geological Anomaly Factor	Recoverable Cavern Sylvinite Volume (m^3)	Tonnage Factor (Tonnes /m^3)	Recoverable Sylvinite Tonnage, Million Tonnes (Mt)	Proven MOP Reserves, Million Tonnes (Mt)	Probable MOP Reserves, Million Tonnes (Mt)
1	4.12	39.32	1,363	80	117,647	6,834	7	871,365	High	50	0.95	413,898	2.08	0.86	0.34	
2	4.06	39.91	1,363	80	115,933	6,735	7	858,675	Low	70	0.95	571,019	2.08	1.19	0.47	
3	3.99	40.76	1,363	80	113,934	6,618	7	843,871	Low	70	0.91	537,546	2.08	1.12		0.45
4	3.93	41.27	1,363	80	112,221	6,519	7	831,181	Low	70	0.91	529,462	2.08	1.10		0.45
5	3.83	42.65	1,363	80	109,366	6,353	7	810,031	Low	70	0.95	538,671	2.08	1.12	0.47	
6	3.73	43.67	1,363	80	106,510	6,187	7	788,882	Low	70	0.95	524,606	2.08	1.09	0.47	
7	3.67	44.50	1,363	80	104,797	6,088	7	776,192	Low	70	0.95	516,167	2.08	1.07	0.47	
8	3.72	43.91	1,363	80	106,225	6,171	7	786,767	Low	70	0.95	523,200	2.08	1.09	0.47	
9	3.69	44.15	1,363	80	105,368	6,121	7	780,422	Moderate	60	0.95	444,840	2.08	0.93	0.41	
10	3.74	43.55	1,363	80	106,796	6,204	7	790,996	Moderate	60	0.91	431,884	2.08	0.90		0.39
11	3.77	43.20	1,363	80	107,652	6,254	7	797,341	Low	70	0.91	507,906	2.08	1.06		0.45
12	3.77	43.17	1,363	80	107,652	6,254	7	797,341	Low	70	0.91	507,906	2.08	1.06		0.45
13	4.12	38.85	1,363	80	117,647	6,834	7	871,365	High	50	0.95	413,898	2.08	0.86	0.33	
14	4.09	38.42	1,363	80	116,790	6,784	7	865,020	Moderate	60	0.95	493,062	2.08	1.03	0.39	
15	4.02	39.44	1,363	80	114,791	6,668	7	850,215	Moderate	60	0.91	464,218	2.08	0.97		0.38
16	3.95	40.66	1,363	80	112,792	6,552	7	835,411	Moderate	60	0.91	456,134	2.08	0.95		0.38
17	3.86	41.65	1,363	80	110,222	6,403	7	816,376	Low	70	0.91	520,032	2.08	1.08		0.45
18	3.76	43.21	1,363	80	107,367	6,237	7	795,226	Moderate	60	0.95	453,279	2.08	0.94	0.40	
19	3.68	44.18	1,363	80	105,082	6,104	7	778,307	Moderate	60	0.95	443,635	2.08	0.92	0.40	
20	3.75	43.22	1,363	80	107,081	6,220	7	793,111	High	50	0.95	376,728	2.08	0.78	0.34	
21	3.71	43.82	1,363	80	105,939	6,154	7	784,652	Low	70	0.95	521,793	2.08	1.09	0.47	
22	3.77	42.90	1,363	80	107,652	6,254	7	797,341	Low	70	0.91	507,906	2.08	1.06		0.45
23	3.78	42.68	1,363	80	107,938	6,270	7	799,456	Low	70	0.91	509,254	2.08	1.06		0.45
24	3.77	42.93	1,363	80	107,652	6,254	7	797,341	Low	70	0.91	507,906	2.08	1.06		0.45
25	4.23	34.63	1,363	80	120,788	7,017	7	894,630	High	50	0.95	424,949	2.08	0.88	0.30	
26	4.18	35.75	1,363	80	119,360	6,934	7	884,055	High	50	0.95	419,926	2.08	0.87	0.31	
27	4.09	37.48	1,363	80	116,790	6,784	7	865,020	High	50	0.95	410,885	2.08	0.85	0.32	
28	4.06	37.94	1,363	80	115,933	6,735	7	858,675	Moderate	60	---		2.08	0.00	0.00	
29	3.95	39.77	1,363	80	112,792	6,552	7	835,411	High	50	0.91	380,112	2.08	0.79		0.31
30	3.92	40.45	1,363	80	111,936	6,502	7	829,066	High	50	0.91	377,225	2.08	0.78		0.31
31	3.87	41.09	1,363	80	110,508	6,419	7	818,491	Low	70	0.95	544,297	2.08	1.13	0.46	
32	3.87	40.97	1,363	80	110,508	6,419	7	818,491	Low	70	0.95	544,297	2.08	1.13	0.46	
33	3.86	41.09	1,363	80	110,222	6,403	7	816,376	High	50	0.95	387,779	2.08	0.81	0.33	
34	3.85	41.46	1,363	80	109,937	6,386	7	814,261	Moderate	60	0.91	444,587	2.08	0.92		0.38
35	3.83	41.64	1,363	80	109,366	6,353	7	810,031	Low	70	0.91	515,990	2.08	1.07		0.44
36	3.83	41.58	1,363	80	109,366	6,353	7	810,031	High	50	0.91	368,564	2.08	0.77		0.32
														Totals	7.63	6.52

16.7 Estimated Production Schedule

Based on experience at similar potash solution mining operations, Gensource's technical team anticipates that full KCl production capacity of 250,000 t/y of MOP will be achieved by the end of year 2. Table 30 shows the expected production schedule with production capacity in tonnes of saleable MOP per year (t/y).

Table 30: Saleable MOP Production Capacity By Year

Year	Caverns	Average (t/y) per Cavern	Average Production Capacity (t/y)	% of Full Capacity
1	6	11,250	67,500	25%
2	6	33,750	202,500	75%
3-12	6	45,000	270,000	100%

Gensource's technical team conservatively estimates that the second set of solution mining caverns will be required at about year 12, assuming that the first set of caverns is ultimately limited to only the PLM 1 sub-member. Thus, expenditure for developing a new set of caverns has been included in the project economics every 12 years as part of the operating cost estimate and economic model. Each successive set of caverns will experience a production ramp up similar to the initial caverns. The team considers it reasonable the initial cavern life can be extended beyond 12 years, and/or transitioned to batch production to supplement production from the future caverns and minimize production losses during the transition.

16.8 Dissolution Testing

Gensource contracted Hazen Research, Inc. ("Hazen") of Golden, Colorado, USA, an established and reputable testing and research facility, to conduct an experimental program to examine the dissolution rates of KCl and NaCl using half-core samples collected from Gensource's Property. A summary of this testing is discussed in sub-section 13.3.

16.9 Cavern Temperature Modelling

Gensource engaged AnBound Energy Inc. ("AnBound") of Calgary, Alberta, Canada, a reservoir engineering consulting company, to build a reservoir model and perform a simulation of Gensource's solution mining of potash by selective dissolution. The main objective of this project was two-fold. First, AnBound evaluated whether the STARS reservoir simulator software/program was capable of modelling the main physical mechanisms taking place during the selective dissolution of potash, as this was the first time the software is used for this specific purpose. The STARS software was developed by the Computer Modelling Group (CMG), who is a leading reservoir simulation software provider for the oil and gas industry. Secondly, the model provided a "base case" that could be used to move forward to the next phases of the project. During the project, AnBound worked closely with Gensource's technical experts in order to fine tune the data input and verify the quality of the results.

After initial setup, refinement, simulation, and analysis of the selective solution mining modelling project, AnBound made the following conclusions:

- Results from the base case (for both temperature of the system and potash production values) were well aligned with the design from the Vanguard One Feasibility Study, and on that basis, the input parameters used seem to have realistic values.
- The simulation model suggested that an injection temperature of 80 °C may be sufficient to achieve the cumulative production results estimated for the Vanguard One Feasibility Study. That is, there may be a production upside when injecting at the Feasibility Study base case of 99 °C; or alternatively, there may be cost savings by injection at 80 °C.
- The cavern growth (shape and volume) exhibited a "tear drop" shape, which is consistent with the expectation of the technical experts based on the cavern arrangement/design and dissolution process.

The temperature model did not incorporate the dynamic effect of dissolution, and the subsequent impact on the temperature gradient across the cavern/wellbore. Instead, a static value was used in the modelling and analysis. The team is contemplating a further modelling project, where the results from the dissolution testing (i.e., mass-transfer coefficient) can be incorporated into the temperature modelling, to better represent the dynamic nature of the dissolution process. For the time being, Gensource relies upon conservative values and assumptions similar to those used as the base case for the Vanguard One Feasibility Study.

16.10 Subsidence

As selective mining extracts only the KCl, approximately 57% of the original potash bed will be left in place (i.e., NaCl). Thus, the maximum height of a possible collapse (chimney failure) would be 43% of the cavern height, or 1.7 m, at the roof of the cavern in the center of the subsidence bowl for an average cavern thickness of 3.9 m. This estimate assumes that the brine has been completely removed and also does not account for the volume increase in overlying rock that could collapse into the void and reduce downward movement. In addition, the 1,500-m depth of the caverns significantly exceeds the maximum depth of 50 m at which such subsidence typically occurs (Whittaker and Reddish 1989). Moreover, this estimate ignores the possibility of bridging of competent rock masses, such as the overlying Dawson Bay Formation, between the workings and the surface.

Golder Associates Ltd. estimated surface subsidence of approximately 0.6 m over several hundred years as part of the Vanguard One Feasibility Study. This value represents 15% of the total height of the cavern, which is consistent with the maximum percentage of total height predicted for subsidence models of taller vertical caverns at other properties in Saskatchewan. The edge of the modelled subsidence bowl (i.e., location where subsidence is zero) is 1,600 m from the edge of the caverns. The gradient of surface subsidence would be gradual, with slightly steeper slopes near the mine boundary. The expected maximum gradient is approximately 0.26 metres per kilometre (m/km). This gradient represents a strain of 2.6E-4, which is an order of magnitude smaller than the strain required to cause major damage to buildings, bridges, roads, pipelines and farm fields (Singh, 1992) Consequently, the impacts of subsidence caused by selective solution mining were determined to have negligible residual effects.

16.11 Rock Mechanics

The selective mining multi-lateral horizontal cavern design does not use an oil blanket, so that a stable cavern roof is not a design requirement. Indeed, potash solution mining has continued after significant roof falls at Mosaic's solution mining operations in Saskatchewan (and formerly in Michigan) using a method Mosaic calls "rubble mining."

The vertical portions of the cavern wells are designed to be drilled within a protected pillar, and the casings will not be subject to significant cavern stresses associated with salt creep. In addition, due to the geometry of the horizontal caverns, and the fact that they are brine-filled, creep testing results are considered to have very limited influence on selective mining and hence, creep tests have not performed to date for the Project. Creep tests have been performed and reported by a number of other potash projects targeting the same potash members and results from different sites do not vary much if grain sizes are similar.

To support increased confidence in the mining approach and mitigate the risk associated with potential rock creep, Gensource plans to conduct a preliminary geomechanical study (the study) to evaluate impacts from the extraction of sylvite in the cavern. This study includes: 1) assessment of cavern stability; 2) assessment of well integrity; and 3) estimation of surface subsidence. Gensource will develop a risk assessment, and if necessary, any proposed mitigation strategies following the geomechanical study.

16.12 Batch Operations

The selective solution mining at the Tugaske Project is envisaged to have two distinct cavern production phases. The first phase is continuous operation of the solution mining cavern. The second phase is a batch operation of the solution mining cavern until production from the solution mining cavern is no longer economic.

When a "Belle Plaine method" style vertical solution mining cavern can no longer sustain an acceptable brine grade, the cavern operating strategy is changed to batch operation mode. In batch mode, the cavern is placed on standby for an extended period to allow the brine KCl grade to approach saturation at the cavern temperature. After sufficient time, the brine within the cavern is harvested and processed until the cavern brine grade diminishes to a predetermined minimum grade. At this point, the cavern is placed on standby and the process is repeated.

As such, Gensource's technical team consider it likely that the selective solution mining multi-lateral horizontal caverns will have a batch operations mode that will increase the total tonnes of KCl produced by the cavern by 20 to 100%.

16.13 Potential To Recover KCl From Upper Patience Lake Potash Members

As the selective mining multi-lateral horizontal cavern roof grows to a size that it is unstable, it will collapse which will potentially create permeable paths for the cavern brine to dissolve additional KCl. As this process continues, more cavern roof instability could result, which could perpetuate the process.

There may be an opportunity to devise methods to accelerate and initiate the failure of the cavern roof. Although the base case of the Project considers only the PLM 1, there are upside opportunities to produce more tonnes per cavern by allowing upward dissolution to reach upper Patience Lake potash zones (i.e., PLM 2 through PLM 4).

Successive upward failure of the cavern roof could result in connection of the solution mining cavern with the overlying permeable Dawson Bay formation. If this occurs, the solution mining cavern may not be able to sustain the pressure necessary to push the production brine from the solution mining cavern to the surface. This can be accomplished by installing an electric submersible pump in the production-well tubing column to lift the production brine from the cavern to the surface. Electric submersible pumps are currently being utilized at Moab, Utah by Intrepid Potash, and at Belle Plaine, Saskatchewan by Mosaic.

16.14 Cavern Closure

Solution mining caverns will be operated for as long as they economically produce KCl brine for plant processing. When it becomes necessary to plug and abandon a solution mining cavern, the following procedure will be implemented:

- The 7” casing will be perforated into a permeable zone of the Dawson Bay formation
- A cast iron bridge plug will be set immediately above the perforations.
- The 7” casing will be effectively sealed with cement or bentonite as directed by the Oil and Gas Conservation Regulations of the Saskatchewan Ministry of Energy and Resources (Government of Saskatchewan, 2018).
- The wellhead and casing will be cut off 2 m below the ground surface and a permanent well marker attached to the 7” casing.
- The surface will be reclaimed to the standards as set forth by the Oil and Gas Conservation Regulations (Government of Saskatchewan, 2018).

Plugging and abandonment procedures may commence 20 to 30 years after solution mining has been initiated, depending on the extent of the Patience Lake Member that is ultimately accessible for selective mining. The perforations into the Dawson Bay formation are to prevent the solution mining brine from being pressurized to lithostatic pressure as the caverns slowly become smaller due to salt creep over geological time.

16.15 Selective Solution Mining Cut-Off Grade

In general, a cut-off grade for metal deposits is estimated by assuming a breakeven between the revenues and costs. Costs are typically expressed in currency per ton (or tonne) whereas revenues are typically currency per ounce for gold and other precious metals, or per lb or kg for base metals. With potash and some other industrial minerals, the revenues and costs are both expressed in dollars per tonne of product, MOP in the case of the Tugaske Project, so a cut-off grade in the traditional metal-mining sense is not strictly applicable for solution mining of potash. However, for selective mining of the type to be employed by the Tugaske Project, the sylvite crystals in the sylvinite matrix must be sufficiently plentiful to create a continuous contact from one sylvite crystal to the next, or prolonged dissolution will not occur. Such dissolution typically requires an in-place KCl grade of at least 30% by weight. Therefore, for selective secondary mining of potash, a minimum KCl grade of 30% is specified when defining potash Mineral Reserves.

17 RECOVERY METHODS

17.1 Overview

The process plant (or, "the plant") is nominally designed to produce 250,000 tonnes per year of saleable Muriate of Potash ("MOP"), pink or clear, granular grade potash product. Return brine from processing will be heated in a series of heat exchangers to 100 °C and pumped to the wellfield for re-injection into the mine caverns, for dissolution and recovery of potassium chloride (KCl), from the underground sylvinite ore deposit containing both KCl and sodium chloride (NaCl) minerals. Heating the return brine will increase the dissolving capacity for KCl. The wellfield production brine of approximately 60 °C will be pre-cooled in a heat exchanger, with the mine return brine, prior to feeding the crystallization circuit. There, incoming production brine will be progressively cooled down in a 6-stage crystallization circuit, consisting of 4 vacuum crystallizers, followed by 2 surface cooled crystallizers; ultimately cooling mother liquor to 10 °C, with chilled glycol/water mixture, resulting in the production of KCl crystals. A slurry containing KCl solids will be de-watered in a centrifuge prior to feeding a fluid bed dryer. The saturated filtrate solution will be mixed with depleted solution and re-introduced in the crystallization circuit. A dust collection system will scrub the dryer exhaust stream prior to releasing in the atmosphere. The dried coarse solids will be conveyed to the compaction circuit. A closed circuit, incorporating a double roll compactor, flake breaker, impact crusher and sizing screen, will produce a final potash product of typical particle size distribution (PSD) for granular potash product. A dedicated dust collection system will remove particulate matter produced during the MOP particles sizing process and scrub the air prior to discharging to the atmosphere. Raw water will be sprayed on the hot product to harden its surface (referred to as "glazing"). Excess moisture will be evaporated, and the product cooled down to a maximum of 60 °C prior to being conveyed to the product storage building or directly to loadout. Front-end loaders will reclaim the product from the product storage building and feed the bulk loading system for either trucks or railcars.

The following block diagram presents an overview of the main process circuits and how they are linked to one another.

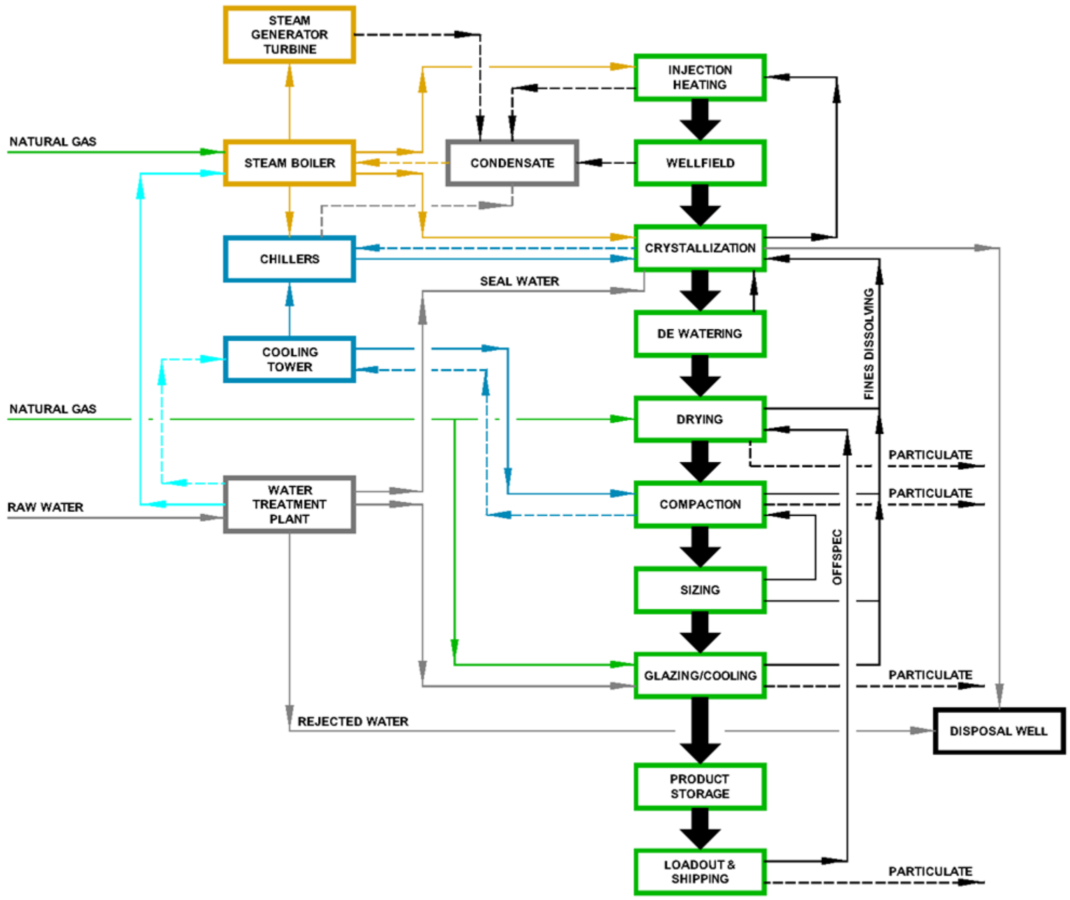

Figure 24: Simplified Process Block Diagram

As discussed in Section 13, the original process design for the Project was completed by process engineers at Engcomp and Innovare. In November 2019, Gensource formally engaged K-UTEC AG Salt Technologies, Koeppern GmbH & Co KG, and Ebner GmbH & Co KG (“KKE”). Together, KKE represent world-class services in the area of potash and salt process design and equipment fabrication and supply. KKE will take full design-supply-commission responsibility for the process plant for the Tugaske Project, complete with a process guarantee and liquidated damages if their design fails to meet any of the agreed to performance requirements; including product quantity and quality. Engcomp remains responsible for the development of the overall heat and mass balance for the Project, including supply of necessary utilities to the process plant. Engcomp will integrate KKE’s efforts into the overall process design for the Project.

The following is a brief summary of each of the main processing areas (or circuits).

17.2 Process Brine, Mine, Circulation & Storage

Return brine (or injection brine) from processing is heated to 100 °C and pumped to the well field for re-injection into the mine caverns, for selective dissolution and recovery of KCl from the underground Sylvinite ore deposit containing both KCl and NaCl minerals. KCl mineral is selectively dissolved within the ore body when a near saturated brine solution of NaCl (and under saturated KCl) is injected at high temperature. The return brine used for cavern injection has a concentration of approximately 8.5 weight % (wt. %) KCl and 20.5 wt. % NaCl.

Heating the return brine from approximately 50 °C to 100 °C will increase the dissolving capacity for KCl and will be accomplished in a series of 3 steam heated shell-and-tube heat exchangers. Make-up water will be added to the brine prior to heating to account for the additional water needed to fill the mine cavity to replace ore as it is mined and removed.

The production brine KCl concentration is expected to increase across the well field to approximately 12.7 wt. % and will be collected at the surface plant site in the Vacuum Crystallizer Feed Vessel. Prior to the Feed Vessel, the approximately 60 °C brine will be pre-cooled in a plate and frame heat exchanger with the mine return brine which also pre-heats the return brine as an energy saving step.

From the Feed Vessel, the brine will be pumped to the crystallization circuit for recovery of KCl from the mine (production brine) solution.

17.3 Crystallization

The crystallization circuit comprises a 6-stage cooling crystallization process, consisting of four (4) vacuum crystallizers and two (2) surface cooled crystallizers. Each crystallization stage is equipped with two outlets (solution and slurry) allowing the crystal growth in each stage to be adjusted as necessary during operations. For operations and maintenance requirements, each crystallization stage is also able to be by-passed.

In the 4 vacuum crystallizers, cooling will be accomplished by a steam ejector system creating a vacuum in the crystallizer body, causing vaporization of water to take place and the cooling of the crystallizer contents (by "flashing" in vacuum, up to a temperature above the crystallization temperature). The water vapour is condensed in barometric condensers, using the cooled brine as the condensing media. Brine flow progresses from one crystallizer to the next in series via gravity flow. Vacuum cooled brine from the 4 vacuum crystallizers is pumped to a two (2) effect Surface Cooled Crystallizer (SCC) crystallization system, arranged in series for further recovery of KCl in solution.

In the SCC's the mother liquor is further cooled to 10 °C, resulting in additional KCl solids precipitation. Recirculation pumps will pump the crystallizer contents from the SCC bodies through shell-and-tube heat exchangers for cooling and then back to the crystallizers for crystal growth. The cooling flow is a mixture of ethylene glycol and water circulating through the heat exchanger tubes in series from the second stage to the first. Cooling flow temperature is maintained by mechanical chillers. The KCl slurry from the final stage SCC is pumped to the de-brining process.

17.4 De-Brining (also, De-Watering Or Separation)

Slurry containing KCl solids from the crystallization circuit is pumped to the de-brining circuit (also referred to as de-watering or separation). A cyclone will operate as a clarifier and separate the KCl crystals from the depleted brine. The cyclone underflow stream containing KCl crystals will flow, by gravity, into a centrifuge. The overflow stream from the cyclone will flow by gravity to the Mixing Vessel. The de-brining circuit cake moisture content is expected to be 5%, which will be sent to the drying circuit.

17.5 Drying

A fluid bed dryer will be used to dry the residual moisture from the KCl solids that exists after the de-brining circuit. A screw conveyor will continuously push the wet cake into the static fluidized bed KCl Dryer, which uses natural gas to heat the air. The exit temperature for the dried solids is expected to reach 130 °C.

The fluidizing air exiting the dryer will enter a gas cyclone for the initial removal of entrained KCl dust. Overhead air from the cyclone will flow to a venturi scrubber, where water will enter the air stream and collect finer dust particles before it exits the scrubber stack. Collected fines will be re-introduced in the system.

17.6 Additives (Reagents)

Provision is made to add iron oxide powder, which is naturally reddish in colour, to the KCl Dryer discharge product to colour the potash product ahead of the compaction circuit. Potash produced from solution mining is pure and naturally white, or clear. It is the desire of some fertilizer markets (and potash customers), to have a final product that is “pink” (reddish) in colour. Addition of the iron oxide prior to compaction will allow for better impregnation of the iron oxide into the KCl product, creating a more consistent colour throughout each granule.

Other process reagents such as anti-caking amine and dedusting oil will be applied to the potash product, before storing and loading the product. Anti-caking amine is an agent enabling the product to flow freely by impeding capture of ambient moisture and lumping (since potash is naturally a hydroscopic material). De-dusting oil is applied as a dust suppression agent when handling the product through either conveyance or frontend loaders. These reagents support the integrity of the final granular product and minimize product degradation.

17.7 Compaction, Sizing & Glazing

Due the relatively high nucleation rates prevalent inside the SCC, the particle size distribution (PSD) of the KCl crystals will likely be finer when compared to mechanized mining and flotation processes, typical for other Saskatchewan producers. Therefore, the design accounts for all dryer discharge (100%) to be compacted in a roller press (“compactor”). The compactor will rotate at low speed, to allow for the entrapped air to escape. The compactor product (“flake”) will be crushed prior to reporting to a sizing screen. The screen product oversize will be further reduced in an impact crusher. The very fine material will be re-introduced back to the compactor while the screen middling fraction constitutes the final product, sized at SGN 300, typical for granular particle size distribution.

Treated water is sprayed on the hot potash particles to achieve about 2% moisture content. The contact of the water with the hot granules is accomplished in an inverted screw mixer. The addition of water first melts and then hardens the KCl crystals, hence the term “glazing”. Excess water is evaporated in a fluidized bed dryer when hot air is injected to suspend the particles. Dried particles flow by gravity to the cooling side of the glazing dryer/cooler and a cool air stream is blown through the dryer bed to achieve the desired final product temperature of 60 °C. The fluidizing action of the dryer combined with the vacuum generated by the exhaust blower carries the fine KCl product to a dust collection baghouse. Cartridges installed inside the baghouse collect dust particles while air filters through and eventually exits the stack. The collected fines are fed back to the compactor.

17.8 Product Storage & Loadout

Engcomp is responsible for the design of the product storage and loadout system for the Project. Cool granular product from the sizing processes will be moved through a series of material handling devices and stored in the final product storage building, or loaded directly into bulk railcars and/or bulk trucks. When it comes time for loading (either bulk railcars or bulk trucks), product from the storage building is reclaimed with front-end loaders and dropped in two hoppers. Apron feeders installed underneath each hopper regulate the rate of product feeding the loadout screen. The role of this screen is to isolate any lumps that may have formed in storage and to remove material too fine to meet the final product specification. The lumps are fed to a rolls crusher where they are broken and re-introduced into the system. The fine material is stockpiled in a covered bunker. The company may opt to sell the fine material “as is” or to re-introduce it to the process. The system is sized to load railcars and transport trucks at a rate of 547 tonnes (metric tons) per hour (t/h) (approx. 600 short tons/hour) and 273 t/h (approx. 300 short tons/hour) respectively. A small dust collection baghouse installed in the transfer tower will collect any dust generated from material handling equipment, the loadout screen, and the rolls crusher.

18 PROJECT INFRASTRUCTURE

18.1 Plant Site

The process plant (or, “the plant”) and its outbuildings (or, “non-process facilities”) are arranged on a nominally square grid, with enough space provided for a future expansion (i.e., doubling of production capacity), should it be desired. That is to say, consideration was given to developing the site layout and plot plan, for the future ease of incorporating the necessary infrastructure for a second plant module. This “two-module” footprint is approximately 400 m x 400 m (16 hectares or 40 acres). The site is positioned on the north/northeast side of the existing highway (Highway 367) and rail (CP Outlook Subdivision). “Plant North” is set at 42 degrees east of “True North” and will be the basis for discussing locations in relation to the plant.

Main vehicle access to the site is provided from the local grid road, tying into the existing highway. There are two main egress roads on the site, running on the east and west side of the plant respectively.

The following is a summary of each of the main site facilities:

- The process plant (WBS Area 300) is housed in a single long, narrow enclosure, nominally 122.6 m long x 26 m wide. The building is approximately 28 m tall at its apex. Equipment is arranged north to south, matching the process flow. Well field feed is on the north end and product dispatch at the south. The process plant is predominantly arranged with the majority of the “wet-end” process occurring in the north side of the plant, while the “dry-end” is to the south. Space is allocated for a second, similar-sized process plant to be located west of the first plant, should expansion in production capacity be desirable in the future.
- The control room is located on the upper floor of the process plant, including offices/work stations for the plant operators. It is envisaged that this combined structure will be “modular” - meaning that components will be pre-fabricated offsite and come pre-assembled with much of the internal elements ready for installation by the contractor.
- There are several electrical rooms (“E-rooms”) situated within the different facilities, and like the control room, these will also be modular where appropriate.
- A product storage building (WBS Area 410) is located to the southwest of the process plant and is a pre-engineered fabric-covered building with a concrete floor at grade level. This building could be expanded in the future and can be built to allow for easy integration of a second plant’s segregated material storage (if segregation is necessary). This building is currently sized for a capacity of 13,500 short tons of storage (67 m long by 45.7 m wide).

- Loadout screening (WBS Area 420) occurs in a clad steel structure south of the process plant. Rejected fines are stored in a grade-level bunker for sale as “off-spec” product and/or reclaim back into the plant as/when required.
- Bulk truck trailers or rail cars are loaded in the loadout building (WBS Areas 430, 440). Legal-for-trade weigh systems provide accurate records of shipped product. A small control room is provided for an operator.
- The power generation/utility building (WBS Area 730) is nominally 45 m square and is adjacent to the plant. It houses most of the utility/services equipment, which are mounted on at-grade foundations and covered by a single, large-span pre-engineered fabric structure. The building apex is approximately 19 m high. An elevated and enclosed gallery creates a pipe chase to the plant. Space for expansion of this building is available, to house equipment necessary for a future process plant.
- Cooling towers/fans (WBS Area 740) are located remotely to the southeast, downwind to the plant (as winds are predominantly from the northwest).
- The storm runoff (retention) pond (WBS Area 520) is located at the southeast extremity of the site, at the natural grades’ low point.
- The disposal well (WBS Area 540) is located to the northeast of the plant. Space is also allocated for a future or second disposal well.
- The maintenance shop & warehouse (WBS Area 720) share a common enclosure (nominally 37 m long and 24 m wide) and are adjacent to the plant. This facility has offices and services to support the maintenance and warehousing staff. Expansion of this building is possible to support a future Process Plant addition. This structure will be a pre-engineered fabric building and utilizes modular shipping containers for the side walls. The shipping containers serve a dual purpose, as they provide a foundation for the fabric building as well as space for offices, washrooms, storage rooms etc. inside the shipping containers.
- The security/administration/dry (and lab) facilities (WBS Area 710) are housed in a common, single-floor enclosure, located near the plant. Its nominal footprint is 21 m long x 14 m wide. This facility is designed to be a modular trailer-style complex.
- On-site Parking stalls are allocated, which currently accommodate staff and visitors, between the maintenance shop & warehouse and security/administration/dry parking lots.
- A fueling station is shown at a pullover section on the N-S road.

- There are several outdoor tanks. Tanks containing brine or water which are part of the process do not need to have secondary containment as per the pertinent environmental codes. Tanks containing reagents will be heated and contained as per the codes.
- The site also includes a rail-siding (spur) which ties into the existing CP rail line, and additional onsite rail trackage to accommodate the filling and handling of both empty and full rail cars.

Modular construction was utilized across the site, where possible, to reduce on-site construction time and labour costs while gaining the benefits of off-site construction cost savings and higher quality control standards.

The following figures show a plot plan of the site, as well as a 3D model rendering (looking southwest).

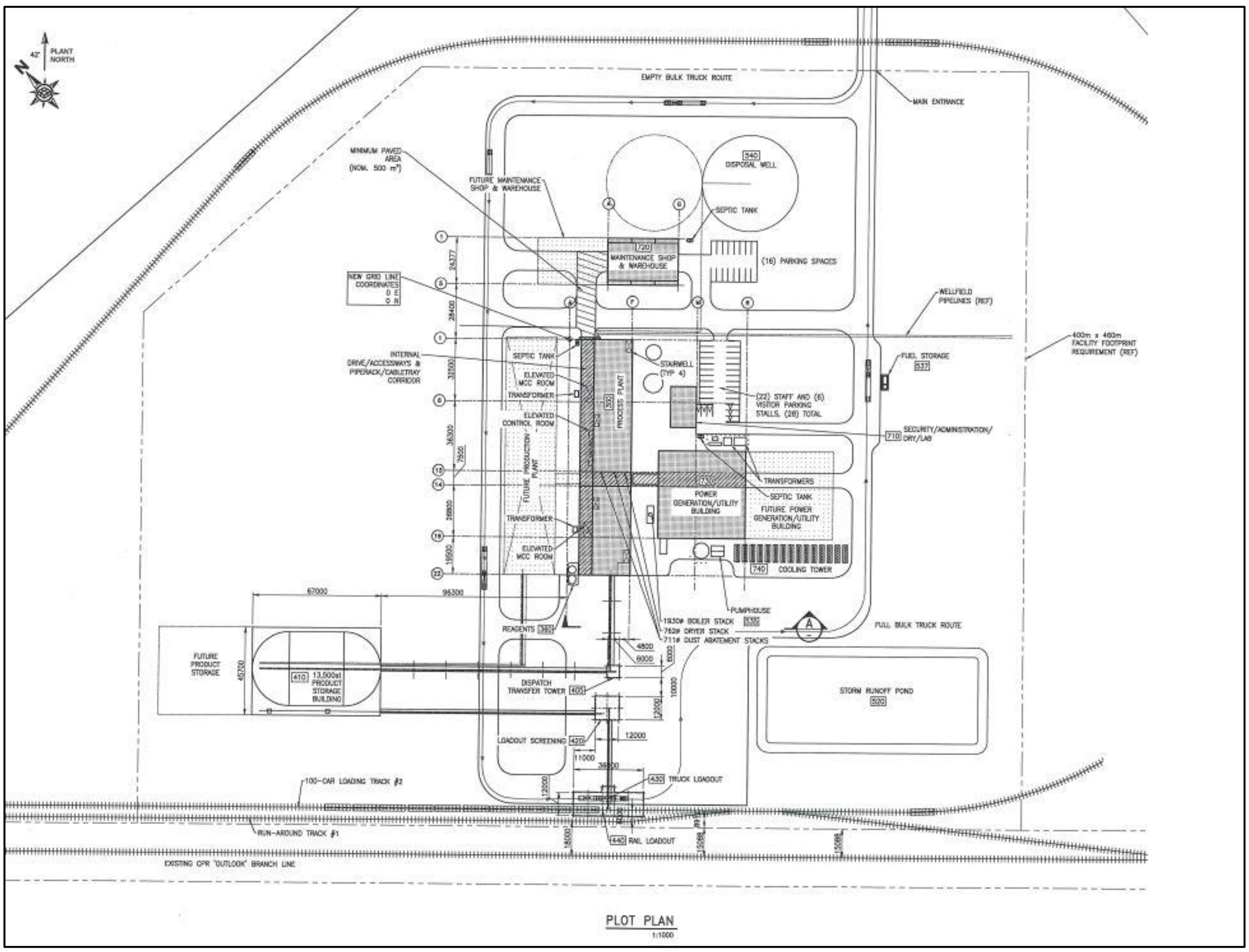

Figure 25: Site Plot Plan

Figure 26: 3D Model Rendering (looking southwest)

18.2 Site Civil

The overall project area is comprised of two main features: the plant site (or "site") and the well field.

18.2.1 Plant Site (or "Site")

Gensource has secured an option agreement to purchase surface land that can more than accommodate the Project, as well as any future expansions. The plant site will be located on the Southeast quarter, of Section 4, in Township 22, Range 2, West of the 3rd Meridian (SE-4-22-2-W3M), and consists of: the process plant, product storage building, reclaim screening, rail and truck loadout, site/yard material handling conveyances, maintenance shop & warehouse, power generation/utility building, security/administration/dry building, cooling tower, disposal well, outdoor tankage, fuel storage, storm runoff pond, and roads and parking lots.

The plant site has direct access to the existing highway (Highway 367) and the CP rail line, which runs northwest/southeast through the Project area. Access to the plant site will be via an existing grid road, which runs north/south along the east side of the site. In general, the site presents a mild, continuous slope from the northeast to the southwest. Consideration for a future expansion (i.e., the addition of another module capable of 250,000 tonnes per year production) has been incorporated into the current site layout and footprint.

A rail spur/run-around track approximately 1.5 km in length will be constructed parallel to the existing CP rail line and provide rail access to the site. Additional trackage will provide on-site storage for approximately 100 loaded and 100 empty railcars (i.e., 2 "unit trains" of 100 bulk hopper cars).

Four (4) water wells will provide raw water to the water treatment system, and have been preliminarily placed adjacent to the process plant site, spaced at 500 m intervals. The optimal location and spacing of these wells will be determined in consultation with environmental and hydrogeological engineers, the drilling company, and the civil consultants.

One (1) disposal well will be located on the plant site, which will be used for deep injection of any waste or impurities generated from the process plant into the basal Deadwood Formation that lies several hundred metres below the potash horizon. The disposal will be licensed and operated according to the existing provincial regulations.

A runoff pond will be constructed on the plant site, to contain any runoff that occurs from rainfall, snowfall melt, etc. Water collected in the pond may be used for process and mining purposes.

The plant site will be supported by several third party (offsite) utility providers. These utility companies, SaskPower, SaskTel and TransGas, are owned and operated by the Saskatchewan Provincial Government, and are referred to as Crown Corporations. Overhead SaskPower 25kV service (construction power and backup power) is fed to the site from the west. Underground SaskTel fibre optic communication service arrives at the plant site from the east. Underground TransGas natural gas supply for the site is routed from the northeast. Final definitive alignments of all offsite utilities will be confirmed during detailed engineering.

18.2.2 Well Field

The second main feature of the Project is the well field, which is located northeast of the plant site. Primary access to the well field is provided by the existing grid road network. The well field comprises six (6) underground horizontal caverns drilled into the target potash member (PLM 1). The well field and each cavern are connected to the plant site, via shallow-buried brine pipelines.

The well field consists of several surface well pads, with each well pad containing either injection or production well heads, or both. Each of these well pads are similar in design and size to typical well pads in the oil and gas industry. Small access roads will be built to access the well pads from the existing grid roads. The injection and production wells are fed from, and return to, the process plant site via a shallow buried brine pipeline (one line each for injection and production brine). These lines will be buried in a Rights-of-Way (ROW) secured through easement agreements between Gensource and the surface landowners – which are being completed at the date of this report.

18.3 Site Utilities

18.3.1 Natural Gas

Natural gas service is required for the Project to provide the energy demands for such components as building heat, make-up air units and product dryers utilized in the process system. The largest natural gas consumer is the high pressure packaged boiler system, the steam from which powers the steam turbine generator to produce power for the plant site. Calculated maximum daily gas consumption for all uses is approximately 5,600 GJ/d or 1.9 Million GJ/y. The calculated maximum hourly gas consumption for all uses is 235 GJ/h.

Natural gas servicing will be provided via pipeline by TransGas to the custody transfer location at the site property line. On-site natural gas distribution delivers gas from the TransGas custody transfer location to the individual site buildings and equipment that require natural gas service.

18.3.2 Petroleum Fuel (Gasoline/Diesel)

Liquid (Petroleum) fuel-powered vehicles required on site for Maintenance, Operations and Loadout duties has been allowed for in the OPEX estimate and these vehicles will be refueled from on-site fuel tanks.

An allowance has been made for a horizontal, double-walled two-compartment, skid-mounted tank for diesel (7,610 litres) and gas (3,240 litres) containment. Access to these will be restricted to authorized personnel only.

18.3.3 Steam

The steam requirements of the plant and overall process are significant, and as such, Gensource identified an opportunity to harness this steam and self-generate the electrical power required on site using a natural gas fired high pressure boiler in combination with a steam turbine generator (STG). Energy-efficiency (and resulting OPEX savings) are gained by utilizing steam for the heating, cooling, and power needs of the plant.

Air drawn from outside will be filtered and pre-heated prior to being mixed with natural gas and fed to the burner. Steam at 50 bar(a) and 435˚C is fed to the STG and the boiler has been sized to produce a maximum of 100,000 kg/h (100 t/h). Tail steam from the STG is utilized, both as-is and re-heated, in process and ancillary applications, which include:

- Heating of return brine from processing to then be sent back to the well field for re-injection into the mine caverns for dissolution and recovery of potassium chloride (KCl);
- Steam ejectors;
- Reagent heating;
- Steam boiler air intake pre-heat;
- Steam boiler blower drive turbine (replaces a large electric motor to reduce electric load and utilise available steam discharged from the turbine); and
- Building unit heaters.

18.3.4 Power

As discussed, the Tugaske Project will self-generate power with the STG. The configuration selected is high pressure superheated steam feeding a non-condensing steam turbine, which, in turn, drives an electrical generator. In total, the Project requires approximately 9.6MW of electrical power, under normal operations. Power will be distributed on site at the 25kV level, and equipment in the plant and various ancillary buildings are supplied with power at either 5kV or 600V. Modular electrical rooms that are built off site and installed within or around the various buildings on site distribute and supply power to process, mechanical, and HVAC equipment, as well as process control equipment, lighting, convenience power, and heat tracing for piping.

A connection to SaskPower's existing 25kV distribution line is still required for construction power, as well as for back-up or emergency power when the STG or the boiler is down or being maintained. This back-up power demand is currently estimated at approximately 2MW and will only be drawn on an as-needed basis. A supply agreement will be structured with SaskPower, a process already begun.

18.3.5 Compressed Air

The compressed air system on site consists of air compressors, air receivers and an instrument air dryer. The air compressors deliver air at 700 kPa(g) with a total capacity of 310 litres per second. Compressed air utilized in process and ancillary applications, includes:

- Dust baghouse bag pulsing;
- Steam boiler purge;
- KCl Dryer and Glazing Dryer/Cooler burner purge;
- Instruments, control valves, splitter and flop gates, fire alarm valves;
- Reagent unloading system; and
- Utility stations

18.3.6 Raw, Treated, & Potable Water

The raw water requirements for the site are in the order of 1,000 m3/day. When operating in the summer, the volume may approach 1,200 m3/day; the difference due to the need to spray water on the cooling tower coils during warmer weather. Therefore, for conservatism the Project includes for the construction of four (4) raw water wells, with each well able to produce up to 500 m3/day. Under normal operating conditions, three wells will be producing, with a fourth well available for backup.

The groundwater source for the Project is the Ardkenneth aquifer, which was selected based on field studies and test work and was approved for use of up to a daily maximum of 2,000 m3/day in the approved Environmental Assessment.

The raw water wells are proposed to be located northwest of the process plant site, spaced at approximately 500 m intervals. All wells will be drilled on land owned and controlled by Gensource and will be owned and operated by Gensource. These wells will be licensed through the Water Security Agency. The optimal location and spacing of the wells will be verified upon the next stage of detailed engineering.

While raw water will be used for mining and process needs, some equipment within the process requires a high level of water purity; namely the cooling tower and the steam boiler. As a result, raw water must be treated and a variety of dissolved solids (impurities) must be removed. The proposed water treatment system is a direct feed, reverse osmosis (RO) membrane treatment unit. Boiler feed water requirements are more stringent, and secondary treatment is required following the RO membrane. The secondary treatment system is a continuous electrode deionization process consisting of three modules operating in parallel to meet the flow rate required for the boiler feed.

Potable water for staff consumption will be provided by a contracted bottled water supplier, with regularly scheduled delivery/return.

18.3.7 Chilling Solution & Cooling Water

Chilling solution required by the crystallization circuit will be provided by three (3) Mechanical Chillers, which will deliver a mixture of ethylene glycol and water. The chillers are sized to deliver the required volume of chilling solution at a temperature of 3.5 °C; but can be operated to produce a chilling solution at less than 0 °C if desired during operations. The mechanical chillers are the largest user of cooling water, and heat extracted from the chilling solution is transferred to the cooling towers (adiabatic type). The cooling towers will dissipate excess heat to atmosphere.

18.3.8 Fire Protection System

In case of a fire, treated water will be used for fire fighting purposes. The fire protection system consists of a Fire Protection Diesel Pump, the Treated Water Storage Tank, a Fire Protection Jockey Pump, and a Process Plant Fire Booster Pump. The fire protection system will be managed by a dedicated fire alarm control system, complete with appropriate sensors and alarms/sirens. The controls will be located and managed from the plant control room.

18.4 Site Rail & Storage

The CP rail line runs directly through Project area. The plant site is situated immediately adjacent to the existing highway (Highway 367) and rail line. Switches will be installed to connect the site rail to the CP rail line.

To accommodate the storage and shipping of product via bulk rail hopper wagons, rail track is required on site as follows:

- “Run-around track” to accommodate the movement of cars and locomotives, off of the CP rail line;
- Loading track to accommodate 100 bulk hopper cars;
- Storage track to accommodate 100 bulk hopper cars; and
- 6 rail turnouts/switches

The product loadout system has been designed with the capacity to load 100 standard bulk hopper rail cars (often referred to as a “unit train”), at a rate of 600 short tons per hour. This accommodates the filling of a unit train in under 24 hours, with a production capacity able to accommodate another unit train approximately every 2 weeks.

The Project will include approximately 25,000 short tons of product storage on site, via a combination of a typical product storage building (complete with product transfer and reclaim capabilities), and rail storage (i.e., on-site rail track, with capacity to store loaded bulk hopper cars while waiting for CP service. The design will enable loading final product into both bulk rail cars, as well as bulk trucks – with majority of the product shipping occurring anticipated via rail.

18.5 Site Communications & Data

A dedicated fibre optic line, provided by SaskTel will be routed to the site, and terminated in the Maintenance Shop/Warehouse – which can also serve as a construction staging area until other buildings on site are constructed. A firewall is installed at the SaskTel point of connection to protect the LAN/data/voice system throughout site.

Site communications is segregated into two (2) different networks. One network is dedicated to the process control system, and the second is the user network, providing personnel in the various buildings on site with phone connections and internet access. Hardware for the user network, including a server, a gateway, a firewall, Power over Ethernet (PoE) switches, and Cisco IP phone sets, are provided by SaskTel.

The buildings on-site equipped with telephone and internet connections are: the Maintenance Shop/Warehouse, the Power Generation/Utility Building, the Security/Administration/Dry complex, and the Process Plant. With the exception of the Power Generation/Utility Building, which only requires one phone, each of these buildings has a dedicated room or space within a room to accommodate communications network equipment. Fibre optic cabling is installed between these buildings, thereby connecting each of them to the SaskTel network. The phone in the Power Generation/Utility Building is connected to the network hardware in the nearby Process Plant Control Room.

A wireless network (Wi-Fi) is also available in the four buildings listed above. This permits laptop computers, tablets, cellular telephones, and other devices to be connected to the network without cabling requirements. Wireless routers are installed throughout these buildings, enabling mobile internet connection.

In order for personnel to communicate between buildings and areas of site not equipped with telephones, such as the Cooling Tower, the Fire Water Pump house, and the well field, hand-held radios and/or cellular phones will be required.

18.6 Site Process Control System

The plant control system utilizes Programmable Logic Controllers (PLCs) for the control of loads and analyzing instrumentation for feedback to the operator stations. The control system has dedicated controllers for each of the three (3) major areas of the plant site, namely: the Power Generation/Utility Building, and the Crystallization ("wet-end") and Compaction ("dry-end") areas of the Process Plant. In addition to these controllers, some vendor supplied equipment packages also contain their own PLCs. These sub-systems include: the boiler, STG, chillers, water treatment plant, compactor, dryer burner, and the fire protection management system. These sub-systems all communicate back to the three (3) plant control system PLCs via both copper and fibre optic cables and Ethernet switches.

A fibre optic cable connects the control system within the plant to the remote well field equipment. This data connection allows for the remote monitoring and control of the pumps and instrumentation devices in the field. The control system has the ability to start the six (6) mine injection pumps from the control room. It allows the operators in the control room to view the well field operations in real-time and to modify the process accordingly in the event that an upset or abnormal condition arises.

The control system contains a database-driven historian system that trends process and instrumentation data for reporting and troubleshooting purposes. This system allows plant staff the ability to trend any observable system point within the control system and retain historical data of these points for an indefinite period of time.

Each of the electrical and motor feeds contains Intelligent Electronic Devices (IEDs) that relay information back to the control system. This information is used by operations and the control system to ensure the process is operating at optimal levels. Where applicable, the control system implements closed loop feedback control so that the operator can set a parameter and be assured that the control system modifies process equipment operation to achieve that set point.

18.7 Site Mobile Equipment

The following is a list of the estimated mobile equipment that is required for site operations and is to be owned or leased by Gensource. Such equipment includes:

- (2) General purpose forklifts, one large capacity (e.g., 5t) for rough terrain and one smaller capacity (e.g., 2t) for general site operations and warehouse inventory handling;
- (1) Skid-steer loader for site maintenance, snow clearing, etc.;
- (1) Boom Truck Crane for more routine equipment servicing and well field maintenance;
- (1) Telescopic handler for elevated maintenance work;
- (6) Gasoline pickup trucks for site operations and general-purpose duties;
- (1) Wheel loader for product reclaim; and
- (2) Locomotives, required for moving/hauling both full and empty rail cars on the site.

A capital strategy could include purchasing mobile equipment for construction as opposed to construction rentals, and then turning over purchased equipment for operations. Used/refurbished equipment could also be considered, as could selling any purchased equipment that is not needed for operations. The decision to purchase, rent, lease, refurbish, salvage, etc. will consider the best economic trade-off for the Owner, and be decided at a later date.

18.8 Site Sanitary & Waste Services

A trade-off study was previously completed to evaluate the capital and long-term operation and maintenance costs of several sewage disposal options for the site. These options included: septic truck haul, construction of a sewage lagoon, and the construction of a ground disposal mound. Based on the capital costs of the septic truck haul option being significantly lower than the construction of a sewage lagoon and ground disposal mound, the septic truck haul option was found to be most favourable for the site.

As such, three (3) underground fibreglass sewage holding tanks are required for the site. The tanks are strategically located based on the site buildings housing staff, washrooms and showers. A 3,500 Imperial Gallon (Igal.) tank is required for the Administration building, while 2,500 Igal. tanks are required for each of the Maintenance Shop/Warehouse building and the Process Plant.

Two to three loads per week are required based on the estimated sewage generation for the site and typical septic truck capacities for haulers located in the project area. The contracted septic hauling will be tendered prior to the site start up in order to obtain the most competitive pricing.

18.9 Site Security

The plant site will be regulated and controlled to ensure the safety and security of the personnel, plant, property, and equipment. Since the plant site is substantially smaller than a traditional potash mine, dedicated/stand-alone security infrastructure, such as a guard house or security building, was not deemed appropriate for the size of operation. This approach is similar to that of agricultural or oil & gas facilities of similar size in the province.

To help control visitors to the site, appropriate signage and protocols will direct everyone to the Administration building/office complex. All people entering the site will be required to report to the front-desk, where they will sign-in, provide the appropriate information and credentials, and be screened to ensure they are permitted to safely enter the site and conduct their business. All visitors will be required to follow the health, safety, and environment (HSE) policies and procedures established for the site. Appropriate safety training will be provided to visitors, to help orient them to the site, making them aware of the risks, hazards, and safe working procedures to avoid accidents and injury. All visitors will be assigned to an on-site employee for oversight and assistance.

Sensitive areas of the plant site will be secured and demarcated for authorized access only. The process will be in operations 24 hours per day, and operators will be responsible for ensuring that no unauthorized or unaccounted for visitors enter the property.

With respect to security systems, as the project nears operations, plans will be solidified regarding the installation and operation of any additional security systems or protocols, including video surveillance (i.e., closed-circuit TV systems, or CCTV), radio-frequency identification cards (RFID) for access, emergency alarms, etc. Once installed, regular monitoring will occur, and the system will be maintained and tested on an on-going basis.

18.10 Offsite Infrastructure

As indicated previously, the Project will be supported by several offsite utility providers. The following groups have been engaged for the Project: SaskPower, TransGas, SaskTel, CP Rail, the Saskatchewan Ministry of Highways & Infrastructure, as well as the local Rural Municipalities (R.M.s). Gensource will coordinate with such entities in order to acquire and deliver the necessary infrastructure and services required to tie their infrastructure into the Project. The following is a discussion of each of the key offsite infrastructure requirements for the Project.

18.10.1 Offsite Power

While the primary source of power for the Project will be self-generated by Gensource (through a natural gas fired boiler/STG combination), an extension of SaskPower's existing three phase overhead 25kV distribution line is required for construction and emergency/back-up purposes. An existing phase distribution line runs north/south along rural grid road 627 to Tugaske, SK, approximately 3 miles (4.8 km) west of the Project site. SaskPower's overhead line extension to the plant site will tap off of this existing line and extend east to reach the plant site. The following figure shows the existing SaskPower distribution in the Project area (with the location of the Project site denoted).

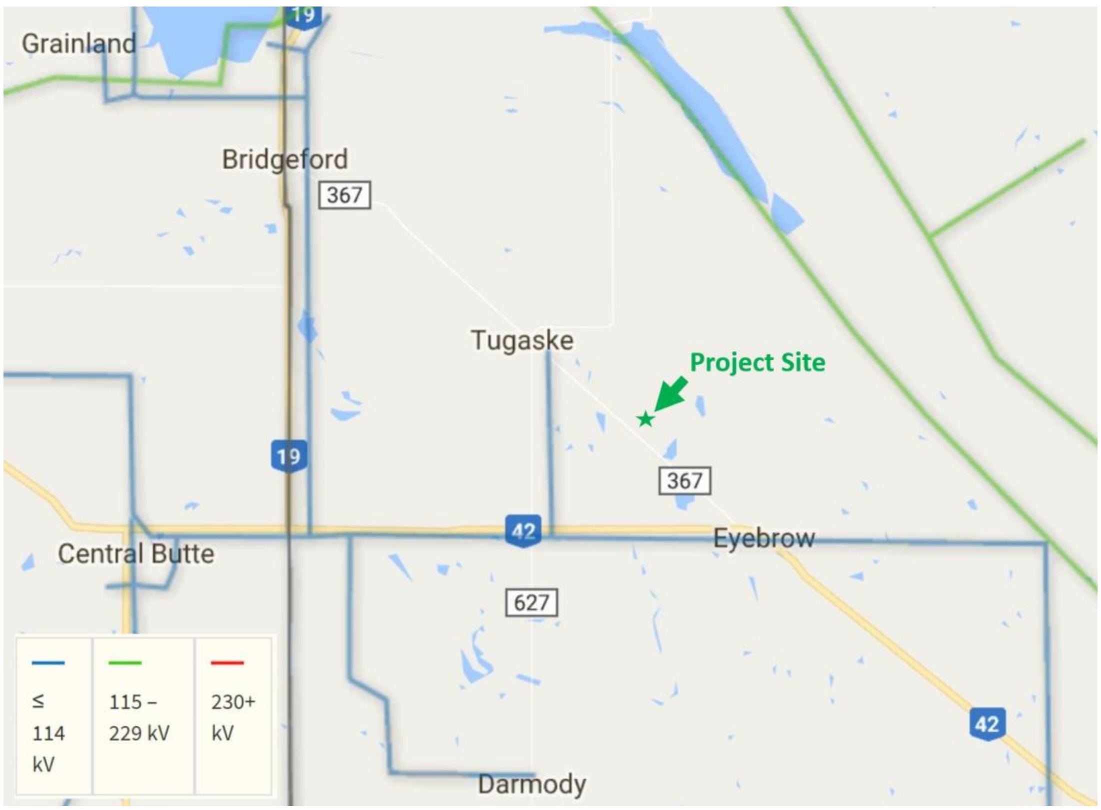

Figure 27: Local Power Infrastructure

For the construction phase of the Project, a temporary transformer will be installed to provide 600V power. Once construction of the electrical infrastructure within the plant and ancillary buildings is complete, SaskPower's overhead line extension to the plant is connected to the plant electrical system directly and will revert to an emergency or back-up power role, utilized only during maintenance and start-up conditions. The available power (2MW) from the grid is not sufficient for the entire plant load (9.6MW). The control system blocks the start of non-essential loads, or loads not required for start-up, until the STG is powering the plant.

18.10.2 Offsite Natural Gas

A new 150 mm diameter (NPS 6) pipeline will be installed to provide gas to the Project and will be fed from an existing 400 mm diameter (NPS 16) TransGas transmission pipeline, located approximately 10 kilometres northeast of the Project area, as shown in the following figure.

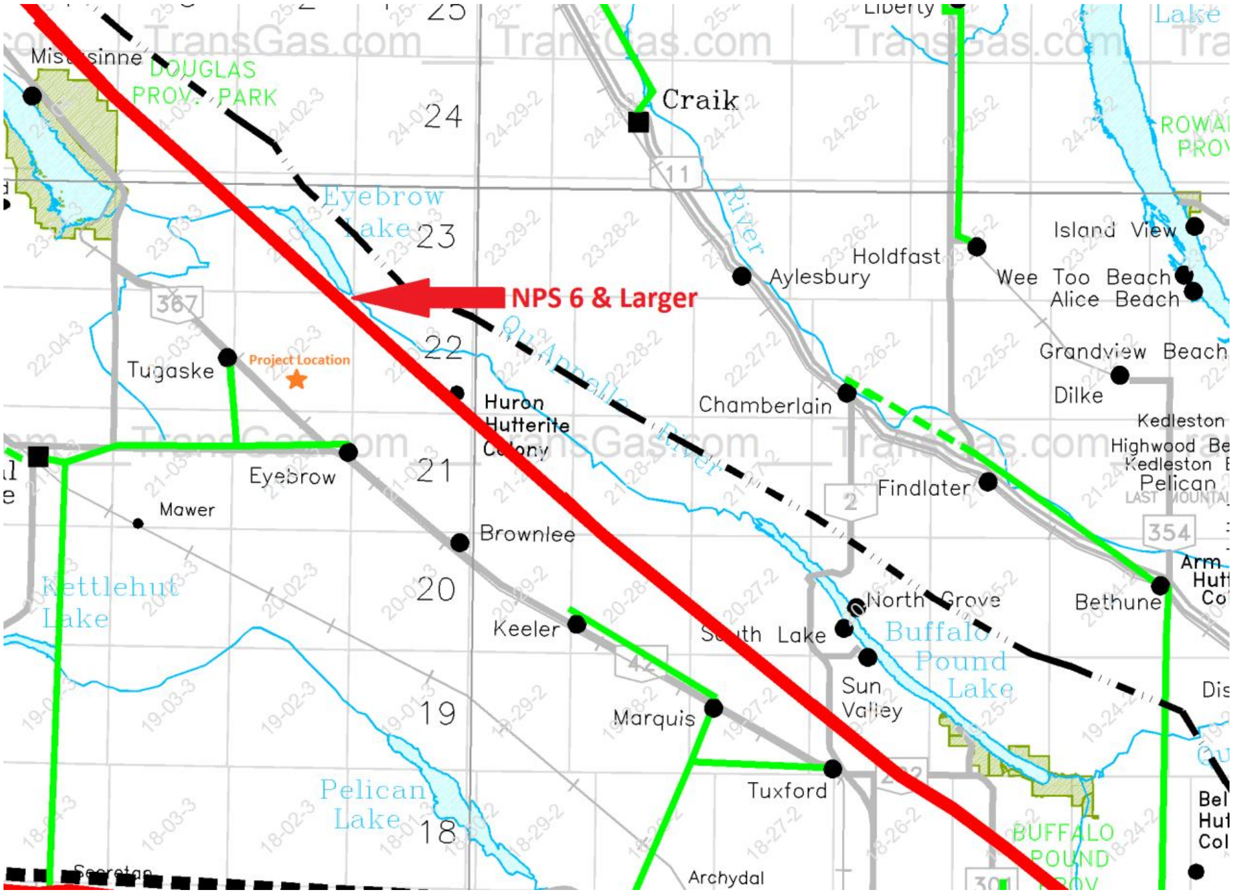

Figure 28: Local Natural Gas Infrastructure

The work includes the tie-in to the existing 400 mm diameter transmission line, approximately 10 km of new 150 mm diameter transmission line, riser piping at the custody transfer location, construction of a regulating station, line heater and odorization and the installation of gas metering equipment complete with remote readout capabilities. While the baseline demand for the Tugaske Project module is approximately 5,600 GJ/d or 1.9 Million GJ/y, the pipeline is being sized to accommodate a future doubling of annual production without further upgrades being required. The construction cost for bringing this new 150 mm gas line to site is included in the capital cost estimate. The delivery and demand charges for the consumption of natural gas are accounted for in the operating costs section of the financial model.

18.10.3 Offsite Rail

The primary product loading and transportation (shipping) strategy for the Project is based on shipping product from the plant site via bulk railcar.

The CP Outlook Subdivision runs directly through the Vanguard Area, and is immediately adjacent to the plant site. It should be noted that the Vanguard Area is also located approximately 40 km west of the Craik Subdivision, a former CN Rail line. This line is now partially owned and operated by a provincial short-line railway, Last Mountain Rail (LMR). LMR and CN Rail have maintained a relationship that maintains CN Rail running rights on the line. The following figure shows the proximity of the Project site to the surrounding rail lines.

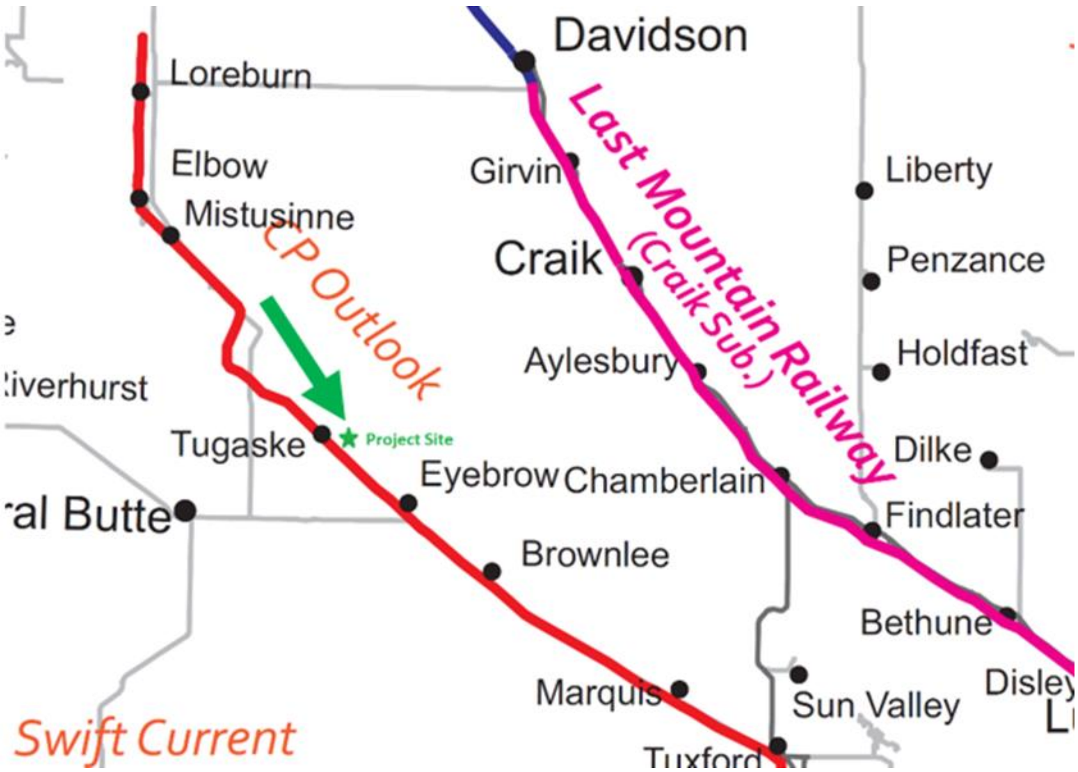

Figure 29: Local Rail Infrastructure

Gensource has completed initial designs and costing to construct a rail spur/siding at the plant site, which will tie into the existing CP rail line. Initial work with CP regarding the tie-in to and logistics and costs regarding product loading/hauling have been undertaken.

18.10.4 Offsite Roads

Primary access to the site is from an existing R.M. grid road that runs north/south along the east side of the plant site. The grid road intersects with the existing highway (Highway 367) approximately 400 m southeast of the site. Existing traffic controls at the intersection consist of stop signs on the existing grid road, north and south of the highway. Crossing of the existing railway line, which runs parallel to the highway to the north, is required to access the site. The railway crossing is currently uncontrolled. The following figure shows a satellite image of the various road access points surrounding the plant site (and rail).

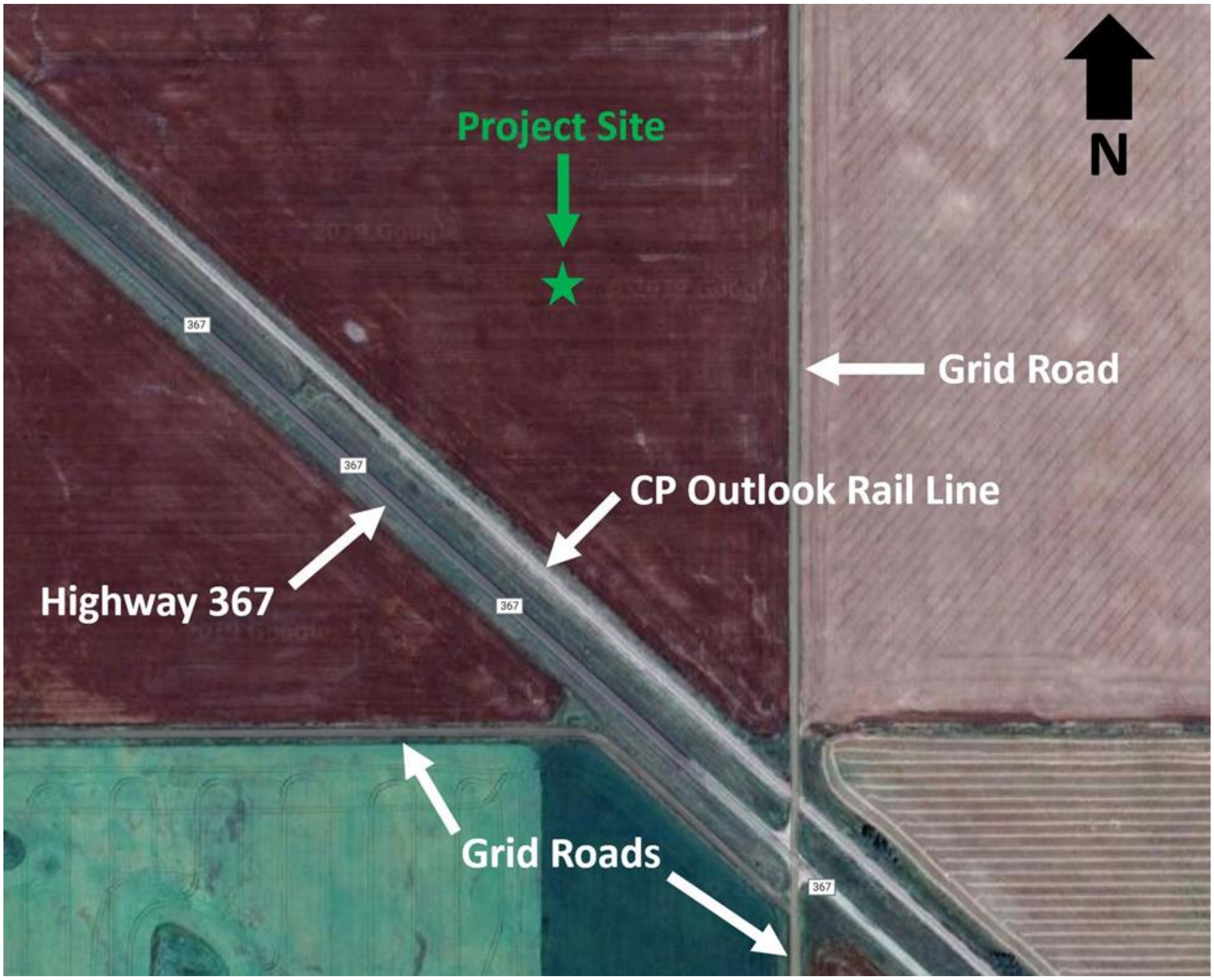

Figure 30: Local Road Infrastructure

Initial indications from discussions with transportation consultants, and the Saskatchewan Ministry of Highways & Infrastructure, has led the team to believe that a traffic impact assessment is likely to conclude that road improvements are not required for the Project. However, for conservatism, a capital cost allowance is included in the capital cost estimate for certain improvements. Such improvements will be confirmed and/or modified, upon completion of the traffic impact assessment completed during the next stage of the Project. Any highway improvements will be discussed and confirmed.

18.10.5 Offsite Communications & Data

At present, SaskTel is the sole service provider in Saskatchewan for establishing the network and telecommunications services at site. These services include the network infrastructure and fibre optic cabling required for dedicated internet and telecommunications services to the Project. SaskTel additionally offers several optional IT services, which are for consideration and available on an ongoing basis during operations (i.e., hardware, software, and data/communication services).

The construction costs, estimated by SaskTel, for providing fibre optic cable to the site include the trenching to a location outside of Gensource's property. SaskTel has presented a budgetary cost, which was factored to adjust for the appropriate distance to the plant site from the nearest SaskTel cellular tower and included in the capital cost estimate. Ongoing technology and telephony costs (i.e., data, telephones, etc.) are accounted for as an operating cost, included in the OPEX.

SaskTel has indicated that Gensource will not require the construction of a cellular tower to service their mine site. SaskTel has an extensive cellular tower network in Saskatchewan, and a permanent cell tower nearby provides 4G/LTE network coverage. An existing SaskTel cellular tower is approximately 2 miles (3.2 km) east of the Project site. The following figure shows the local SaskTel infrastructure.

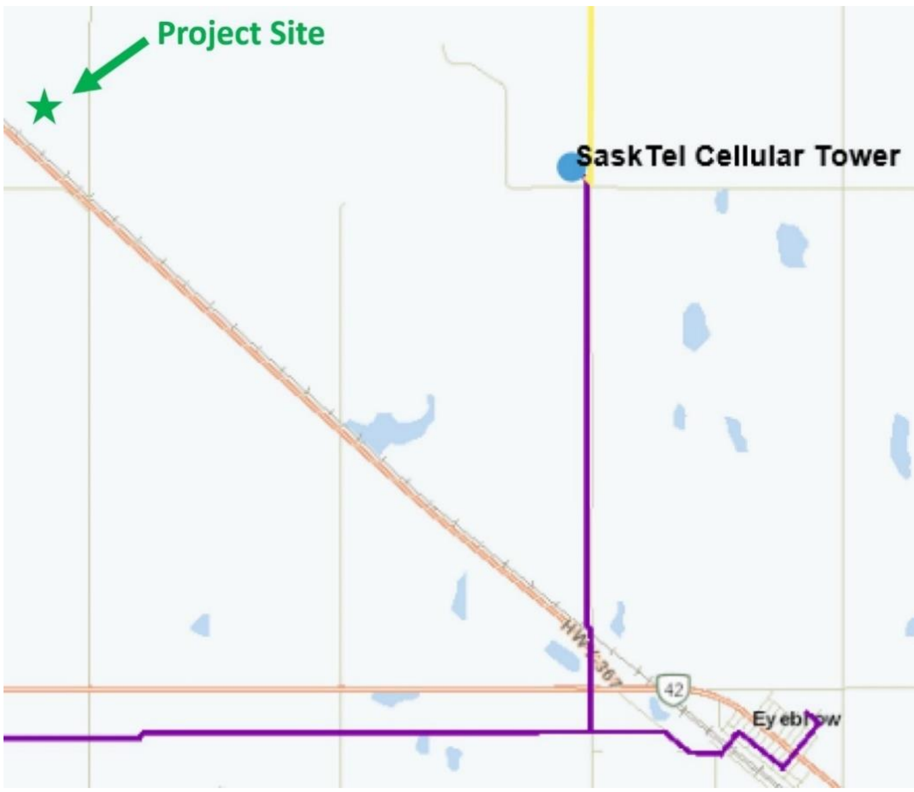

Figure 31: Local Communications & Data Infrastructure

18.11 Transportation & Logistics

The transportation and logistics strategy accounts for a traditional bulk storage, handling, and shipping system on site, which can accommodate both bulk rail and truck transportation.

Transportation of potash, from the site to the end customer will be the responsibility of HELM as Offtake. Sale of the product from the Tugaske Project to HELM and title transfer of the product will occur FCA railcar at the Project site.

19 MARKET STUDIES AND CONTRACTS

Gensource's business model is one of vertical integration – bringing the customer into the development of the facility that will produce the product, allowing that end-user to control its own supply chain. Additionally, under this model, only capacity that is spoken for, or pre-sold, will be constructed, thus eliminating market-side risk by meeting an identified demand with a supply chain rather than building supply before identifying demand.

In a news release dated January 20, 2020, Gensource officially announced HELM AG and its North American subsidiary, HELM Fertilizer Corp. (together, "HELM") as its offtake partner (or "Offtaker") for the Tugaske Project. HELM, founded in 1900, is a privately-owned company based in Hamburg, Germany. HELM is a multifunctional marketing organization, active in chemical distribution, the active pharmaceutical ingredients and pharmaceuticals industries as well as the crop protection and fertilizer industries.

HELM's fertilizer business unit was started in 1972 and has developed into one of the world's largest independent global logistics and marketing networks for fertilizers. HELM distributes fertilizer in its core markets of Europe, North America and Latin America. Within the USA market, HELM Fertilizers is one of the top three North American fertilizer distributors. To serve the needs of the customers, HELM has recently increased its portfolio of storage facilities close to key agricultural markets in the U.S.

For the Tugaske Project, HELM will purchase 100% of the production from the Project for a term of 10 years, renewable thereafter. The off-take includes typical take or pay provisions, standard industry commercial terms and market-based pricing. Title transfer will occur at the Tugaske plant site.

From the Tugaske site, HELM will place product at strategic customers located within the USA resulting in efficient transportation and low logistics costs. Transportation and logistics costs are not included in the financial model, instead these costs are deducted from the selling price to arrive at a "net-back" price to the JV.

Argus Consulting Services, ("Argus") was engaged in 2020 to conduct a market analysis and pricing forecast for Tugaske's defined market area. An updated price and market analysis was provided in September 2021. Argus is a leading provider of price assessments, business intelligence and market data for the global crude oil, petroleum products, gas, LPG, coal, electricity, biofuels, biomass, fertilizers, emissions and transportation industries. Argus and its industry experts executed a confidential study related to MOP supply, demand, costs and pricing, with specific focus on the Project's target market area, providing an in-depth look into MOP supply and demand fundamentals for the target market, including consumption by region, the cost to serve to these regions, the competitive environment and the margins on offer based on the marketing plan developed by HELM. Argus also provided a detailed review of market and price drivers, including a review of market related threats and opportunities.

The pricing forecast supplied by Argus included a base case and a downside case, and the base case was used as the price basis for the financial model and economics. It is worth noting, however, that recent price increases across the fertilizer spectrum, and particularly for potash fertilizers, have resulted in a situation where, in the time between the completion of the Argus market report containing the Argus price forecasts and the date of this report, actual potash prices in the target market area have surpassed the Argus price forecast, in some cases by a material margin. To maintain a conservative economic case, Gensource has not adjusted prices upwards to the current pricing levels, but instead has maintained the price forecast provided by Argus and accepted by the Senior Lenders.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Approvals & Permitting Process in Saskatchewan

The provincial environmental regulatory process for mining projects in Saskatchewan has two primary, yet separate, steps:

- Environmental assessment (EA); and
- Regulatory permitting

An EA is a process by which the environmental baseline conditions and environmental and social effects are determined and then reported for regulatory review. An EA includes those aspects of the project that require review prior to a government agency allowing a project to be approved for development. Fundamentally, the assessment investigates the risks and benefits of a project in the context of the existing socio-economic and biophysical conditions.

Regulatory permitting includes the submission of specific applications and documents as set out by the requirements for exploration, construction and operation under legislation such as Saskatchewan's Environmental Management and Protection Act (EMPA) and the Minerals Industry Protection Regulations. Following the environmental assessment approval, the project can advance into the permitting phase of the environmental regulatory process.

20.1.1 Environmental Assessment Regulatory Approval Process

The Environmental Assessment Act (Government of Saskatchewan 2013), or "the Act", requires that proponents receive approval from the Minister of Environment before proceeding with a 'development' that is likely to have significant environmental implications. The Act defines a development to mean any project, operation or activity, or any alteration or expansion of any project, operation or activity which is likely to:

- have an effect on any unique, rare or endangered feature of the environment;
- substantially utilize any provincial resource and in so doing, pre-empt the use, or potential use, of that resource for any other purpose;
- cause the emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation;
- cause widespread public concern because of potential environmental changes;
- involve a new technology that is concerned with resource utilization and that may induce significant environmental change; or
- have a significant impact on the environment or necessitate a further development, which is likely to have a significant impact on the environment.

The environmental assessment process begins with the submission of a Technical Proposal to the Ministry of Environment's Environmental Assessment & Stewardship Branch ("EASB") by the proponent. The Ministry of Environment (“MOE”) will review the Technical Proposal and make one of two decisions:

- The project is ‘not a development’; therefore, no further study is needed and the project can proceed to regulatory permitting; or
- The project is a ‘development’ and will require an Environmental Impact Assessment.

The following is a graphical representation of the environmental assessment process in Saskatchewan.

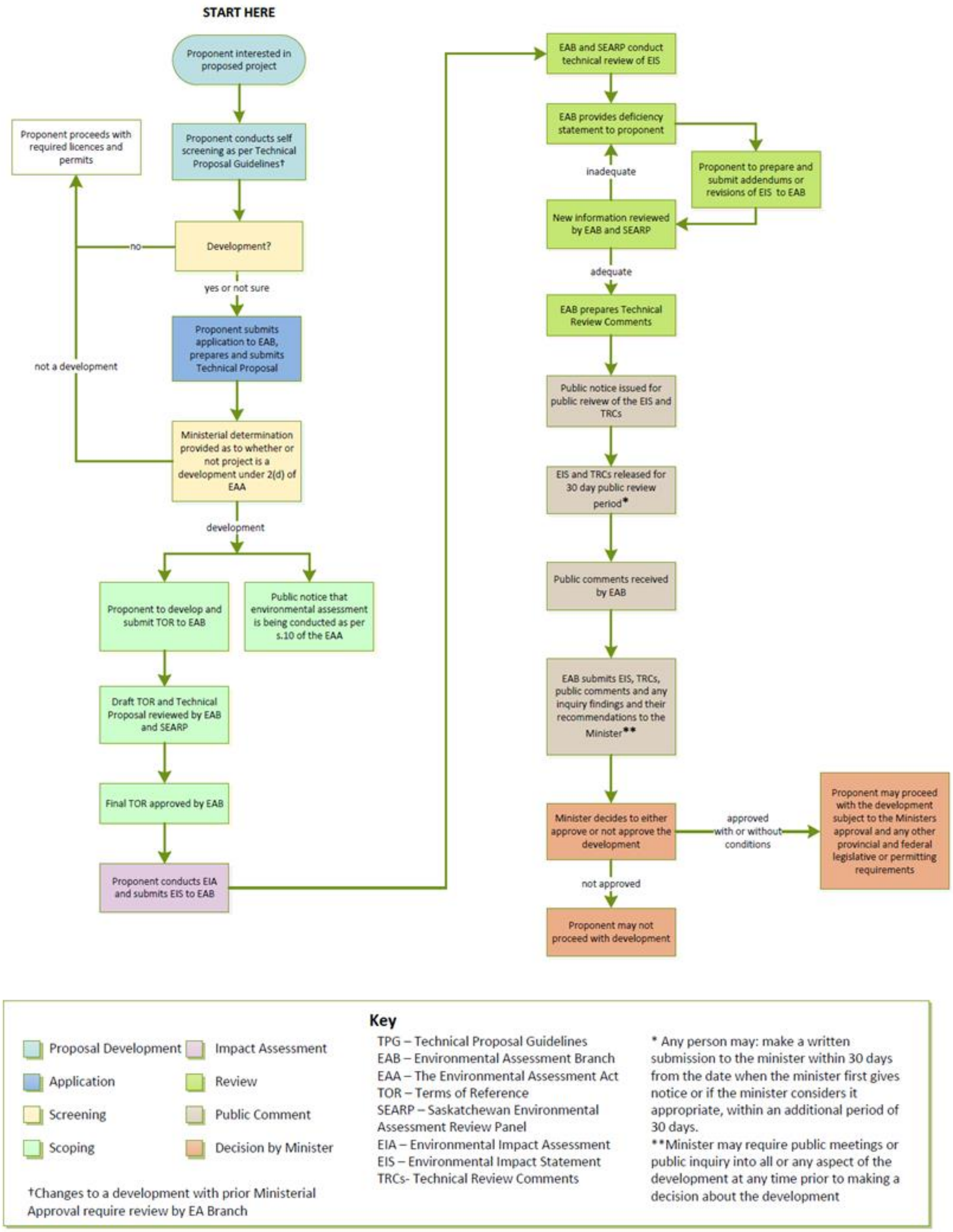

Figure 32: The Saskatchewan Environmental Assessment Process

Gensource represents a new approach to potash production in Saskatchewan. Combining selective solution mining, with enhanced processing and recovery techniques results in several key benefits, such as:

- No salt tailings or brine ponds on surface. Because the mining method is selective, only KCl (potash) is dissolved from the ore zone, leaving essentially all excess NaCl (salt) in place in the ore zone. Leaving that excess salt in the ore zone means not having to deal with it on surface. Without a salt tailings pile, there is no need for brine retention ponds, and therefore no brine containment structures whatsoever.

- The water consumption is small – due to the small size of the project, but also on a per-tonne of production basis. Because the mining process requires a near saturated salt brine, water for mining can also be drawn from groundwater sources and can utilize brackish sources (as opposed to surface or fresh water sources), if found in the area, that are otherwise inappropriate for use by other potential consumers. Traditional solution mining of potash cannot use such sources, as they require fresh water for dissolving both the potash and salt in the ore body, and the large fresh water quantities required are drawn from fresh surface water bodies (often causing public concern).
- The processing technologies are energy efficient, which helps not only reduce carbon footprint, but also reduces operating costs for the facility.
- Using Gensource's proprietary energy system results in self-generation of power for the plant site using a high efficiency natural gas fired boiler. The result is that plant site power has a smaller carbon footprint because it is not drawing from the Saskatchewan provincial power grid system, which derives is generation from a mix of sources, approximately 30% of which is coal. Estimates are that Tugaske will avoid almost 24,000 tonnes of CO_{2e} emissions by generating its own power.

Gensource engaged Golder Associates Ltd. ("Golder") to assist with an environmental assessment of the Project and prepare and submit a Technical Proposal to the EASB.

20.1.2 Regulatory Permitting, Licenses & Approvals

Following the environmental assessment approval, the project can advance into the permitting phase of the environmental regulatory process. The key permits required for a mining development are regulated under the Saskatchewan Mineral Industry Environmental Protection Regulations of EMPA. An Approval to Operate permit, under the EMPA and Clean Air Act, is subject to a number of operating terms and conditions, including: emergency reporting requirements, environmental management, discharge limits, monitoring, record keeping, and reporting requirements.

Federal and provincial permits, licenses and approvals that may be required for the Project are listed in the following table.

Table 31: Provincial Permits, Approvals And Licenses

Jurisdiction	Related Regulations	Permits for Consideration
Provincial Acts		
The Environmental Assessment Act, S.S. 1979-80, E-10.1	■ no specific regulations related to this *Act*	■ Environmental Assessment Approval
The Environmental Management and Protection Act, R.R.S. 2010, c. E-10.22	■ Environmental Code Chapter B.1.1 Discharge and Discovery Reporting ■ Environmental Code Chapter E.1.1 Halocarbon Control ■ Environmental Code Chapter E.1.2 Industrial Source (Air Quality) ■ *The used Petroleum and Antifreeze Products Collection Regulations, E-10.21 Reg 6.* ■ *The Mineral Industry Environmental Protection Regulations, 1996, E-10.2 reg 7.* ■ *The Hazardous Substances and Waste Dangerous Goods Regulations*, R.R.S., c. E-10.2, Reg 3. ■ *The Waterworks and Sewage Works Regulations*, E-10.22 Reg 3.	■ Hazardous Substances and Waste Dangerous Goods Permit to Construct, Upgrade and Operate a Storage Facility ■ Permit to Construct, Operate – Pollutant Control Facility ■ Permit to Construct - Aquatic Habitat Protection Permit ■ Environmental Protection Plan (Air Quality)
The Highways and Transportation Act, S.S. 1997, H-3.01	■ *The Highways and Transportation Regulations*, H-3.01 Reg 1. ■ *The Erection of Signs Adjacent to Provincial Highways Regulations*, 1986.	■ Oversize/Overweight permits
The Water Security Agency Act, S.S. 2005, W-8.1th	■ *Saskatchewan Watershed Authority Regulations*, R.R.S., c. S-35.03 Reg 1.	■ Water Rights License
Oil and Gas Conservation Act, S.S. 1978, O-2	■ *The Oil and Gas Conservation Regulations*, 2012, O-2 Reg 1	■ Drilling License ■ Wastewater Disposal Well Permit
Planning and Development Act, S.S. 2007 P-13.2	■ *The Statement of Provincial Interest Regulations.* ■ *The Subdivision Regulations, 2014.* ■ *The Dedicated Lands Regulations, 2009.*	■ Development Permit ■ Discretionary Use Approval ■ Road Haul Agreement
Reclaimed Industrial Sites Act, S.S. 2007, R-4.21	■ *The Reclaimed Industrial Sites Regulations*, R-4.21, Reg 1	■ Release from site Approval

As the Project progresses to construction, the required information will need to be compiled and submitted to the Saskatchewan Government to obtain the necessary permits and licenses for both construction and operations.

20.2 Regional Environmental Setting

To provide context for evaluating potential changes from the Project, Golder completed both field and desktop reviews, in order to provide a description of the existing environment in the Project area. Such disciplines evaluated included:

- Atmospheric Environment (air quality, acoustic environment);
- Geology;
- Hydrogeology;
- Surface Water Environment;
- Aquatic Environment;
- Terrestrial Environment;
- Land and Resource Use;
- Heritage Resources; and
- Socio-Economic Environment

Reviews of these disciplines provide an understanding of the existing physical, biological and social conditions that may be influenced by the Project (i.e., Base Case). Golder subsequently completed an environmental assessment, which analyzed and classified the environmental effects, and determined the significance of the effects from the Project and other developments on the biophysical and socio-economic components of the environment. The details of this information are contained within their Technical Proposal for the Project.

20.3 Environmental Assessment (EA)

The EA process is an important tool that is used to integrate biophysical, cultural and social factors into project planning and decision-making. The goal of the EA process is:

- to promote sustainable development;
- to engage the public, Indigenous peoples, and government agencies; and
- to identify appropriate mitigation to avoid, limit, and rehabilitate (restore or reclaim) the overall biophysical, economic, social, heritage and health effects of the project.

Projects require an initial application to the MOE regarding the provision of a determination on a project under the Act. The Act, and its related procedures, provides a coordinated review of environmental issues associated with projects and developments in the province. Environmental assessment ensures economic development proceeds with adequate environmental safeguards while providing opportunities for public input and consultation.

A Self-assessment, as described in section 2 of the Act, allows a proponent to evaluate whether or not the proposed project is likely to meet any of the 2(d) criteria under the Act, and if a review under the Act is warranted. Self-assessment can save time and resources, as well as minimize delays to start dates when EASB review is clearly not needed.

Projects with relatively minor impacts, or that are highly-regulated by other regulatory authorities within the ministry or other government agencies, may not require EA review. Following self-assessment, if the project does not appear to be a development under the Act, proponents should proceed with contacting other ministry branches or regulatory authorities to obtain permits and licenses needed for the project to proceed.

As discussed in sub-section 20.1.1, Golder helped complete an initial environmental assessment and submitted a Technical Proposal to the EASB for review and determination as to whether or not the Project would classify as a development, as defined under the act. The Technical Proposal was submitted to the EASB in June 2017, and was followed by several rounds of additional Information Requests (or “IRs”) from the various stakeholders with the MOE. On August 8, 2018, Gensource received the Ministerial Determination of ‘not a development’ from the MOE for the Project. As a result of the Determination, Gensource is not required to complete a full Environmental Impact Assessment (EIA), since the Project is unlikely to have a significant impact on the environment. This notification officially confirms that the Project can now proceed to the next stage of the environmental regulatory permitting, licensing, and approval process as discussed in sub-section 20.1.2.

Since receiving the Ministerial Determination in 2018, as discussed elsewhere in this report, certain modifications to module design were implemented to suit the intended potash market of the Offtaker. The modifications were reviewed in the context of the previous environmental assessment and Technical Proposal submission to the EASB by Golder, and the team prepared and submitted a memorandum outlining the updates to the Project and the resulting changes to previously assessed impacts. Since the changes were non-material, it was again determined that the Project does not trigger any of the criteria for requiring an EIA under the Act, and on June 26, 2020, the EASB supplied a letter confirming that the ministry conducted a technical review of the minor changes to the Project, and that Ministerial Determination of 'not a development' remains valid.

20.4 Engagement

The main purpose of engagement is to provide a means to communicate with stakeholders who could potentially be impacted by the project. Gensource views engagement as a key element to allow for the involvement of these stakeholders in the early stages of the project. The following are key objectives of the engagement effort:

- Identify members of the general public, First Nations and Métis communities, and federal and provincial regulatory authorities who may have an interest in the project;
- Prepare information for stakeholders about the project;
- Prepare a process to document communications and any issues or concerns raised about the project and the outcomes;
- Plan and schedule opportunities for stakeholder input on the study area and potential effects from the project (i.e., biophysical and socio-economic components of the environment);
- Identify possible mitigation that can be incorporated into the project planning and/or design to resolve issues

Gensource has maintained proactive efforts to communicate information regarding the Project with impacted stakeholders over the course of the Project thus far, and maintain continuous engagement efforts with the community, which has included, but is not limited to:

- Hosting public information meetings in the community;
- Hosting First Nations and Metis focused open-house and information sessions;
- Attending Village and R.M. council meetings;
- Meeting in-person and/or over the phone with various landowners interested in the Project and/or who are impacted by any of Gensource's exploration or development efforts;
- Communicating with local business, services providers, and interested parties for potential employment or service requirements for the Project and/or operations;

- Attending local community fundraising and social events;
- Making charitable donations to local organizations, facilities, or causes;
- Meeting and maintaining contact with the various Government ministries, agencies, and officials, including technical and commercial groups with the Crown Corporations; and
- Providing news releases and public disclosure regarding the advancement of the Project on the company's website, through quarterly teleconference calls, and other various media sources and publications.

Gensource is committed to maintaining and open and consistent engagement with the stakeholders throughout the life of the Project – working to build a strong and trusting relationship with the communities in which we will build and operate.

20.5 Environmental & Social Due Diligence

In early 2020, the Senior Lenders commissioned an independent consultant to undertake an Environmental and Social Due Diligence (ESDD) assessment of the Project. The specific objectives of this ESDD were to:

1. Verify the adequacy of:
- the Project's environmental approval process,
- the Environmental Management Plan and proposed measures, monitoring system and budget,
- the evaluation of any 'Associated Facilities' (if applicable) relative to International Finance Corporation (IFC) Performance Standard 1,
- the consultation and information process with stakeholders (land owners/users, local communities, non-governmental organizations, authorities, etc.) including grievance mechanisms;
2. Review whether capacity and management structures to address environmental and social impacts are feasible and appropriate, notably during Project construction and operation; and
3. Document the above, per Equator Principles (EP) IV guidance.

To complete the ESDD, the independent consultant reviewed documents provided, as well as publicly accessible and commercially available information associated with the site environmental conditions and provincial and federal government regulatory requirements. Additionally, interviews with Gensource's executive team, Gensource's environmental consultant (Golder), and Rural Municipality (R.M.) officials in the impacted communities were conducted. The detailed confidential ESDD Report was submitted to the Senior Lenders in June 2020 and supports the on-going efforts towards financial close with the Senior Lenders.

21 CAPITAL AND OPERATING COSTS

21.1 Capital Cost Estimate

21.1.1 Capital Cost Summary

An integrated team, consisting of Gensource, Innovare, Engcomp and its engineering sub-consultants, and general construction contractor South East Construction ("SEC") worked together during the Vanguard One Feasibility Study to perform the necessary engineering, procurement, estimating, scheduling and constructability reviews to develop the AACE International (AACE) Class 3 Capital Cost Estimate ("CCE") - referred to as the capital expenditure (or "CAPEX") for the Project. According to AACE guidelines, a Class 3 estimate should have an expected accuracy in the range of -10% to -20% on the low side and +10% to +30% on the high side after the application of contingency, at a 50% level of confidence. The CCE developed for the Vanguard One Project represented the anticipated cost for a typical Gensource module. This cost was summarized in a previously disclosed NI43-101 Technical Report (Fourie et al., 2018).

Subsequent to the Vanguard One Feasibility Study, as discussed in more detail in Section 19, Gensource is now advancing the project as the "Tugaske Project" - with a specific focus on the potash market in the USA. Some process design changes were made to the Vanguard One Project module as part of the Tugaske Project, in order to suit the requirements of this market. The primary changes included:

- **Product Type:** The Tugaske Project will produce a granular grade MOP product with a Size Guide Number (SGN) of 300, that can be either pink or white (clear) in colour.
- **Product Storage & Hauling:** The Tugaske Project will implement a bulk storage facility and on-site rail, that combined, allow for 25,000 short tons of product storage. The design will accommodate a "unit-train" (~ 100 standard bulk hopper railcars), and product can be loaded/shipped via bulk rail or bulk truck.

Therefore, the Vanguard One Project CCE was used as the basis to develop the Tugaske Project CCE and the required changes were incorporated, resulting in an updated AACE Class 3 CCE for the Project.

Finally, based on the FEED efforts, and feedback received from the debt financing due diligence process, further updates were made to the design and CCE for the Tugaske Project. Key aspects from FEED which were incorporated into the updated CCE included:

- Integration of German vendors into the Project;
- Inclusion of escalation since the original CCE was completed, bringing all procurement and pricing up to date; and
- Inclusion of a number of risk-mitigating items as deemed prudent by Gensource in consultation with the Senior Lenders' Independent Engineer.

These updates to the Tugaske Project resulted in an estimated CAPEX of $CAD 352.1 Million. This includes a contingency of $CAD 33.6 Million, which is approximately 10% of the total direct and indirect costs. The contingency for the Project represents a minimum P85 level of confidence from the Monte Carlo analysis completed for the CAPEX.

The following table summarizes the total CCE, by Level 1 of the Project's Work Breakdown Structure (WBS).

Table 32: CCE Summary (By WBS Level 1)

WBS Area	**CAPEX (M$CAD)**
100 – Mining	$30.8
200 – Well Field	$17.1
300 – Process Plant	$96.9
400 – Product Storage & Loadout	$15.8
500 – Site Infrastructure	$23.5
600 – Offsites	$7.9
700 – Non-Process Facilities	$29.9
900 – Project Indirects	$96.6
SUB-TOTAL (Pre-Contingency)	**$318.5**
980 – Contingency	$33.6
GRAND TOTAL	**$352.1**

21.1.2 Basis of Estimate

21.1.2.1 Direct Costs

According to AACE, "Direct Costs" are:

"Costs of completing work that are directly attributable to its performance and are necessary for its completion. 1) In construction, the cost of installed equipment, material, labor and supervision directly or immediately involved in the physical construction of the permanent facility. 2) In manufacturing, service, and other non-construction industries: the portion of operating costs that is readily assignable to a specific product or process area."[5]

Direct Costs for the Tugaske Project CCE were estimated utilizing a "bottom-up" estimating methodology. As defined by the Project Management Institute (PMI) in their Project Management Body of Knowledge (PMBOK®), bottom-up estimating is a method of estimating project duration or cost by aggregating the estimates of lower-level components of the WBS. Thus, bottom-up estimating involves the estimation of work at the most detailed WBS levels. These estimates are then aggregated in order to arrive at WBS summary totals. By building detailed cost and time estimates for a work package by the detailed WBS levels, the probability of being able to meet the estimated amounts improves substantially. While bottom-up estimates

[5] http://library.aacei.org/terminology/

may take more time to complete, they are typically more accurate than either analogous or parametric estimates.[6]

For the Tugaske Project CCE, Direct Costs consist of the costs estimated for each of the following categories:

- Tagged Equipment;
- Bulk Materials;
- Labour;
- Sub-contracts;
- Construction Equipment; and
- Other

A procurement package list was developed for the equipment required for the project ("tagged equipment"), whereby equipment was grouped together into packages and sent to equipment suppliers requesting budget pricing. Budget quotes were obtained from equipment suppliers for procurement packages greater than $CAD 50,000 in value. Tagged equipment less than $CAD 50,000 were estimated based on in-house historical pricing or from on-line catalogue pricing. The majority of the tagged equipment pricing was updated during FEED, as it was being driven by either the KKE design-supply-commission package for the process plant, or the items outside of the KKE scope that are likely to be procured through a German procurement general contractor (i.e., MAVEG).

Material take-offs (MTOs) were produced from the 3D plant model for piping, fabricated items, foundations, concrete, structural steel, building finishes, and major cable tray runs. Power cables and instrument MTOs were based on the cable schedule and P&IDs respectively. Earthwork and site utilities material take-offs were produced from 2D site layout drawings. A preliminary 3D model was created for the proposed changes to the process plant layout for the KKE equipment, and reviewed by the team, to investigate any relevant modification to the previous MTOs used in the CCE. Such modifications were made, where warranted, and the group has high confidence that there remains some opportunity to optimize these MTOs during the detailed engineering phase, when the revised process plant layout will be completed in more detail. For instance, there remains the opportunity to reduce the overall footprint of the building based on the revised KKE process design, equipment selection, and arrangement; however, the existing footprint has been assumed in the current CCE in order to remain conservative.

A key benefit of having the general construction contractor, SEC, involved early in the Project is that the estimates of construction labour are provided directly by the contractor actually performing the work, leading to a higher degree of confidence in the base estimate. SEC completed the direct field cost estimate for installation of process, mechanical, electrical and instrumentation equipment, as well as the supply and installation of bulk materials and

[6] https://www.projectmanagement.com/wikis/368761/Bottom-Up-estimating

construction equipment. A minor amount of subcontract costs was provided by contractors other than SEC (i.e., potential subcontractors or "subcontracts"), as SEC will self-perform the majority of the construction work. For example, pre-engineered buildings prices were collected from firms that supply and install such buildings as part of their normal scope of supply, and included under subcontracts in the CCE. Finally, as part of FEED, SEC re-assessed the construction estimates to account for the integration of KKE's scope into the process plant, and made updates to their labour and supervision estimates accordingly.

The drilling and solution mining estimates provided during the Vanguard One Feasibility Study were based on the experience and knowledge of Gensource's drilling and solution mining subject matter experts (SMEs), and verified by quotes from drilling contractors. As part of the FEED, the SMEs revisited the drilling cost, schedule, and strategy previously developed – with some of the SMEs having the benefit of recently completing the horizontal drilling of potash caverns in Saskatchewan's Prairie Evaporite Formation on another project. This recent work provides valuable insight into the horizontal leg drilling rates used in the previous estimate and allows the updated estimate to be more conservative with respect to the anticipated timelines and costs. Finally, the estimate was also bolstered by ensuring that risk reduction measures for drilling, such as directional drilling time, geosteering, measuring gamma at bit, etc. were all captured in these CCE updates, providing increased confidence in proposed drilling program.

21.1.2.2 Indirect Costs

According to AACE, "Indirect Costs" are:

"Costs not directly attributable to the completion of an activity, which are typically allocated or spread across all activities on a predetermined basis. (1) In construction, (field) indirects are costs which do not become a final part of the installation, but which are required for the orderly completion of the installation and may include, but are not limited to, field administration, direct supervision, capital tools, startup costs, contractor's fees, insurance, taxes, etc. (2) In manufacturing, costs not directly assignable to the end product or process, such as overhead and general purpose labor, or costs of outside operations, such as transportation and distribution. Indirect manufacturing cost sometimes includes insurance, property taxes, maintenance, depreciation, packaging, warehousing and loading."[6]

For the Tugaske Project CCE, Indirect Costs consist of the costs estimated for each of the following categories:

- Construction Temporary Facilities;
- Construction Services and Utilities;
- Indirect Construction Labour;
- Construction Equipment and Materials;
- Distributables;
- Freight, Duties and Taxes;
- Engineering, Procurement and Construction Services;

- Pre-Commissioning, Commissioning and Start-up, including first fills, commission and start-up spares;
- Other Costs, including office furnishings, maintenance equipment and rolling stock; and
- Owner's Costs

Indirect field costs including temporary construction facilities, services and utilities, indirect construction labour, construction equipment and materials, distributables, etc. were validated and revised where required by SEC, as they are the general contractor who will be responsible for providing these items during construction.

Since the majority of the equipment will be of German or foreign origin, an increase to the anticipated freight, duties, and taxes has been accounted for in the updated estimate.

The Saskatchewan Provincial Sales Tax (PST) of 6% has been included on all construction costs, based on the latest regulations from the Government of Saskatchewan. What should be noted that the Government has recently rescinded the applicability of PST for certain drilling services, and therefore there may be some reduced tax paid versus estimated for these expenses; however, to remain conservative, since PST exemptions are subject to change by the Government, a full 6% PST on drilling is included in the updated CCE.

Engcomp revised the detailed engineering costs to account for the reduction in engineering scope, now transferred to KKE as part of its services.

Indirect Costs were also updated during FEED with respect to Owner's Costs. Such updates included receiving current indicative pricing for the premiums of the various insurance coverages planned for the Project, which will be provided as an "Owner's Controlled Insurance Program" (or "OCIP"). Additional polices such as a "Control of Well" insurance policy during cavern drilling has been included in the insurance costs, as is the cost to secure the necessary Decommissioning & Reclamation ("D&R") bond required for construction licensing. These insurance revisions are seen as additional risk mitigation strategies for the Project. The Owner's Cost update during FEED also accounts for the impacts to indirects based on the integration of German content into the Project. This included the addition of on-site time for KKE to provide supervision during installation of equipment, training, and commissioning and start-up support for their design-supply-commission package. Lastly, the estimated premium for engaging a German procurement general contractor (or "exporter of record" for the ECA process) is accounted for in the revised estimate of Owner's Costs.

21.1.2.3 Provisional Costs

Provisional costs in the CCE refer to:

- Contingency;
- Risk Reserve; and
- Escalation

The range of probable costs in an estimate are based on the variability associated with the different cost sources used to generate the estimate - ranging from highly variable to relatively low variability (i.e., estimates based on allowances usually have higher variability, whereas estimates based on firm quotes have lower variability). During the FEED work, a significant portion of the CCE was determined by fixed price (or firm price) offers, budget quotations, quoted unit rates and other lower variability cost sources. The table below shows a breakdown of cost source in the updated CCE (not including contingency).

Table 33: CCE Breakdown & Variability by Cost Source

Cost Estimate Method	Total Estimate (Excluding Contingency, M$CAD)	Percentage of Total Estimate (%)	Variability
Allowance	5.4	2%	High
Firm Price Quote	55.9	18%	Low
Budgetary Quote	114.9	36%	Low
Estimate	106.4	33%	Medium
Factored	35.9	11%	Medium
Total	**318.5**	**100%**	

During FEED, the CCE updates provided additional confidence in the Project budget.

An updated quantitative risk analysis (QRA) was subsequently completed, utilizing the statistical model previously developed for the Project. A QRA is used to develop a probabilistic range for the potential costs of the Project, considering uncertainty, and allows the Owner to evaluate the potential contingency to allocate to the Project to arrive at a certain “Level of Confidence” (or “LOC”) that the Project can be completed at or below the selected budget. Variability ranges in the QRA model for specific estimates were modified to reflect the further engineering definition and procurement efforts completed during FEED.

When evaluating the $CAD 352.1 Million budget (which includes the $CAD 33.6 Million contingency) against the updated QRA results (statistics) summarized in Table 34, it can be seen that this budget exceeds the 85th Percentile (“85%” or “P85”) from the Monte Carlo simulation which included over 10,000 iterations of probabilistic project cost scenarios (the statistical values for the P85 are outlined in red in Table 34). These statistics indicate that the updated CCE of $CAD 352.1 Million established during FEED has an LOC of 85% - meaning that at least 85% of all 10,000 scenarios modelled were below this budget; stated another way, there is less than a 15% chance that this budget will be exceeded according to the QRA.

Table 34: QRA Summary Statistics

Summary Statistics for Total Project Cost			
Statistics	**$CAD**	**Percentile**	**$CAD**
Minimum	$ 287,353,399	**5%**	$ 314,471,251
Maximum	$ 386,492,286	**10%**	$ 318,905,850
Mean	$ 336,364,465	**15%**	$ 322,120,697
Std Dev	$ 13,610,242	**20%**	$ 324,660,514
Variance	1.852E+14	**25%**	$ 326,946,995
Skewness	0.07	**30%**	$ 329,026,494
Kurtosis	2.92	**35%**	$ 330,868,445
Median	$ 336,208,173	**40%**	$ 332,680,694
Mode	$ 339,583,626	**45%**	$ 334,510,529
Left X	$ 314,471,251	**50%**	$ 336,208,173
Left P	5%	**55%**	$ 337,867,136
Right X	$ 359,142,424	**60%**	$ 339,736,285
Right P	95%	**65%**	$ 341,536,839
Diff X	$ 44,671,172	**70%**	$ 343,390,017
Diff P	$ 1	**75%**	$ 345,454,602
#Errors	0.00	**80%**	$ 347,680,712
Filter Min	Off	**85%**	$ 350,570,491
Filter Max	Off	**90%**	$ 354,197,383
#Filtered	0.00	**95%**	$ 359,142,424

Regarding “risk reserve” (sometimes also referred to as “management reserve” or “owner’s reserve”), Gensource has aligned with the reserve analysis approach laid out by in the PMI’s PMBOK®. In the PMBOK®, contingency is meant to account for the “known-unknowns”, whereas a management reserve can be considered to account for the “unknown-unknowns”. This management reserve, unlike contingency, is therefore not included in the CCE, since this amount is not anticipated to be spent over the duration of the Project. If, during execution, an issue materializes that was not intended to be covered by contingency, then the project team will make a case to the project steering committee of the owner to access the reserve in order to adequately address the issue. An appropriate management reserve is being addressed separately between Gensource and the Senior Lenders, to be included in the debt financing package for the Project.

During FEED the most significant components of the Project costs were reviewed, and updated, and reflect current pricing (i.e., KKE process plant design-supply-commission package, cavern drilling estimate, etc.). The construction labour estimates were updated to reflect the current agreed rates for the construction trade unions, and the subsequent rates which will form the basis of the multi-party agreement between Gensource, Engcomp, and SEC.

21.1.2.4 Currency Exchange

During FEED, the following currency exchange rates were used to update the CCE:

Table 35: CCE Currency Exchange Rates

Exchange Rates		
CAD	**$**	**1.00**
US	**$**	**1.21**
EUR	**$**	**1.47**

21.2 Operating Cost Estimate

During FEED, adjustments were made to the anticipated operating expenditures ("OPEX"), as well as the budgeted maintenance costs and sustaining capital expenditures ("sustaining CAPEX") of the operations. The adjustments incorporated changes driven by the integration of KKE's technical design changes to the process and the resulting adjustments to the required utilities to support these process changes. Also, with feedback provided by the Senior Lenders' Independent Engineer during the technical due diligence process, adjustments were made to the annual budget estimates to provide additional risk-mitigation for the operations and conservatism in the Project economics. These updates are discussed in more detail in the following sections.

21.2.1 Operating Cost Summary

The following is the resulting OPEX summary[7].

Table 36: OPEX Summary

	$/t KCl	
Total OPEX $CAD:	$	64.09

Due to the selective mining method and Gensource's processing enhancements, the small-scale facilities will run at extremely low cost per tonne of product produced. When compared to data published by other projects, the OPEX per tonne appears at the low end of the lowest quartile of all potash operations globally.

[7] As discussed previously, the nominal production capacity of the Tugaske Project is 250,000 tonnes per year (t/y) of final saleable MOP product. However, from the engineering analysis and process design work completed, the actual base case productive capacity of the Project, operating for 8,000 hours per year, is 250,820 t/y of a high purity product (i.e., 99+% KCl, versus the industry standard of ~96% KCl, 60% K_2O, MOP product grade). When dealing with the analysis of cost per tonne of product produced, for both Section 21 and Section 22 of this report, the actual base case productive capacity of 250,820 t/y is used rather than the nominal capacity - resulting in a true reflection of actual costs per tonne. The difference between the two capacities is small at only 0.33%; however, note is made of this difference here for transparency and completeness. It is additionally important to note that the build-up of operating hours per year to 8,000 leaves some 300 hours annually as "unallocated". These unallocated operating hours will not likely be wasted and can ultimately be used for: increased maintenance; unplanned downtime (although a factor for unplanned downtime has already been included), and/or; additional production time. If all 300 hours are used in production, the annual product tonnes could increase to as much as 260,226 t/y of high purity 99+% KCl. If the product purity can be reduced through processing methodologies to meet the industry standard grade of 60% K_2O, the total annual MOP tonnes produced could reach 267,219 t/y. The base case of 250,820 t/y of high purity product is used in subsequent unit cost calculations in order to present a conservative analysis.

Annual investment is required to maintain the facility, including all buildings, equipment, materials, etc. Further to this, future upgrades may be required to specific equipment, systems, and even the mining caverns at certain intervals over the life of the asset, which are implemented as sustaining CAPEX projects. The following is the average annual budget, on a per tonne basis, for maintenance and sustaining CAPEX.

Table 37: Maintenance & Sustaining CAPEX Summary

	$/t KCl
Total Sustaining CAPEX $CAD:	$ 20.99

21.2.2 Basis of Estimate

Annual OPEX consists of both fixed costs that are independent of production capacity (e.g., operating personnel, land and taxes, etc.) and variable costs that are dependent on production rates (e.g., utilities, consumables, etc.). The fixed and variable OPEX costs in each of these respective categories were updated during FEED.

21.2.2.1 Operating Personnel

An operations plan accounts for 46 full-time positions, required to operate and maintain the potash production facility. This includes all necessary personnel for the well field, process plant, maintenance, and general and administration functions. These personnel will be on-boarded during the construction and commissioning stage of the Project, and support the Project team transition the Project to operations. On-boarding will include training of operations personnel on the systems provided by the equipment manufacturers/vendors. Due to the "24/7" nature of running a potash facility (i.e., operating for 24 hour per day, 7 days per week), some functions will require 24 hours per day coverage to operate the facility, and shifts will be established for appropriate coverage and rotation of personnel for these functions. Some functions will only require personnel on a day shift basis, and call-out protocols will be established as required. The OPEX cost for having personnel to meet this operations plan was updated during FEED.

21.2.2.2 Land, Taxes, and Insurance

During FEED, Gensource re-assessed and updated the previous estimates in the OPEX estimate for Land, Taxes, and Insurances, to reflect current information. These items include:

- Annual maintenance for roads, rail, etc.;
- Annual long-term lease payments for surface well pads;
- Rural Municipality (R.M.) Property Tax; and
- Operating Insurances

21.2.2.3 Corporate Overhead

Each of Gensource's small-scale potash production facilities are intended to be a fully independent functional entity. The JV group owning the Project will be setup under one of the many different styles of private company structures available, which will likely be driven by optimizing tax and legal requirements. Regardless, Gensource does not envision the entities owning/operating these modules will carry any corporate overhead of a "head office", such as a CEO, CFO, etc. However, for conservatism, a nominal general and administration ("G&A") cost for corporate support of the operations is accounted for in the financial model and Project economics, estimated annually at 1.50% of gross revenue.

21.2.2.4 Natural Gas

Natural gas consumption is the largest single utility demand for the operations, required for the steam and energy demands of the facility (e.g., brine heating/cooling, dryers, building heaters, make-up air units, etc.), as well as for production of power through a high-pressure boiler and steam turbine generator.

Under the KKE process design updates, there are fewer pieces of equipment requiring power (e.g., pumps/motors, etc.), and therefore, there is a lower annual power demand than under the original process design. Also, since KKE will utilize a fluid bed dryer for primary drying (as opposed to a rotary drum dryer previously specified), there is a lower annual natural gas consumption for this equipment because of the design temperatures required and the efficiency of the equipment. Altogether, the annual total natural gas consumption for the Project has been reduced to 235,000 MJ/h (235 GJ/h) or 1.9 Million GJ annually, a reduction of approximately 10% from previous design iterations.

During FEED, the natural gas delivery costs were also re-evaluated, based on updated commodity pricing, using pricing information available from Alberta Energy Company ("AECO") – which is representative of the natural gas prices and demand in the Western Canadian provinces, including Saskatchewan. The average of forecasts of real AECO average prices were updated, using the average of a forward looking 8-year forecast from 2020 to 2027 (showing an 8-year average of $CAD 2.46/MCF[8]). When combined with the applicable charges (e.g., demand charge, commodity charge), the total delivered natural gas price used during FEED was $CAD 3.12/GJ[9]. Current (as of July 2021) AECO real prices are slightly above $CAD 2.00/MCF, so conservative margin remains in the natural gas cost assumed in the OPEX estimate.

21.2.2.5 Other Utilities

In addition to the updates for the key OPEX utility (Natural Gas), estimates for "Other Utilities" were also re-evaluated and updated during FEED to reflect current information. These items include:

- Standby power provided by the crown utility, SaskPower, on as as-needed basis (i.e., emergency start-up or backup power);
- Drinking water;

[8] MCF is an abbreviation derived from the Roman number M for one thousand, put together with cubic feet (CF), and is used as a measure of natural gas (i.e., 1,000 cubic feet). AECO provides natural gas pricing in $/MCF.

[9] Natural gas usage for the Project is estimated in Gigajoules (GJ), therefore conversion of the natural gas pricing from $/MCF to $/GJ is necessary to calculate the operating costs. 1 MCF is approximately 1.06 GJ.

- Sewage and waste disposal;
- Fuel for mobile equipment; and
- Technology and Telephony (i.e., Internet/Data and Phones)

The FEED changes did not materially impact any of the estimates previously established for these items.

21.2.2.6 Consumables

"Consumables" includes chemicals and reagents required in the process, as well general maintenance and operations supplies. The following items have been accounted as part of the annual OPEX:

- Process Chemicals & Reagents:
    - Anti-caking amine;
    - Dedusting oil; and
    - Iron oxide
- Supplies:
    - Maintenance & operating consumables;
    - Miscellaneous supplies; and
    - Personal Protective Equipment (PPE)

Process chemicals and reagents include de-dusting oil and anti-caking agents, which are applied to the finished product before storage and/or shipping, to prevent material degradation. Iron oxide colourant is required to create a pink product and is added prior to compaction. The process chemicals and reagents consumption were updated during FEED, for each of these 3 items. Application rates were obtained based on KKE's process design changes, and from consultation with the manufacturers/vendors of these additives. Updated pricing for these additives was also obtained.

Maintenance and operating consumables include items such as oils, greases and lubricants, welding rods, steel plate, and other miscellaneous materials and small parts. These consumables were estimated at 0.1% of the total tagged equipment cost, and are in addition to the sustaining CAPEX budgets for equipment repairs and/or replacement. The miscellaneous supplies are those supplies necessary for an industrial and operating site, and include items such as administration supplies, janitorial supplies, medical and first aid supplies, safety supplies, etc. The estimate for these supplies is based on the size of the operation. Finally, a small Personal Protective Equipment allowance is provided to each employee, for small personal PPE purchases, such as safety boots and/or coveralls. All other PPE items are included in the general safety supplies budget.

21.2.3 Maintenance & Sustaining CAPEX

The following annual maintenance and potential sustaining CAPEX investments have been included in the Tugaske Project financial model, and are reflected in the resulting Project economics.

21.2.3.1 General Maintenance (Self-Performed)

For large industrial process plants, anticipated maintenance costs are generally estimated as a factor of the replacement cost of the plant. Majority of the maintenance work can be performed by the maintenance personnel employed, with larger and/or custom work being contracted out on an as-needed basis (see sub-section 21.2.3.2). For a potash plant, a typical factor for maintenance capital costs is estimated at roughly 2% of replacement cost. A new plant requires a minimal level of maintenance in the early years of its economic life, since the equipment is still new (and even under warranty in many instances, which is typically 2 years on most equipment). Therefore, a reduced sustaining CAPEX budget of 50% (or 1% of replacement cost) was used during the first two full producing years (i.e., Year 3 and 4 after First Product, since the Project assumes a 2-year ramp-up to full production of 250,000 tonnes per year). This annual budget then increases to 2% of the replacement cost, for the remaining economic life of the Project (i.e., starting in Year 5 after First Product, and continuing for the life of mine).

21.2.3.2 Contracted Maintenance Services

As discussed in sub-section 21.2.2.1, to create a lean and efficient operations, and reduce unnecessary overhead and payroll burden for personnel that may not be fully utilized, the annual maintenance strategy of the operations also includes engaging the local mining industry and supply chain (which is extensive in Saskatchewan), to support larger and/or more complex maintenance tasks that cannot be readily or easily handled by the full-time maintenance personnel alone. An annual budget of 0.5% of the replacement cost has been carried in the financial model (applied in a similar fashion to the general maintenance budgets discussed in sub-section 21.2.3.1), to allow for master services agreements (MSAs) to be setup between the operations and various service providers, so that these service providers can be called upon as needed for any planned or unplanned support.

21.2.3.3 Cavern & Well Field Replacement

The single largest potential sustaining CAPEX investment for the operations is the cost of adding six (6) new horizontal caverns, with associated pipelines and infrastructure, when caverns reach the end of their productive life. This replacement is conservatively estimated to be required every 12 years, and the replacement costs have been allocated over two successive years for: (1) the completion (drilling) of the new caverns and, (2) fabrication and installation of the new pipelines and wellfield equipment respectively. In reality, each set of 6 caverns drilled, including the initial 6 caverns, may have a longer economic operating life than 12 years, as mining within the initial target formation (i.e., PLM 1) is likely to continue upward into the upper members of the Patience Lake Member (i.e., PLM 2 through PLM 4) which also have KCl grades amenable for selective solution mining. See Section 16 for additional discussion on the selective solution mining method. Ultimately, each cavern will be operated as long as it is economic, but for conservatism, a full cavern and wellfield replacement (~ $CAD 46 Million) is included twice over the economic life modelled for the Project.

21.2.3.4 Well Maintenance

The estimated annual maintenance costs for cavern well (injection and production well) workovers (i.e., $CAD 1 Million annually), and disposal well testing and maintenance per regulatory requirements (i.e., $CAD 300,000 every 10 years), have not changed from those estimated for the Vanguard One Feasibility Study. However, for additional conservatism, during FEED the sustaining CAPEX budget was increased to assume that the annual maintenance costs of $CAD 1 Million will still be expended on the existing 6 caverns, while the 6 new caverns are being completed as discussed in sub-section 21.2.3.3; where in reality, the maintenance programs on these existing wells will likely be reduced as part of the transition to the new set of caverns.

21.2.4 Taxes & Royalties

For potash producers in Saskatchewan, taxes can be categorized as: (1) specific potash related taxes and royalties, and (2) typical taxes on businesses. With respect to the latter, these taxes include income tax, for which Saskatchewan's general tax rate on corporate taxable income is 12%, Federal Goods and Services Tax (GST) of 5%, and Provincial Sales Tax (PST) of 6%.

With respect to potash related taxes, the Potash Production Tax Schedule of the Saskatchewan Mineral Taxation Act, 1983 (Government of Saskatchewan, 2019) and the Potash Production Tax Regulations (Government of Saskatchewan, 2020), the following additional taxes apply to the Project:

- Base payment production tax;
- Saskatchewan Potash Profit Tax (PPT); and
- Saskatchewan resource surcharge

The base payment (or Base Levy) is calculated on a calendar year basis with a minimum rate of $CAD 11.00/t and a maximum rate of $CAD 12.33/t of K_2O sold, depending on potash grade. New producers are exempt from paying this tax for 10 years, provided that its production capacity exceeds 122,000 t of K_2O per year. The base payment is calculated in isolation of the producer's profit as the base payment calculation is overridden by the minimum and maximum amounts. The base payment produces a credit against profit tax.

The Saskatchewan PPT is a progressive payment based on net profit from mine operations. This tax is considered a profit-sharing tax and as such will be variable from quarter-to-quarter and year-to-year. There cannot be one fixed dollar amount or percentage affixed to operating profits. The PPT is a complex and comprehensive calculation, with the ultimate tax calculated on a per K_2O tonne of profit, net of base payments, corporate allowance (currently 2%), corporate office incentive, depreciation allowance (120% on new capital expenditures in excess of 90% of a company's 2002 capital expenditures), loss carry-forward (to a maximum of 5 years), research and development ("R&D") tax credit (40% of approved expenditure), and royalties. The profit tax rate payable in 2011 was 15% on profit up to $CAD 59.55/t of K_2O and 35% for profit over $CAD 59.55/t of K_2O. There are provisions for R&D tax credits; however, these credits are not included in the financial model. Under the R&D tax credit regime, credits must be applied for and approved by the Ministry prior to the credits being applied. With the current deductions available, the Tugaske Project will not pay the PPT tax for approximately 5.5 producing years. The Tugaske Project will apply for R&D tax credits which is expected to further delay paying PPT taxes.

Royalty rates payable under Section 38 of The Subsurface Mineral Regulations (Government of Saskatchewan, 2017), to the province of Saskatchewan is now calculated at 3% of average annual K_2O revenue. Royalty rates in respect of production from Freehold subsurface mineral leases will reflect the same level as those paid for production from Crown lands.

Although Saskatchewan no longer imposes a capital tax on corporations, the province does apply a 3% resource surcharge based on the value of fiscal-year resource sales for companies with gross assets of $CAD 100 Million or more (as determined by its balance sheet for income tax purposes) and a positive taxable paid-up capital balance.

Finally, as per existing agreements in place, private royalties are included in the financial model and resulting Project economics.

All of these taxes and royalties are accounted for in the annual costs to operate the Tugaske Project, and are included in the resulting Project economics.

21.2.5 OPEX Summary

The following represents the "All-In" cash operating costs of the Tugaske Project (shown in $US per tonne KCl), once it reaches full production. The first 5.5 years (approximately) are "free" of the PPT – as the regulations allow for tax shields through the grossed-up and accelerated depreciation of capital costs incurred during the construction of the Project. As such, the Tugaske Project will be shielded from PPT for approximately 5.5 years of full production, at which point this PPT "holiday" will conclude, and PPT will apply as discussed in sub-section 21.2.4. The following figures depict the All-in cash operating costs, during and after the PPT holiday. What should be noted is that the PPT is not a fixed percent calculation but is based on quarter-to-quarter profitability. The PPT calculated does not include R&D tax credit provisions which are expected to be available to the Tugaske Project when operating. As such, the PPT as calculated is likely overstated.

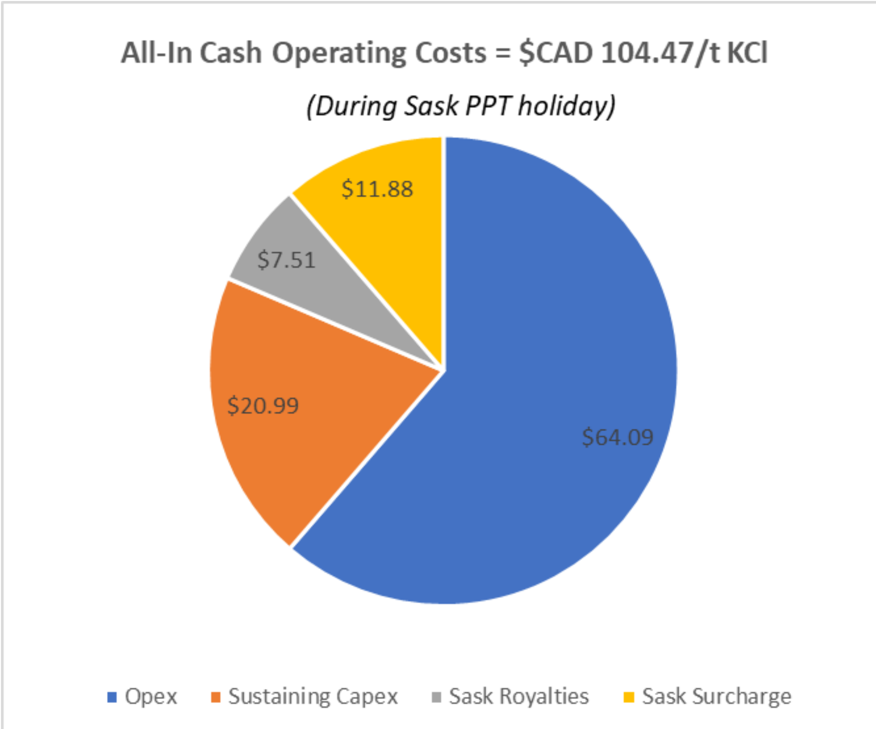

Figure 33: All-In Cash Operating Costs ($CAD/tonne KCl) – During PPT holiday

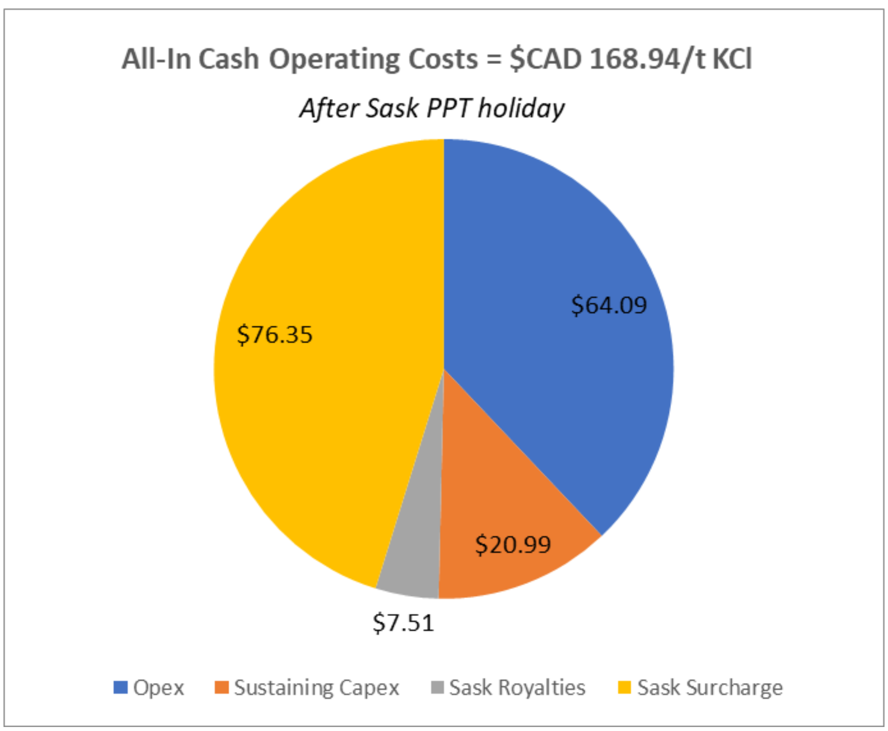

Figure 34: All-In Cash Operating Costs ($CAD/tonne KCl) – After PPT holiday

22 ECONOMIC ANALYSIS

The financial performance of the Project was re-evaluated during FEED, once again using a discounted cash flow ("DCF") analysis. Since financing of the Project has advanced significantly with the inclusion of a senior debt financing component from the Senior Lenders, the annual financial model previously developed for the Project was updated to include:

- The addition of senior debt financing with an average 10.5-year tenor;
- Cost overrun (fully funded) account, debt service reserve account, price protection account, closing costs, and Export Credit Agency fees;
- A more detailed, monthly analysis of cashflows;
- Updates to the Project CAPEX, OPEX, and other adjustments made during FEED (as discussed elsewhere in this report);
- Detailed annual retail potash price forecast (Argus Consulting) for the segmented areas in the USA which captures HELM's marketing plan; and
- Marketing fee for HELM.

22.1 Financial Performance Summary

While CAPEX and OPEX were added to the Project to account for both identified and unidentified risks, the overall project financing package has also been defined. The financing package includes costs for not only CAPEX, but also other financing costs including: fees, closing costs, Export Credit Agency (ECA) premiums, interest during construction, cost overrun account, debt service reserve account, price protection account, and other senior lender credit enhancements. Along with the revised CAPEX and OPEX, the financing costs have been incorporated into the updated financial model and the Tugaske Project remains financially robust, demonstrating positive economics. While the final financial structure will not be finalized until such time as the senior debt facility agreement is signed, Table 38 below shows the baseline sources and uses of funds for the Project, which are the basis for the calculation of financial performance. These financial model input parameters are subject to change as the definitive senior debt facility agreement is completed and signed. Detailed financial terms are currently under negotiation and therefore not available for disclosure at the date of this report.

Table 38: Project Sources & Uses of Funds*

Description	Amount (M$CAD)	Percent of Total
Sources:		
Senior Debt	280	60%
Equity (Includes cash and Paid-In capital)	191	40%
Total Sources:	**471**	**100%**
Uses:		
Capex	318	68%

Description	Amount (M$CAD)	Percent of Total
Cost Overrun Account	40	8%
Paid-In capital (non-cash)	36	8%
Project Contingency	34	7%
Banking fees, ECA premium and closing costs	35	7%
Interest during construction	8	2%
Total Uses of Funds:	**471**	100%

*Note: These financial model input parameters remain in negotiations and are subject to change as the definitive senior debt facility agreement is completed.

Based on the above input parameters, key financial performance indicators are provided in the following table.

Table 39: Financial Performance Summary

Economic Indicator	Before Sask. Prof Tax	After Sask. Prof Tax*	Final After-Tax**
NPV_8 (M$CAD)	$635.4	$454.4	$310.4
IRR	21.74%	19.47%	17.10%

*Note: The Saskatchewan Potash Profit Tax calculated does not take into account new regulations regarding R&D credits announced by the Saskatchewan Government December 2020.

**Note: Final After-tax (Corporate rate of 27%) IRR and NPV to do not take into account Net Operating Losses (NOL) that may be available to the Project. These NOL's may be used to offset corporate taxes. Thus, the published Final After-Tax IRR/NPV may be understated.

22.2 Basis

The DCF analysis for the Project uses the following input parameters and is based on the assumptions as described below:

- The economic analysis is based on the sources and uses of funds (as detailed in Section 22);
- Potash production is 100% granular grade and conforms to the specifications required by the Offtaker (i.e., SGN 300, granular grade MOP);
- Approximately 25,000 short tons of combined storage capacity on site;
- Default currency reported in $CAD;
- Annual OPEX costs of $CAD 64.09/t KCl, as detailed in sub-section 21.2;
- Annual sustaining CAPEX costs of $CAD 20.99/t KCl as detailed in sub-section 21.2;
- Currency exchange ($US:$CAD) was carefully considered. In order to appropriately reflect the historical, current and future currency fluctuations, an exchange rate of 1:1.25 was used in the first 2 years of construction with a 1:1.30 conversion factor for life of mine. When converting any values established during FEED from $CAD to $US for the sake of reporting/comparison, the June 2021 Bank of Canada $US:$CAD of 1:1.21 was used;
- Base case pricing for granular product is the net-back price of product "Free Carrier" (Incoterms®: FCA) mine site forecast supplied by Argus Consulting Services (June 6, 2020,

and updated September 2021) net of a 4% marketing fee for HELM. There was no price escalation applied after the 10-year forecast (i.e., flat forward pricing);

- Product delivery is FCA mine site (at Tugaske, SK), as per the terms of the detailed offtake agreement;
- There is no expansion assumed beyond 250,820 tonnes of saleable product per year;
- The economic mine life is estimated at 45 years, including 40 years of full production;
- Consideration was given to the expected timing and allocation of construction CAPEX;
- The cash flows include Saskatchewan Resource Surcharge (3% of revenue), Provincial Royalties (3% of K_2O net revenue) and Saskatchewan Potash Profit Tax (PPT), as well as other commercial royalties as per royalty agreements negotiated by Gensource;
- Head office general and administrative ("G&A") expenses of 1.50% of gross revenue are included, over and above the identified management and administration personnel accounted for in the Project OPEX; and
- Development costs of $US 4,000,000

22.3 Sensitivity Analysis

Several sensitivity scenarios were conducted to "stress-test" the economic robustness of the Project. Sensitivities were focused on: potash price, currency exchange, natural gas price assumptions, capital cost inflation, construction delay timing, potash price deflation, production ramp up extension, interest rate increases, and project completion timing. Of the many input assumptions generated, the Project is most sensitive to potash price changes, currency exchange and, to a much lesser extent, natural gas prices and interest rate increases. The findings imply a recommendation that disciplined hedging programs for both currency exchange and natural gas price volatility be implemented in the operational phase of the Project.

23 ADJACENT PROPERTIES

The most significant neighbouring property was permit KP 329, which lay to the north of KL 245, originally held by Athabasca Potash Ltd. - whose assets were purchased in 2010 by BHP. This permit has since been relinquished back to the Government of Saskatchewan. No public information is available on past activities on this property.

Gensource's other main area of interest, the "Lazlo Area" (surrounding the Town of Craik – which is approximately 50 km northeast of the Vanguard Area), consists entirely of Freehold minerals leased by Gensource. No activity other than desktop studies has taken place for the Lazlo Area by Gensource – resulting in an NI 43-101 Technical Report published in December 2014 (Hambley and Halabura, 2014).

24 OTHER RELEVANT DATA AND INFORMATION

24.1 Sustainable Potash Production (Absence of Tailings)

The Tugaske Project is significantly different than a traditional potash mine. Gensource will employ selective solution mining techniques combined with proprietary processing enhancements, which, together, can demonstrate that the Project is possible to be both small and economic in potash production. As discussed in more detail elsewhere in this report, selective solution mining of potash consists of using a saturated salt (NaCl) brine to selectively dissolve potash (KCl) from a sylvinite bed within a solution mining cavern. Since the mining brine is saturated in NaCl, only KCl is dissolved from the ore zone, leaving all excess NaCl in place within the sylvinite. Using selective solution mining as the primary mining method is relatively new to the province of Saskatchewan; however existing solution mines in the province use the method for a portion of their production (as much as 50%) as “secondary mining”. Existing solution mines in Saskatchewan use what the industry refers to as the “Belle Plaine method” for solution mining sylvinite (e.g., Mosaic Belle Plaine, K+S Bethune) and have publicly disclosed that they also implement selective solution mining as a means to increase production while reducing operating costs at their facilities. The use of selective solution mining as the primary mining method is currently successfully implemented by Intrepid Potash, at their Moab and Carlsbad facilities since 2003 (Ryan, 2012).

One of the key benefits of the selective solution mining method is that, due to the use of NaCl brine as the mining solution, no tailings (NaCl) will be produced as part of Gensource’s Project. With no salt tailings, the need for surface brine ponds is eliminated and therefore neither a Tailings Management Area (“TMA”) nor the associated intensive environmental monitoring program will be required. Compared to conventional underground mining and conventional solution mining (i.e., the Belle Plaine method) of potash, this is a significant advantage for the Project, as no capital costs for TMA, brine ponds or diking systems to contain brine run-off are required. From an operational perspective, TMA operating personnel are not required and other associated operating and management costs are avoided. Finally, in contrast to conventional potash mining and conventional potash solution mining, there is no long-term environmental or decommissioning liability from a large salt tailings pile, surface brine ponds and diking systems that comprise the TMA. The selective solution mining approach as described in this report, when implemented, should demonstrate a more sustainable potash operation, and show a lower overall impact on the environment and the local community.

25 INTERPRETATION AND CONCLUSIONS

The geological data presented in this Technical Report summarizes the presence of high grade, consistently mineralised zones of sylvite throughout the Vanguard Area – with specific significance in the Patience Lake and Belle Plaine potash members of the Prairie Evaporite Formation. As per CIM Definition Standards (2014) Mineral Resource was classified as Inferred, Indicated, and Measured. The Mineral Resource categories were estimated for the Patience Lake and the Belle Plaine Members only. Due to the pervasive presence of carnallite, and lower KCl grades, no Mineral Resource was defined for the Esterhazy Member.

Table 40 shows a sensitivity analysis of the sylvite tonnage based on a range of possible recovery rates (Effective May 16, 2021) – with the assumed "base case" recovery of 40% (outlined in red) resulting in over 289 Million tonnes of Measured and Indicated Mineral Resource in the Vanguard Area. Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves – for which Modifying Factors are considered and applied.

Table 40: Measured & Indicated Mineral Resource Estimate Summary (With Base Case Highlighted)

Resource Category	Total KCl Grade*	Total Sylvinite Tonnage	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl), 30% recovery	Sylvite Tonnage (KCl), 40% recovery	Sylvite Tonnage (KCl), 50% recovery
	Weight %	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)	Million tonnes (Mt)
Measured	35.7	1,223.8	1,162.6	124.5	166.0	207.5
Indicated	35.8	955.3	859.8	92.4	123.1	153.9
Total	**35.7**	**2,179.1**	**2,022.4**	**216.9**	**289.1**	**361.4**

*Note: The Total KCl Grade is the weighted mean.

Assuming the base case recovery of 40%, as per Table 40, over 289 Million tonnes of Mineral Resource has been classified in the Measured and Indicated categories in the Vanguard Area. Based on the potential of future work to devise suitable engineering and economics for the conversion of this Mineral Resource into Mineral Reserve (as has been regularly accomplished in Saskatchewan's Prairie Evaporite Formation since mining began in the late 1950's), and subsequent application of the pertinent Modifying Factors, when using the baseline design capacity for annual production of 250,000 tonnes for a Gensource module, it can be seen that the probable life of these modules could theoretically approach multiple centuries.

Based on the geological data collected, analyzed, and modelled, with validation from assayed core samples, several potash sub-members appear to be well suited to the development of a horizontal cavern selective solution mining project, based on the mining and recovery methods discussed in this report. The CIM Definition Standards (2014) provide for a direct relationship between Indicated Mineral Resource and Probable Mineral Reserve, and between Measured Mineral Resource and Proven Mineral Reserve. For conservatism, the Mineral Reserves estimated for the Tugaske Project considers only continuous operation of the solution mining caverns focused on the lowest sub-member of the Patience Lake member – the PLM 1.

Therefore, the Mineral Reserves represent only the base case for the feasibility economics. Since the initial mine plan focuses only on the PLM 1, only a small portion of the overall Mineral Resource is converted to Mineral Reserve for the base case. In reality, mining of the PLM 1 is likely to progress upwards over time into other sub-members of the Patience Lake (i.e., PLM 2 through PLM 4); thus, increasing the potential amount of KCl tonnes recovered from each cavern. The PLM 1 is on average 3.9m thick, with an average potash grade of 43% KCl, across the mining area.

The Proven and Probable Mineral Reserve estimate for the Tugaske Project (Effective May 16, 2021), based on the PLM 1 only, is approximately 14.1 Million tonnes, which indicates a minimum expected mine life of at least 56 years – based on the annual production of 250,000 tonnes of saleable Muriate of Potash (MOP).

Table 41: PLM 1 Proven & Probable Mineral Reserve Estimate Summary

Reserve Category	Mean Cavern Thickness (m)	KCl Grade (wt. %)	Carnallite Grade (wt. %)	Insolubles Grade (wt. %)	Cavern Volume (Mm3)	Cavern Recovery (%)	Reduction for Unknown Anomalies	Recoverable Cavern Volume (Mm3)	Sylvinite Tonnage (Mt)	MOP Tonnage (Mt)
Proven	3.9	42.0	0.71	6.4	15.7	60.3	0.95	9.0	18.7	7.6
Probable	3.9	42.6	0.69	6.3	13.1	63.7	0.91	7.6	15.3	6.5
Total*					**28.7**			**16.5**	**34.0**	**14.1**
Weighted Mean	**3.9**	**42.3**	**0.70**	**6.4**		**61.8**	**0.93**			

*Note: Discrepancies between the sum of Proven and Probable and the listed Total are due to rounding.

The efforts completed by Gensource since summarizing the Project in a previous NI 43-101 Technical Report (Fourie et al., 2018) has significantly de-risked the Project. Through the debt financing process, the Senior Lenders have engaged independent consultants to perform due diligence reviews on the following aspects of the Project: Technical, Marketing, Environmental & Social, Legal, Insurance, and Financial Modelling. While each review identifies and discusses risks related to the Project, no fatal flaws have been identified. Non-material risks can be mitigated through the implementation of accepted engineering practices; and, while CAPEX and OPEX were added to the Project to account for both identified and unidentified risks, the overall project financing package has also been defined. Along with the revised CAPEX and OPEX, the financing costs have been incorporated into the updated financial model and the Tugaske Project remains financially robust, demonstrating positive economics.

Table 42: Financial Performance Summary

Economic Indicator	Before Sask. Prof Tax	After Sask. Prof Tax*	Final After-Tax**
NPV8 (M$CAD)	$635.4	$454.4	$310.4
IRR	21.74%	19.47%	17.10%

*Note: The Saskatchewan Potash Profit Tax calculated does not take into account new regulations regarding R&D credits announced by the Saskatchewan Government December 2020.

**Note: Final After-tax (Corporate rate of 27%) IRR and NPV to do not take into account Net Operating Losses (NOL) that may be available to the Project. These NOL's may be used to offset corporate taxes. Thus, the published Final After-Tax IRR/NPV may be understated.

It is therefore the opinion of the authors of this report that the Project continues forward with development and implementation.

26 RECOMMENDATIONS

The Tugaske Project is ready for implementation. Steps to implementation are identified as:

1. Financing activities:
   - Complete equity investments for the Project between the two equity partners;
   - Complete senior debt facility agreement; and
   - Financial close.
2. Shareholder group activities:
   - Complete and execute Shareholder Agreement between the equity partners, including any associated sub-agreements;
3. Project execution activities:
   - Complete procurement and contracting activities with key vendors;
   - Mobilize project team and institute project management and control processes;
   - Complete any remaining trade-off studies and freeze final design;
   - Initiate detailed engineering and procurement; and
   - Execute land option and initiate site activities required to support construction.

As detailed in Section 22, the financing package includes costs for not only CAPEX, but also other financing costs including: fees, closing costs, Export Credit Agency (ECA) premiums, interest during construction, cost overrun account, debt service reserve account, price protection account, and other senior lender provisions. While the final financial structure will not be definitive until such time as the senior debt facility agreement is signed, the table below shows the baseline sources and uses of funds for the Project, which are the basis for the calculation of financial performance. These financial model input parameters form part of the agreed senior debt term sheet for the financing and are the basis for the senior lenders' commitment letters announced September 23, 2021.

Table 43: Project Sources & Uses of Funds*

Description	Amount (M$CAD)	Percent of Total
Sources:		
Senior Debt	280	60%
Equity (Includes cash and Paid-In capital)	191	40%
Total Sources:	**471**	**100%**
Uses:		
Capex	318	68%
Cost Overrun Account	40	8%
Paid-In capital (non-cash)	36	8%
Project Contingency	34	7%
Banking fees, ECA premium and closing costs	35	7%
Interest during construction	8	2%

Description	Amount (M$CAD)	Percent of Total
Total Uses of Funds:	**471**	100%

*Note: These financial model input parameters remain in negotiations and are subject to change as the definitive senior debt facility agreement is completed.

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Environment Canada, climate data for Moose Jaw: http://climate.weather.gc.ca/climate_normals/index_e.html

Gensource Corporate News. https://gensourcepotash.ca/news/

Government of Saskatchewan. The Saskatchewan Environmental Assessment Process: http://publications.gov.sk.ca/documents/66/89132-EAFlowProcessMap.pdf

Government of Saskatchewan (2013). The Environmental Assessment Act.: http://www.publications.gov.sk.ca/details.cfm?p=488

Government of Saskatchewan (2014). Technical Proposal Guidelines. A Guide to Assessing Projects and Preparing Proposals under The Environmental Assessment Act: www.saskatchewan.ca/environmentalassessment

Government of Saskatchewan (2017). Subsurface Mineral Tenure Regulations, Crown Minerals Act, Government of Saskatchewan: http://www.qp.gov.sk.ca/documents/English/Regulations/Regulations/C50-2R30.pdf

Government of Saskatchewan (2018). The Oil and Gas Conservation Regulations, as amended, https://publications.saskatchewan.ca/#/products/63704

Government of Saskatchewan (2019). The Mineral Taxation Act, as amended, https://publications.saskatchewan.ca/#/products/631

Government of Saskatchewan (2020). The Potash Production Tax Regulations, as amended, https://publications.saskatchewan.ca/#/products/1263

Government of Saskatchewan (2021). Mining and Petroleum GeoAtlas, https://gisappl.saskatchewan.ca/Html5Ext/index.html?viewer=GeoAtlas

Mackintosh, D. (2011). Let the discussion begin: Are potash technical reports meeting the intent of NI 43-101? CIM. https://mrmr.cim.org/en/library/magazine-articles/let-the-discussion-begin-are-potash-technical-reports-meeting-the-intent-of-ni-43-101/

University of Saskatchewan, Virtual Herbarium, Ecoregions of Saskatchewan: http://www.usask.ca/biology/rareplants_sk/root/htm/en/researcher/4_ecoreg.php

28 STATEMENTS OF CERTIFICATION

The following is the list of Qualified Persons, contributing to the content of this Technical Report, as, for whom individual certificates of Qualified Persons have been completed and are attached:

- Louis Fourie, P.Geo. – Geologist (Terra Modelling Services Inc.)
- Douglas Hambley, Ph.D., P.E., P.Eng., P.G. – Mining Engineer (DFH Geoscience & Engineering LLC)
- Devon Atkings, P.Eng. – Senior Structural Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Lindsay Ruel, P.Eng. – Senior Electrical Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Dany Bernard, P.Eng. – Senior Process Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Kyle Blixt, P.Eng. – Civil Engineer (BCL Engineering Ltd)
- Sheridan Fjeld, P.Eng. – Senior Mechanical Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Mike Ferguson, P.Eng. – Senior Mechanical Engineer (Gensource Potash Corporation)

Statement of Certification

I, Louis Fourie, P. Geo., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. I reside at 607 Albert Avenue, Saskatoon, SK, S7N 1G6, Canada
2. I am Principal of Terra Modelling Services Inc., a firm specializing in geological modelling and mineral resource estimation.
3. I am a graduate of the Rand Afrikaans University (University of Johannesburg) with a B.Sc. (Hons) in Geology and a B.Sc. in Geology and Mathematics (1996).
4. I am a Professional Geoscientist licensed by Association of Professional Geoscientists of Saskatchewan (Membership Number 22198). Terra Modelling Services is authorized to practice in Saskatchewan by the Association of Professional Geoscientists of Saskatchewan (Certificate Number 32894)
5. I have practised my profession as a geoscientist since 1996. My experience with potash and related mineral deposits includes:
    a. Modelling the Holbrook Potash Deposit and Estimating the Resource for the same for a Technical Report, as well estimating the Resource used for the PEA of the same.
    b. Modelling the potash deposit and Estimating the Resource of Yancoal Canada Resources' main property in Saskatchewan, as well as Estimating the Resource for use in the Prefeasibility of the same.
    c. Due diligence, modelling and resource estimation of potash and other evaporite deposits, as well as phosphate deposits for a variety of clients (including NI43-303, JORC and independent reviews) in Canada, Spain, the United States, Brazil, Morocco, Mauritania, Republic of the Congo and elsewhere.
    d. Advising clients during the development of their projects, especially at the Exploration Stage, both in potash and other commodities.
    e. Partaking in an underground drilling program and modelling of the same at Agrium's Vanscoy Operations
6. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I visited the Vanguard Area several times since 2016, including multiple visits for each exploration well drilled by Gensource, and being present during aspects of the core recovery. I have also viewed the core pertaining to this project at the Core and Sample Repositories, Subsurface Laboratory, Saskatchewan Geological Survey, Regina, Saskatchewan.
8. I am asserting sole authorship over Sections 5 – 12, 14 and 23, and am jointly responsible for Sections 1, 2, 3 and 25. Other QP's as identified have contributed to Sections 13, 15 – 18, 21, 22 and 24; while reliance on other experts applies to Sections 4, 19, 20, and 22.
9. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101. I am also independent of Yancoal Canada Resources, having acted as a consultant to the latter on a different project with a previous company.
10. I have read NI 43-101, Form 43-101F1 and the technical report and have prepared the relevant sections of the technical report in compliance with the standards as pertaining to NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.

11. As of the date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Report.
13. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this 14 day of October, 2021

Signed and Sealed

____ Louis

Fourie, P. Geo. Professional Seal

Statement of Certification

I, Douglas F. Hambley, Ph.D., P.E., P.Eng., P.G., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 May 2021 (the Technical Report) do hereby certify that:

1. I am a Mining Engineer and Geologist, and Principal of DFH Geoscience & Engineering LLC located at 1990 Applewood Drive, Lakewood, Colorado, USA. I am solely responsible for Sections 15 and 16 of this Technical Report.
2. I am a member in good standing of Professional Engineers Ontario, being registered as a Professional Engineer (No. 18026013) since July 1975, of the Association of Professional Engineers and Geoscientists of Saskatchewan, being registered as a Professional Engineer (No. 16124) since January 2009 and of the Association of Professional Engineers of Nova Scotia, being registered as a Member (No. 20200130) since February 2020.
3. I am also licensed as a Professional Engineer in the states of Colorado, Illinois, Michigan, Nebraska, Ohio, Pennsylvania and Wisconsin and as a Professional Geologist in Illinois and Indiana. I served on the Board of Licensing for Professional Geologists of Illinois during its initial four years (1996 to 2000).
4. I have practiced my profession as a mining engineer and geologist since 1972. I have been practicing as a consulting engineer and geologist since May 1980.
5. I am a graduate of the Faculty of Applied Science at Queen's University at Kingston, Ontario, and earned a Bachelor of Science with Honours degree in Mining Engineering in May 1972. I earned a Doctor of Philosophy in Earth Sciences from the University of Waterloo in May 1991. My PhD thesis concerned the prediction of creep around mined openings in salt and potash.
6. I am a Life Member of the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM), a Registered Member (No. 1299100RM) of the Society for Mining, Metallurgy, and Exploration (SME) and a member of the Society of Petroleum Engineers (SPE) and the Society of Economic Geologists (SEG). I am a member of the Resources and Reserves Committee and Ethics Committee of SME.
7. As a consulting mining engineer and geologist, I have been involved from 1984 to 1991 and from 2007 to present with evaluation of resources and reserves and design of mines and other underground facilities in salt and potash in Louisiana, Texas, New Mexico, New Brunswick, Michigan, Ontario, Saskatchewan, Manitoba, Colorado, Arizona, Brazil, Kazakhstan, Russia, the Republic of Congo and Ethiopia. I have performed construction management and project cost estimation for mines and related facilities since 1977.
8. As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101.
9. I have no involvement with Gensource Potash Corporation beyond my involvement with the preparation and writing of the Technical Report. I am independent of the issuer according to the definition of independence presented in Section 1.5 of National Instrument 43-101.
10. As at the effective date of the Technical Report, to the best of my knowledge, information, and belief, those sections or parts of the Technical Report for which I was responsible contain all scientific and technical information that is required to be disclosed to make those sections or parts of the Technical Report not misleading.

11. I have read National Instrument 43-101 and Form 43-101 F1. This report has been prepared in compliance with these documents to the best of my understanding.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their web sites accessible by the public, of the Technical Report.

Dated this 14th day of October 2021

"Signed and Sealed"

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Dr. Douglas F. Hambley, P.E. (Colorado), P.Eng. (Saskatchewan), P.G. (Illinois) Professional Seal

Statement of Certification

I, Devon Atkings, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. I am employed by ENGCOMP Engineering and Computing Professionals Inc., address 2422 Schuyler Street, Saskatoon, Saskatchewan, S7M 4W1, and my occupation is Senior Structural Engineer.
2. My qualifications include:
    a. I am a graduate of the University of Saskatchewan with a B.Sc. in Civil Engineering (1996).
    b. I am a Professional Engineer licensed by APEGS (Membership Number 09556).
    c. I have practised my profession for since 1996. My experience with potash and related mineral deposits includes:
        i. Structural design of new potash facilities and smaller remediation projects within existing potash plants.
        ii. Design and assessment of structural steel, reinforced concrete, timber, and masonry structures within heavy industrial mining environments.
    d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have not visited the Vanguard Area.
4. I have contributed to Section 18 of the Technical Report.
5. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Vanguard/Tugaske Project since October 2016.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this ______14______ day of __________October_________, 2021

Signed and Sealed

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Devon Atkings, P.Eng.

Professional Seal

Statement of Certification

I, Lindsay Ruel, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. I am employed by ENGCOMP Engineering and Computing Professionals Inc., address 2422 Schuyler Street, Saskatoon, Saskatchewan, S7M 4W1, and my occupation is Senior Electrical Engineer.
2. My qualifications include:
    a. I am a graduate of the University of Victoria.
    b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 15946).
    c. I have practised my profession since 2005. My experience with potash and related mineral deposits includes:
        i. Electrical design at the feasibility and detailed engineering levels for green- and brown-field potash, uranium, and diamond projects in Saskatchewan, Ontario, and New Brunswick.
        ii. Instrumentation design at the detailed engineering level for potash and uranium projects in Saskatchewan.
        iii. Medium and low voltage power distribution, motor control, process control, instrumentation, communications, and grounding, lighting, and cable tray design.
        iv. Material take-offs and cost estimating for electrical and instrumentation projects in Saskatchewan.
    d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have not visited the Vanguard Area.
4. I have contributed to Section 18 of the Technical Report.
5. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Vanguard/Tugaske Project since October 2016.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this ___14______day of ________October_____________, 2021

Signed and Sealed

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Lindsay Ruel, P.Eng. Professional Seal

Statement of Certification

I, Dany Bernard, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. At the time if this report, I am employed by ENGCOMP Engineering and Computing Professionals Inc., address 2422 Schuyler Street, Saskatoon, Saskatchewan, S7M 4W1, and my occupation is Senior Process Engineer.
2. My qualifications include:
    a. I am a graduate of Laval University with a B.Sc. in Mining Engineering with a Specialization in Mineral Processing (1993).
    b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 13006).
    c. I have practised my profession since 1993. My experience with potash and other mining-related mineral deposits includes:
        i. Vanscoy Potash Operation in Saskatchewan
        ii. Sintoukola Potash Project in South Africa
        iii. Kapuskasing Phosphate Operation in Ontario
        iv. Wollastonite Project in Quebec
        v. Uranium Operation in Saskatchewan
    d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have not visited the Vanguard/Tugaske project area.
4. I am taking sole responsibility for Sections 13 and 17 of the Technical Report, and have contributed to Section 18.
5. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Vanguard/Tugaske Project since October 2016.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this __14__ day of __________October__________,2021

Signed and Sealed

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Dany Bernard, P.Eng.

Professional Seal

Statement of Certification

I, Kyle Blixt, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. I am employed by BCL Engineering Ltd., address 200-302 Wellman Lane, Saskatoon, Saskatchewan, S7T 0J1, and my occupation is Civil Engineer.
2. My qualifications include:
   a. I am a graduate of the University of Saskatchewan with a B.Sc. in Civil Engineering (2010)
   b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 22037).
   c. I have practised my profession since 2010. My experience with industrial projects includes:
      i. Feasibility, pre-design and detailed design of liquid waste effluent conveyance, storage and pumping works;
      ii. Raw water supply, treatment, storage and pumping systems;
      iii. Heavy earthworks projects including berm, embankment, roadway and drainage system design and storm water retention facilities;
      iv. Power, telephone/internet and natural gas utility site servicing coordination.
   d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have visited the Vanguard Area.
4. I have contributed to Section 18 of the Technical Report.
5. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Vanguard/Tugaske Project since October 2016.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this ____14___ day of __________October___________, 2021

Signed and Sealed

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Kyle Blixt, P.Eng.

Professional Seal

Statement of Certification

I, Sheridan Fjeld, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. I am employed by ENGCOMP Engineering and Computing Professionals Inc., address 2422 Schuyler Street, Saskatoon, Saskatchewan, S7M 4W1, and my occupation is Senior Mechanical Engineer.
2. My qualifications include:
    a. I am a graduate of the University of Saskatchewan with a B.Sc. in Mechanical Engineering (1999).
    b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 13168).
    c. I have practised my profession since 1999. My experience with potash and related mineral deposits includes:
        i. Engineering and design of mechanical equipment and systems for studies and construction, including, but not limited to: materials handling, dust control and process air, piping and plumbing, hydronic systems, water treatment, HVAC, fire protection, etc.
    d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have not visited the Vanguard Area.
4. I have contributed to Section 18 of the Technical Report.
5. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Vanguard/Tugaske Project since October 2016.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, etc.

Dated this 14th day of October, 2021

Signed and Sealed

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Sheridan Fjeld, P.Eng.

Professional Seal

Statement of Certification

I, Michael J. Ferguson, P.Eng., as coauthor of the Technical Report titled *Technical Report Summarizing the Tugaske Project, Saskatchewan* Effective Date: 16 MAY 2021 (the Technical Report) do hereby certify that:

1. At the time of this Technical Report, I am employed by Gensource Potash Corporation located at Suite 1100, 201-1st Avenue South, Saskatoon, Saskatchewan, Canada as President & CEO, and my profession is a Senior Mechanical Engineer.
2. My qualifications include:
    a. I am a graduate of the University of Saskatchewan with a B.Sc. in Mechanical Engineering (1986).
    b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 6393).
    c. I have practised my profession since 1989. My experience with potash mining and processing started in 1984 in underground operations, has progressed continuously to the Effective Date and includes acting in the role of maintenance engineer, design engineer, project engineer, engineering manager, project manager and company executive in many potash projects up to the Effective Date. These projects occurred at all potash operations in Saskatchewan and several additional projects globally.
    d. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I have visited the Vanguard Area many times to participate in local meetings and open-houses, complete field visits, and observe exploration drilling.
4. I am taking sole responsibility for Sections 19, 21, 22, 24, and 26 of the Technical Report, and have contributed to Section 1, 2, 3, and 25. The reliance on other experts applies to Sections 4, 20, 21, and 22.
5. I am not independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101, and further clarified in subsection 1.5(2) of the Companion Policy.
6. I have been involved with the Gensource Potash Corporation since 2013.
7. I have read NI 43-101 and the sections of the Technical Report for which I am responsible, and such sections have been prepared in compliance with this instrument.
8. As of the date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
10. I also consent to the use of extracts from, or summary of, the Technical Report for use by Gensource Potash Corporation for disclosure documents, such as news releases, prospectus, AIF, MD&As, etc.

Dated this 14th day of October, 2021

Signed and Sealed

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Michael J. Ferguson, P.Eng. — Professional Seal