TECHNICAL REPORT SUMMARIZING THE FEASIBILITY STUDY FOR THE VANGUARD ONE POTASH PROJECT, SASKATCHEWAN

Prepared by:

Terra Modelling Services Inc.
Louis F. Fourie, P.Geo., Pr. Sci. Nat.

Agapito Associates, Inc.
Douglas F. Hambley, Ph.D., P.E., P.Eng., P.G.

ENGCOMP Engineering & Computing Professionals Inc.
Dany Bernard, P.Eng.
Sheridan Fjeld, P.Eng.
Devon Atkings, P.Eng.
Lindsay Bedard, P.Eng.
Geoff Wilkie, P.Eng.
Kyle Blixt, P.Eng.

Prepared for:

Gensource
POTASH CORP

Suite 1100, 201 – 1st Ave South, Saskatoon, Saskatchewan, S7K 1J5

Effective Date: May 31, 2017

Original Report Date: July 15, 2017

Revised Report Date: February 23, 2018

DISCLAIMER

This report was prepared as a Technical Report by Terra Modelling Services, Inc. (TMS), Agapito Associates, Inc. (AAI), and ENGCOMP Engineering & Computing Professionals Inc. (ENGCOMP). The quality of information, conclusions, and estimates contained herein are consistent with the level of effort involved in TMS's, AAI's, and ENGCOMP's services based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by Gensource Potash Corporation (Gensource or, the Company), subject to the terms and conditions of its contracts with TMS, AAI, and ENGCOMP. Those contracts permit Gensource to use this Technical Report for its purposes. Any use of this report by any third party is at that party's sole risk.

Caution Regarding Forward-Looking Statements

This report may contain forward looking information and Gensource cautions readers that forward-looking information is based on certain assumptions and risk factors that could cause actual results to differ materially from the expectations of Gensource included in this report. This report includes certain "forward-looking statements", which often, but not always, can be identified by the use of words such as "believes", "anticipates", "expects", "estimates", "may", "could", "would", "will", or "plan". These statements are based on information currently available to Gensource and Gensource provides no assurance that actual results will meet management's expectations. Since forward-looking statements are based on assumptions and address future events and conditions, by their very nature they involve inherent risks and uncertainties. Actual results relating to, among other things, funding and development pursuant to a definitive joint venture agreement with the EGME, results of exploration, the economics of processing methods, project development, reclamation and capital costs of Gensource's mineral properties, Gensource's financial condition and prospects, the ability to establish viable vertical integration partnerships and the sourcing of end use potash purchasers, could differ materially from those currently anticipated in such statements for many reasons such as: failure to obtain funding and undertake development pursuant to any joint venture agreements; changes in general economic conditions and conditions in the financial markets; the ability to find distributors and source off-take agreements; changes in demand and prices for potash; litigation, legislative, environmental and other judicial, regulatory, political and competitive developments; technological and operational difficulties encountered in connection with Gensource's activities; and other matters discussed in this report and in filings made with securities regulators. This list is not exhaustive of the factors that may affect any of Gensource's forward-looking statements. These and other factors should be considered carefully and readers should not place undue reliance on Gensource's forward-looking statements. Gensource does not undertake to update any forward-looking statement that may be made from time to time by Gensource or on its behalf, except in accordance with applicable securities laws.

For a more complete review of the factors that may affect Gensource's forward-looking statements, please see the company's Information Circulars and Management's Discussion and Analyses, posted on Sedar, www.sedar.com, or on the Company's website at www.gensource.ca

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 SUMMARY

1.1 INTRODUCTION

Gensource Potash Corporation (Gensource) is advancing the development of a vertically integrated, small-scale, potash production facility in its “Vanguard Area”. The Vanguard Area is comprised of potash leases KL244 and KL245, which are 100% owned by Gensource. These leases are in south-central Saskatchewan, and surround the villages of Tugaske and Eyebrow in Rural Municipality (RM) No. 223 of Huron and RM No. 193 of Eyebrow, respectively.

The Vanguard One Project (the Project), is the first “module” to be developed by Gensource in the Vanguard Area, and is being designed to produce 250,000 tonnes per year of saleable potash. In the fall of 2016, a Feasibility Study (FS) was initiated as the next step in developing the Vanguard One Project. This NI 43-101 Technical Report discusses the results of the FS.

The preferred site location and well field for the Vanguard One Project have been chosen, and land purchase for the plant site is imminent. The Project will be sited within Township 22, Range 02 west of the Third Meridian (W3M) within Gensource’s KL245 Lease. This is approximately 4.8 kilometres (km) (3 miles) south, and 4.8 km (3 miles) east, of Tugaske. 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 area is approximately 170 km south of Saskatoon and 150 km north-west of Regina (Saskatchewan’s two largest cities), with the closest major city being Moose Jaw, which is approximately 70 km to the south-east.

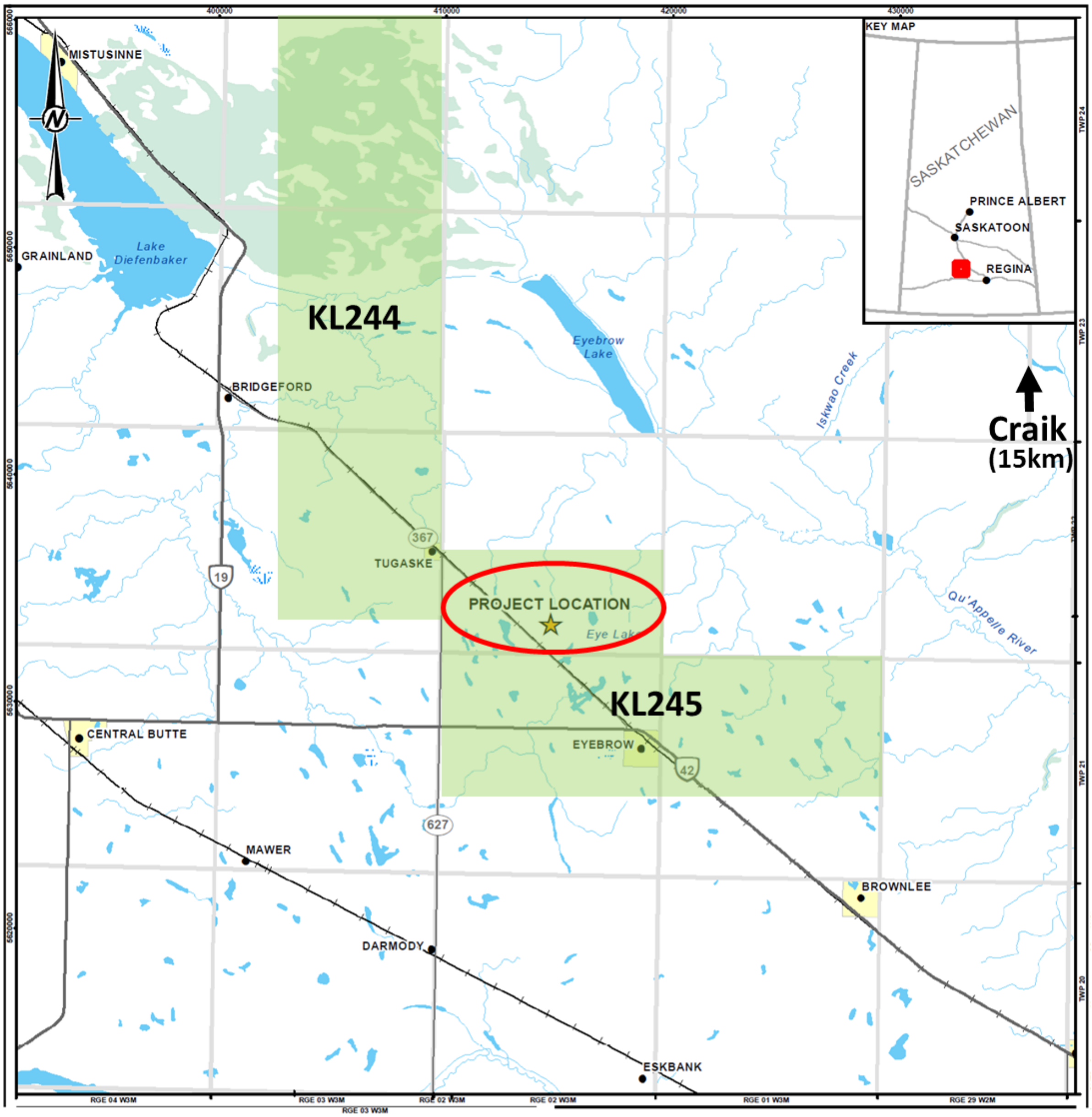

FIGURE 1: VANGUARD AREA & PROJECT LOCATION MAP

1.2 SUMMARY OF PREVIOUS WORK

To date, Gensource has completed the following three National Instrument (NI) 43-101 Technical Reports on the properties, which are all available on SEDAR (www.sedar.com):

- an initial Resource NI 43-101 Report, dated April 22, 2016, which defined Inferred Mineral Resource and Exploration Targets on the property based on geological work completed (Technical Report for the Acquisition of Potash Dispositions KP 363 & KP 483, Saskatchewan, Fourie, 2016);

- a Preliminary Economic Assessment (PEA) NI 43-101 dated July 15, 2016. This work indicated a financially attractive and viable project and contained recommendations to proceed with further geological work, as well as a Preliminary Feasibility Study (Technical Report – Preliminary Economic Assessment for the Vanguard Project, Debusschere et. al., 2016); and
- an updated NI 43-101 Resource Report, issued on March 15, 2017, which defined a Mineral Resource in the Indicated and Inferred categories (the Technical Report for The Updated Resource on The Vanguard Potash Project, Saskatchewan, Fourie, 2017).

1.3 SUMMARY OF FEASIBILITY STUDY

Gensource completed a detailed Feasibility Study (FS or the Study) for the Vanguard One Project in July 2017. The FS represents the next step in Gensource's goal to bring new technologies and new business approaches to the potash industry and was developed to a level of engineering and cost estimating sufficient to support an AACE International Class 3 estimate (AACE International 2012).

The FS was completed by an "integrated team", consisting of ENGCOMP Engineering & Computing Professionals Inc. of Saskatoon, SK and its sub-consultants, South East Construction L.P. of Esterhazy, SK, Terra Modelling Services Inc. of Dalmeny, SK, Innovare Technologies Ltd. of Carlyle, SK, Golder Associates Ltd. of Saskatoon, SK, and Whiting Equipment Canada Inc. of Welland, ON. This approach combined the engineers and designers with a major fabricator and a construction contractor early in the project lifecycle, to collaborate on the design and constructability of the project; ultimately optimizing several key elements during the FS as opposed to later in the lifecycle. This approach also supported the co-development of a solid capital cost estimate and schedule, which bolsters confidence in the outcome of the overall Study.

The purpose of the Feasibility Study was to confirm the economic and technical viability of the Project as previously indicated in the PEA. The FS results will add confidence to the key project parameters and assumptions, the expected capital cost and schedule to implement the project, the construction timelines, as well as the operating costs to produce and ship potash product. These items then feed an updated economic model for the project, providing increased confidence in the potential economic viability.

The following is a summary of major components of scope for the Feasibility Study:

- Upgrade the mineral resource to Measured & Indicated, with subsequent conversion of Resource to Reserve (i.e. Proven and Probable)
- Develop an AACE International Class 3 Capital Cost Estimate (CAPEX)
- Develop an Operating Cost estimate (OPEX)
- Complete an updated Financial Model and Economic Analysis

- Develop a detailed mine plan
- Submit a project proposal to obtain environmental approval
- Engage with local stakeholders, First Nations and Metis, Government & Regulatory Agencies
- Establish the Health, Safety and Environment (HSE) strategy
- Develop the construction strategy
- Define the drilling program
- Define the project design criteria
- Develop a Level 1 project execution schedule
- Develop a Level 2 construction schedule
- Develop a risk management plan
- Define utility requirements and obtain technical solutions and capital cost/operating cost estimates from utility providers
- Advance the Process design
    - Further develop Innovare's proprietary recovery process
    - Develop de-brining, drying, compaction, and loadout processes
    - Work with the major process equipment vendor (Whiting Equipment Canada) to integrate into the overall process design
    - Develop Process Flow Diagrams (PFD's) with detailed mass and energy balance tables
- Develop Piping & Instrumentation Diagrams
- Develop a detailed 3D model of the facility including process plant, power house, warehouse, and maintenance building
- Create a 3D model of all process and utilities to include all equipment and major piping
- Complete basic engineering of:
    - Equipment
    - Model & General Arrangements
    - Process piping
    - HVAC
    - Dust control
    - Building services
    - Major structural steel
    - Major foundations
    - Site Civil and Earthworks
    - Power generation (Steam Turbine Generation)
    - Utilities distribution strategy

The following are general highlights from the Study:

TABLE 1: FEASIBILITY STUDY HIGHLIGHTS

Parameter	Results
Project capacity:	250,000 tonnes per year of final saleable product, standard grade ("MOP", or "potash")
Mine life:	40+ years based on Patience Lake sub-Member 1 (PLM 1) Reserve only
Mining method:	Selective dissolution using horizontal caverns
Processing:	Cooling crystallization incorporating innovative energy efficiency measures
Product storage:	Intermodal shipping containers covering 7 days of operation (typical) on rotation, with an additional 14 days of container storage available on-site as needed
Product Transport:	$CAD 100/t ($US 74.29) transportation and logistics from plant site to overseas destination (CFR Asia) included in the economic analysis, based on quotations received
CAPEX:	$CAD 279M including contingency (≈$US 210M)
OPEX:	$CAD 53.23/t final product ($US 39.54/t). The major components of OPEX are natural gas delivered to site at $CAD 3.71/GJ and operating personnel count of 46 full time staff. All operating costs were inflated at 1.5% per annum. Natural gas prices were taken as a 5-year forecasted average as per Sproule Associates Ltd., April 2017 and inflated annually.
Sustaining CAPEX:	Average annual sustaining capital of $CAD 15.68/t ($US 11.65/t) per year includes full cavern replacement approximately every 11 years, annual well work-overs and 2% of plant site equipment.
Construction:	≈22-month construction period, peak construction work force of approximately 150.

The total project capital construction cost is estimated at $CAD 279M, including contingency (≈$US 210M). The following is a summary of the Class 3, Capital Cost Estimate, summarized by project area:

TABLE 2: CAPITAL COST ESTIMATE SUMMARY

AREA	$CAD
Mining	$ 23,738,000
Wellfield	$ 17,304,000
Process Plant	$ 70,610,000
Product Storage & Loadout	$ 957,000
Site Infrastructure	$ 27,297,000
Offsites	$ 6,877,000
Non-Process Facilities	$ 29,550,000
Project Indirects	$ 77,972,000
TOTAL (Pre-Contingency)*	**$254,305,000**
Contingency (P75)	$ 25,564,000
GRAND TOTAL	**$279,869,000**

*A statistical analysis was completed, using Palisade's @Risk software, to yield a range of probable project costs and aid in the determination of a probabilistic contingency to apply to the project. A contingency of $25,564,000 was selected, representing the value from the 75th percentile of the analysis output. The 75th percentile (or Level of Confidence) value means that 75% of the total project cost outputs from the statistical analysis were equal to or less than this value.

The financial performance of the project is shown in table below, for a range of product prices and costs of capital.

TABLE 3: FINANCIAL PERFORMANCE (POST POTASH PRODUCTION TAX, ROYALTIES, LEVIES AND SURCHARGES)

Price/Tonne US$	Project IRR	NPV @			Opp Margin	Payback (Yrs)
		6.00%	8.00%	10.00%		
$225	9.83%	$ 135,019,994	$49,178,315	($3,494,593)	78.20%	10.00
$250	12.10%	$ 220,792,606	$ 112,507,467	$45,070,745	79.88%	8.00
$275	14.26%	$ 305,333,691	$ 174,755,710	$92,696,697	81.34%	7.00
$300	16.31%	$ 388,540,731	$ 235,822,250	$139,282,488	82.42%	6.30
$325	18.30%	$ 471,047,175	$ 296,232,842	$ 185,262,292	83.45%	5.25
$350	20.24%	$ 553,536,139	$ 356,569,799	$ 231,132,156	83.45%	5.00
$375	22.11%	$ 635,518,277	$ 416,435,959	$ 276,567,150	85.00%	4.80
$400	23.97%	$ 717,756,211	$ 476,482,843	$ 322,125,403	85.78%	4.70
$425	25.75%	$ 799,288,171	$ 535,897,782	$ 367,117,241	86.36%	4.30
$450	27.50%	$ 880,785,576	$ 595,272,298	$ 412,064,642	86.89%	4.00
$475	29.22%	$ 962,232,078	$ 654,587,267	$ 456,946,581	87.35%	3.80
$500	30.92%	$ 1,043,678,579	$ 713,902,236	$ 501,828,519	87.77%	3.00

At a base case potash price of $US 300/t, a 40+year economic project life, 1.5% operating cost inflation, $CAD 100/t ($US 74.29/t) shipping cost to East Asia, operating costs of $CAD 53.23/t ($US 39.54/t), sustaining capital reinvestment totaling $CAD 15.68/t ($US 11.65/t), and exchange rate of 1.30:1, $CAD:$US (40-year Bank of Canada average exchange rate), the financial performance of the project can be summarized as:

TABLE 4: FINANCIAL PERFORMANCE SUMMARY

Indicator	Pre Sask. Profit Tax	Post Sask. Profit Tax
NPV_8	$329,403,545	$235,822,250
IRR	18.32%	16.31%

The following defines the input parameters and assumptions used in the discounted cash flow model (DCFM) for the Gensource Vanguard project:

- The economic analysis is based on a 100% equity scenario with no debt leverage.
- Potash production is 100% standard grade.

- Cash-flow model reported in $CAD.
- Base case pricing assumption for standard product is US $300/t, cfr Asia starting in 2019 with an escalation of 1% thereafter.
- Operating costs have been inflated at 1.5% per annum.
- There is no expansion of production beyond 250,000 t/y.
- The project life is 43 years, including 40 years at full production.
- Consideration was given to the expected timing and allocation of construction expenses.
- OPEX and sustaining CAPEX are included in the models.
- Annual sustaining CAPEX averages $CAD 15.68/t ($US $11.65/t).
- Insurance during construction is included in the models.
- The cash flows include Saskatchewan Resource Surcharge (3% of Revenue), Provincial Royalties (4.4% of K_2O) and Saskatchewan Potash Profit Tax.
- The economic model includes a 3% per annum "Other Royalty" on net revenue.
- Transportation costs to destination are $CAD 100/t, cfr Asia.
- Revenue generated from future potash sales are converted from $US into $CAD at an exchange rate of 1.30:1 (40-year Bank of Canada average exchange rate).
- Spot $US:$CAD conversion used was 1.346:1, as posted by The Bank of Canada on May 24, 2017 (the effective date of the FS).
- Working capital requirements of $CAD 2.66/t.
- Head office general and administrative expenses of 1.10% of Revenue ($CAD 5/t).
- Economic analysis based upon a mine plan developed during the Feasibility Study, and is summarized in Section 16 of this report.

1.4 SUMMARY OF RESOURCE AND RESERVE

Gensource engaged Terra Modelling Services Inc. (TMS) and its principal, Louis Fourie P.Geo., Pr. Sci. Nat. (hereafter referred to as the QP) to produce the Mineral Resource and Mineral Reserve estimates for this Technical Report on the summary of the Feasibility Study, including the changes to the classification and extent of the Resource and Reserve.

The Mineral Resource and Reserve referred to in this report is based on historic drilling (the work previously completed by Yancoal in 2012), the new wells completed by Gensource in 2016 and 2017, 2D and 3D seismic results, and mine planning and layout.

The Mineral Resource and Mineral Reserve estimates are summarized in Table 5 and Table 6, respectively. Based on the exploration work to date, the Resource was classified as Inferred, Indicated, and Measured for the Patience Lake and the Belle Plaine Members. Due to the pervasive presence of carnallite, and lower grades, no resource was defined for the Esterhazy Member. Note that all tonnages are listed as tonnes (tonnes, or t), which are metric tons.

The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

TABLE 5: MEASURED & INDICATED RESOURCE SUMMARY (WITH BASE CASE HIGHLIGHTED)

Resource Category	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 %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
INDICATED	36.82	0.82	5.07	11.19	480.96	432.87	47.81	63.75	79.69
MEASURED	36.45	0.72	5.25	11.23	676.25	642.44	70.26	93.68	117.10
TOTAL	36.61	0.76	5.17	11.21	1157.22	1075.31	118.07	157.43	196.78
								BASE CASE	

It should be noted that for the base case, the Vanguard Project is targeting a continuous potash zone at the base of the Patience Lake sub-Member 1 potash bed (PLM 1) that averages 3.9 metres thick and 43% KCl, Reserve numbers are focused on the PLM 1 only.

TABLE 6: PLM 1 PROVEN & PROBABLE RESERVE SUMMARY

Patience Lake sub-Member 1 (PLM 1): Proven & Probable Reserve							
Reserve Category	Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl)	Recovered Tonnage KCl
	Weight %	Weight %	Weight %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
Probable	43.37	0.77	6.07	3.83	39.53	17.15	3.94
Proven	43.49	0.82	6.12	3.79	58.45	25.42	5.85
Total	43.44	0.80	6.10	3.81	97.98	42.56	9.79

As discussed in more detail in Section 14 & 15, the following assumptions were applied during the Resource & Reserve Estimation:

- 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.
- Deduction of 25% for unseen / unknown anomalies was made in the Inferred category, and this deduction was reduced to 10% for the Indicated Resource, and 5% for the Measured Resource; as Indicated and Measured were largely covered by the 3D seismic survey.
- Recovery rates for the Reserve are based on conservative preliminary horizontal cavern selective solution mining design assumptions (as discussed in Section 16), and are thus more conservative than the original base case recovery of 40% presented in the Resource; resulting in an overall recovered tonnage of approximately 23%.

1.5 RECOMMENDATIONS

The conclusions and recommendations made in this report, along with those discussed in the Feasibility Study, are to:

- Complete the environmental assessment and approval process and move into the permitting phase to ensure the appropriate permits, approvals, and licenses are obtained to advance the Project into the construction phase, followed by operations (~ $400,000 CAD for Environmental Work)
- Complete the full project financing package (included in Gensource Head Office G&A Cost)
- Initiate procurement for key long-lead items (~$32Million CAD of $60Million CAD Total Tagged Equipment)
- Initiate detailed engineering including final trade-off studies (~$5Million CAD of Total Detailed Engineering $16Million CAD)
- Complete advanced modelling and testing of cavern temperature and dissolution rates (~$200,000 CAD)
- Develop a detailed solution mining cavern start-up procedure designed to minimize potential thermal stresses on the solution mining caverns (~$50,000 CAD)
- Complete a detailed site-specific geotechnical investigation as an early component of detailed engineering ($100,000 CAD)

- It should be noted that the estimates and breakdown of the above expenditures are included in the overall project CAPEX of $279Million CAD.

2 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report was prepared at the request of Gensource by a team consisting of Terra Modelling Services Inc. (TMS), Agapito Associates, Inc. (AAI), and ENGCOMP Engineering & Computing Professionals Inc (ENGCOMP). Its purpose is to summarize the results of the Feasibility Study, and update the Resource and Reserve associated with the Vanguard Area.

The information providing the basis for all interpretations and resulting conclusions 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
- The 2 drill holes completed on behalf of Yancoal on KP 483 (KL 245) in 2012, the 2-D seismic program ordered by the same,
- The recent drilling program undertaken by Gensource in 2016 and 2017
- Previous NI43-101 Technical Reports produced for the Vanguard Area (Fourie, 2016 & Fourie, 2017)
- 3D Seismic completed on KL245 in 2017
- The recent engineering efforts by others in the Feasibility Study (ENGCOMP et al., 2017)

In addition, general geological information relevant to the Elk Point Basin as contained within the public record, and detailed in the previous NI 43-101 Technical Reports, was utilized.

Site visits have been performed by TMS as follows:

- An initial site visit to the locations of the Yancoal drill holes, named Yancoal Tugaske 01-18-22-02 W3M (named Y-1-18 hereafter) and Yancoal Tugaske 5-29-21-01 W3M (named Y-5-29 hereafter) was made on 11 April 2016,
- Subsequent site visits were made during the Gensource 2016 drilling program on 27 September 2016, 5 December 2016, and 31 December 2016.
- A visit to examine the post-drilling sites was made on 1 February 2017.

AAI has not visited the Vanguard site. However, it has visited the Lazlo site to the east in 2013 and is familiar with the terrain in this part of Saskatchewan.

Several representatives from ENGCOMP visited the site on 1 February 2017.

Common terms employed in this report are listed in Table 7.

TABLE 7: COMMON 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, for production of this report:

- Information on the Crown Potash Leases KL244 and KL245, provided in Section 4 of this technical report, was obtained from the Mineral Disposition Maps and Database (MARS) made available online from the Saskatchewan Ministry of the Economy. Official Lease certificates, and current freehold mineral leases obtained by Gensource have been visually reviewed by Louis Fourie, P.Geo., Pr. Sci. Nat., Terra Modelling Services Inc.
- Transportation & Logistics information discussed in Section 18 was provided by Gensource.
- Information on environmental studies, permitting, and social or community impact summarized in Section 20 of this technical report was based on studies performed for Gensource by Golder Associates Ltd.
- Information used in preparation of the Vanguard One Project Feasibility Study Report, pertaining to potash supply and demand forecasts, price outlook, taxes, royalties, etc. was compiled by Gensource based on a variety of sources, including, but not limited to: Credit Suisse Ag Science Team, CIBC World Markets, BMO Capital Markets, CRU consultants, 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 Sections 19 and 22 of this technical report.

4 PROPERTY DESCRIPTION AND LOCATION

Gensource's Vanguard Area comprises Crown Potash Mineral Extraction Leases KL244 (formerly Potash Permit KP363) and KL245 (formerly Potash Permit KP483), situated immediately southeast and northwest of the Village of Tugaske, Saskatchewan. A regional property map is provided in Figure 2 (note: "white" or "blank" squares signify freehold mineral rights on the two properties). In addition to the Crown leases, Gensource has leased the private mineral rights to several freehold properties within the lease boundaries. The Gensource Vanguard One project location is situated in Township 22, Range 2, West of the 3rd Meridian, located within Gensource's KL245 lease.

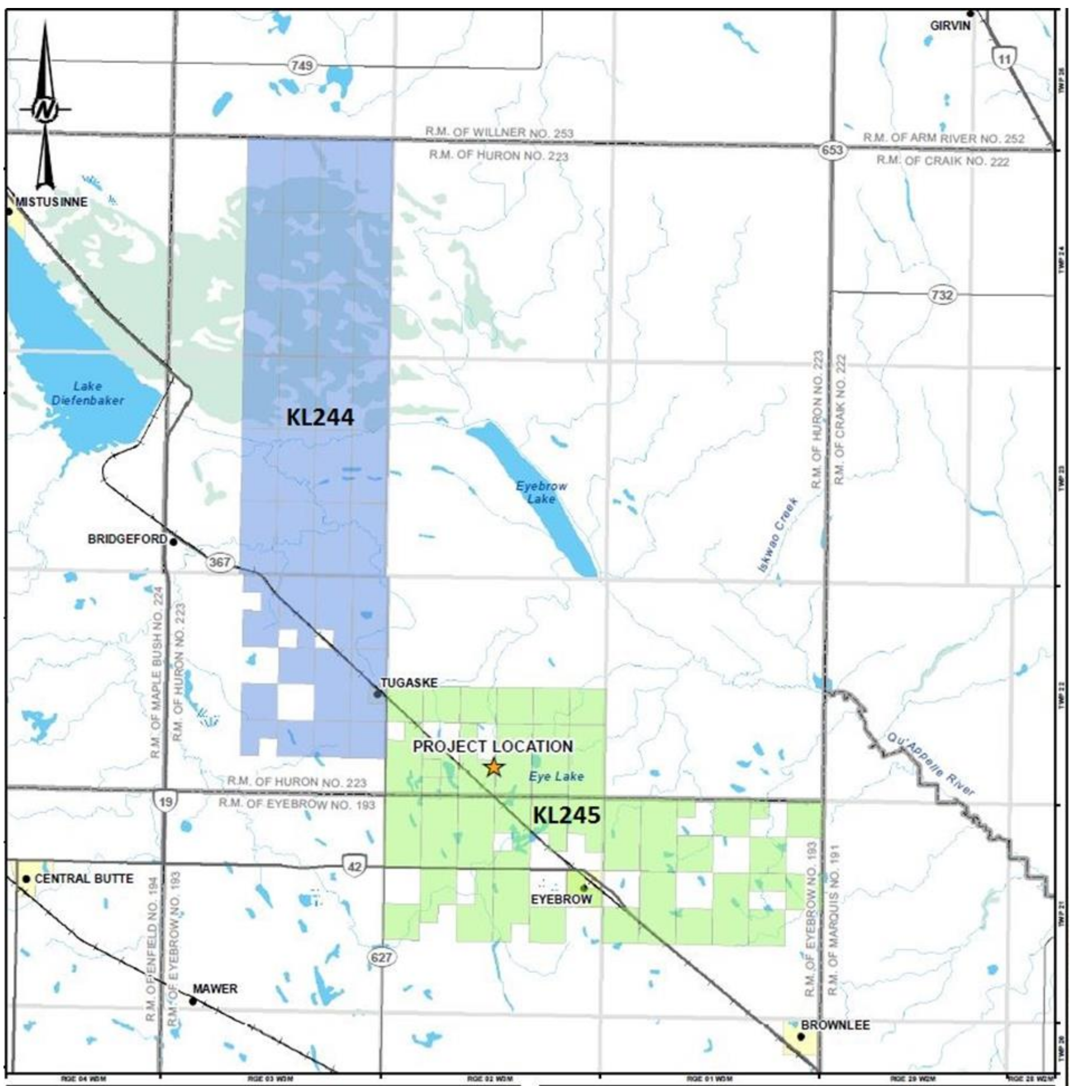

FIGURE 2: PROJECT LOCALITY MAP

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 (KL244 and KL245) is discussed below.

4.1 CROWN MINERAL RIGHTS

Crown 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 KL244 has a total area of 16,562.832 hectares (40,927.649 acres), and KL245 has a total area of 12,341.682 hectares (30,496.960 acres) of crown mineral rights. Gensource is the sole lessee for these mineral rights. Crown minerals leased to Gensource within the two lease areas are identified in the following tables.

TABLE 8: KL244 LEASE DESCRIPTION

KL244						
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

KL244						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
27	ALL	22	3	3	189	
28	ALL	22	3	3	258	
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	

KL244						
Section	**Portion**	**Township**	**Range**	**Meridian**	**Area (ha)**	**Description**
9	ALL	24	3	3	260	
10	ALL	24	3	3	259	
11	ALL	24	3	3	259	
12	ALL	24	3	3	259	
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					**16563**	

TABLE 9: KL245 LEASE DESCRIPTION

KL245						
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	

KL245						
Section	Portion	Township	Range	Meridian	Area (ha)	Description
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	
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

KL245						
Section	Portion	Township	Range	Meridian	Area (ha)	Description
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
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	

KL245						
Section	Portion	Township	Range	Meridian	Area (ha)	Description
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					12342	

4.2 FREEHOLD MINERAL RIGHTS

Freehold 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 KL244 and KL245. Gensource has begun leasing freehold mineral rights in the project area from the private owners of the mineral rights. To date, over 211 acres of freehold mineral rights on KL245 have been leased by Gensource, and efforts to lease additional freehold mineral rights are ongoing. The following table shows the freehold mineral rights in KL245, leased as of the date of this report.

TABLE 10: FREEHOLD MINERALS ACQUIRED BY GENSOURCE

Freehold Associated with KL245						
Section	Portion	Township	Range	Meridian	Area (ha)	Description
5	NE	22	3	3	2	All mines and minerals as referenced on Certificate of Title 76MJ17427
5	NE	22	3	3	62	All mines and minerals as referenced on Certificate of Title 76MJ17427
5	SW	22	3	3	64	All mines and minerals as referenced on Certificate of Title 75MJ03651
8	NW	22	3	3	10	All mines and minerals as referenced on Certificate of Title 67MJ13237
8	SE	22	3	3	14	All mines and minerals as referenced on Certificate of Title 67MJ13237
8	SW	22	3	3	59	All mines and minerals as referenced on Certificate of Title 67MJ13237
TOTAL					211	

Exploration on freehold requires several steps as outlined in Hambley & Halabura (2014):

1. For a surface lease and surface access from surface owner:
   - Contact the rural municipality to determine whether a development permit was required;
   - Contact Saskatchewan Ministry of Environment for environmental clearance;
   - Contact Saskatchewan Tourism, Parks, Culture and Sport (Heritage Branch) for a Heritage Resource Review; and
   - Obtain a license to drill from Saskatchewan Ministry of Economy.
   - Drilling requires numerous other permits, including environmental permits etc.

2. To meet the regulations governing seismic exploration work, the following steps must be performed by the seismic contractor for any seismic survey work performed for this Project:
   - Submit a Preliminary Plan of seismic operations to Saskatchewan Ministry of Economy;
   - Submit Notice of Intent (NOI) for seismic operations to various government agencies for approval and signature;
   - Submit a Geophysical Pipeline Crossing Request for approval to operators of any oil and gas pipelines that will be crossed by the survey lines; and
   - Obtain access approval from all surface land owners whose land the seismic program will cross (including municipal and provincial agencies).

The reader should note that mineral tenure in Saskatchewan has changed with the release of the new Subsurface Mineral Tenure Regulations, effective March 26, 2015 (see references). The main points of the new regulations are as follows:

- The term of a permit is eight years.
- Annual rental of the permit is calculated at as follows:
  - $2 / hectare for the first 5 years
  - $3 / hectare for the final 3 years
- The required work expenditure for a permit is the amount A, where A is the next higher multiple of $1000 (unless an exact multiple of $1000). A is calculated as follows:
  - A = B x C x D, where
    - B is the total surface area of the mineral parcels in the permit measured in hectares
    - C is $350
    - D is the financial adjustment factor for the year in which the calculation is made

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 Equivalents (TLEs) awarded to settle land claims more recently. There are no Indian Mineral Rights in the immediate area of either KL244 or KL245.

4.4 SPLIT MINERAL RIGHTS

Mixed mineral rights, with more than one owner, also exist. There are several sections of land that are either partially owned by the Crown and a Freehold Owner, or as several different Freehold owners on one title.

5 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES AND INFRASTRUCTURE

5.1 ACCESSIBILITY

The Vanguard One Project is located in south-central Saskatchewan, surrounding the Villages of Tugaske and Eyebrow (RM No. 223 of Huron and RM No.193 of Eyebrow, respectively). An existing network of municipal grid roads, provincial highways, and rail lines provide access among the various communities within the region. The Project can be accessed via Highway 19, 42, and 367, and is accessed via rail through the CP Outlook Branch line. The City of Moose Jaw is located 70 km south-east of the Project.

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.

5.2 CLIMATE

The project area is located in south-central Saskatchewan, at an elevation of approximately 600m above sea-level. The climate of south-central Saskatchewan is a typical northern prairie climate, with cold, long winters. The daily average reaches close to -15°C in midwinter, and 20°C in summer. Snowfall is common from October to March, but can be experienced outside those months. An Environment Canada plot for average climate data from 1981 to 2010 can be seen in Figure 3. The area is accessible year-round, though drilling activities and seismic testing can be problematic during the spring thaw (March-April, approximately), as well as the Fall freeze (November-December).

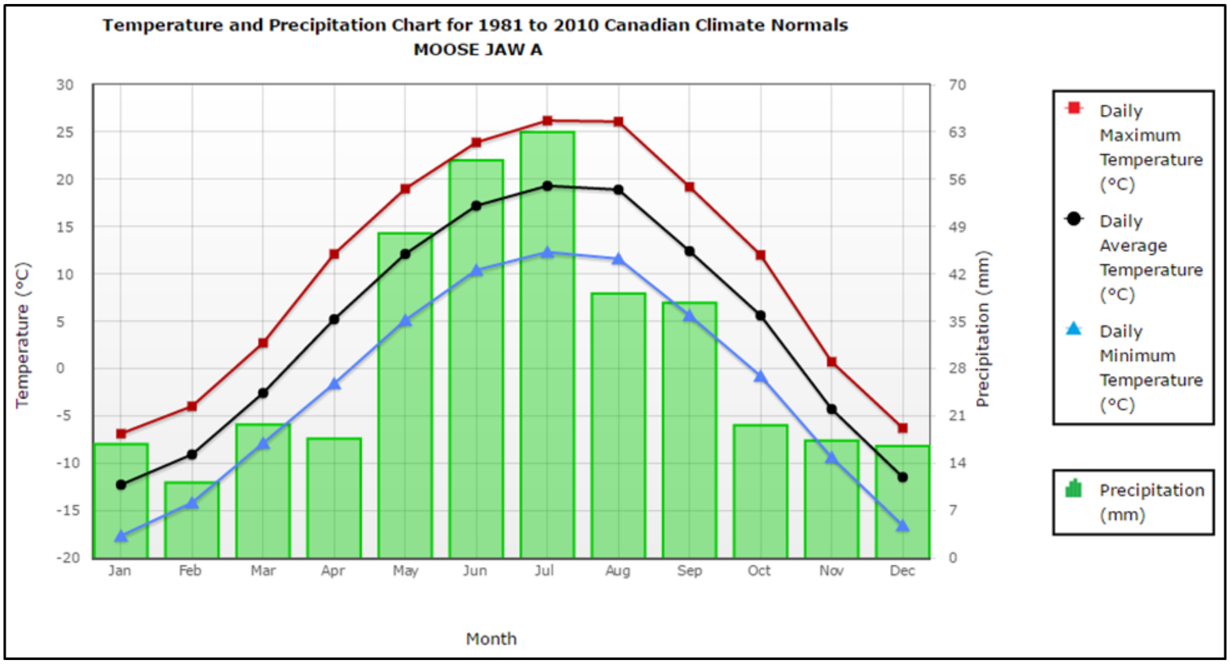

FIGURE 3: CLIMATE DATA FOR MOOSE JAW, SK

5.3 PHYSIOGRAPHY

The area is at the northern edge of the Canadian prairie, in the biome known as the "moist, mixed grassland". The area is sparsely populated, and agriculture and ranching are the predominant land uses and means of wealth creation. 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 Project is located in relatively flat terrain on the southwest side of the Upper Qu'Appelle River valley. The area is gently undulating, with numerous small lakes and sloughs. It is a post-glacial terrain. 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.

5.4 LOCAL RESOURCES

The Project is located within Township 22, Range 2, West of the Third Meridian. This is situated in RM No.223 of Huron. 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), and the Village of Brownlee (approximately 18 km southeast 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 (The 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.

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.

5.5 INFRASTRUCTURE

RM No. 193 of Eyebrow and RM No. 223 of Huron, and communities located within those RM's, are serviced by SaskEnergy/TransGas and SaskPower. SaskTel has a cellular tower nearby the project area as well.

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

6 HISTORY

While oil exploration near Unity, Saskatchewan led to the discovery of the salt of the Prairie Evaporite Formation in 1928, it wasn't until the intensification of oil and gas exploration during World War 2 that sylvite and carnallite were first recognised in a well drilled by Imperial Oil about 110 km due south of Regina (Fuzesy, 1982).

In the early 1960's, exploration for potash took place in the immediate area of the two dispositions. Two wells were drilled northeast of Tugaske, and complete assays, as well as the original drill core were made available for this report. The first, SST-4, was spudded on 10 October 1964. The owner is obsolete. The second, SST-14 was spudded on 21 November 1963. Well owner, Domtar Chemicals Ltd, still operates, but only in paper manufacturing. No ancillary information, such as drilling techniques, sample security etc., could be found.

Yancoal took over the existing potash exploration permits from Devonian Potash Inc. in September 2011. There is no record of Devonian Potash Inc. undertaking any work at the site. Yancoal appointed North Rim Exploration Ltd. (hereafter North Rim) as project managers for an exploration program.

Two wells were undertaken: The first, Y-1-18 was completed on 2 October 2012. Wellsite logging, as well as further detailed logging were undertaken. Samples were assayed at the Saskatchewan Research Council in Saskatoon. Wireline geophysics was also undertaken to correlate the geological logs.

The second well, Y-5-29 was abandoned on 11 November 2012, due to brine influx. 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 the Saskatchewan Research Council 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 in the spring of 2012. A single 9.7 km line was completed over the southern part of KP 363 (KL 244), while 9 lines totalling 98 km were undertaken in a grid pattern over KP 483 (KL 245).

Both the drilling and geophysics are discussed in greater detail later in this report.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

A generalised stratigraphy is presented in Table 11. The uppermost sequences, the Laurentide Drift is the remnant of Laurentian ice sheets, consisting of glacial tills, gravels clays, etc., and contains freshwater aquifers. It is approximately 500 m thick in the project 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 which hosts 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.

A local stratigraphic column is presented in the following table.

TABLE 11: MODIFIED STRATIGRAPHY OF THE PROJECT 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

A more detailed stratigraphy of the Prairie Evaporite Formation is presented in Table 12. Note that in this description, the 2 historic Sifto wells, though situated outside the prospecting permits, are included in the general description. Given the general continuity of potash within the Elk Point Group, the QP is of the opinion that these wells are relevant to understanding the potash potential within the prospecting permits.

TABLE 12: 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

All three main members of the Elk Point Group are present in the project area, as indicated by Y-1-18, V-1-16, and V-1-14; however, not all wells penetrated all members. As discussed in Section 6, brine influx in Y-5-29 led to the abandonment of that well below the Patience Lake, while SST-4 was apparently abandoned below the Patience Lake Member. There is no indication in the seismic data that any of the members disappear in the area, while all 3 members are present towards the north east in the Lazlo study area as covered by the previous NI 43-101 Technical Reports. It is therefore a reasonable assumption that all 3 members are present throughout the project area.

An approach followed in this report, is to distinguish between the various sub-members of the potash 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 QP analysed the mineralisation (and hence the Resource) in the individual sub-members 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 members, but also the sub-members, where relevant.

The 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 13. 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. Insofar as the Belle Plaine is concerned, the correspondence is much better defined. Table 13 indicates the correspondence between the nomenclature used in this report and that of Phillips.

Note that minor changes were applied to the lithological divisions within the Patience Lake and Belle Plaine Members, due to a detailed study of the clay seams, as originally defined by Phillips (1982), within the study area, from the previous 2017 Technical Report. While this resulted in very minor overall tonnage changes, it did result in some changes of grade and tonnage between the potash sub-members. The division between the mineralisation events is strictly defined by specific clay seams, as listed in Table 14.

TABLE 13: NOMENCLATURE CORRESPONDENCE BETWEEN PHILLIPS (1982) AND THIS REPORT

Member	Sub-Member (This Report)	Phillips - 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 study area (Y-1-18, Y-5-29), 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 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 (301 – 307).

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 Sifto wells, as the core appears to start in halite. In the wells completed by Yancoal, and those completed by Gensource, it ranges from ~7.33 m to 9.68 m; 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 7.51 m (Y-5-29, excluding the weakly to non-mineralised PLM 4) to 14.18 m (V-1-16), with an average thickness of 11.56 m.

TABLE 14: PATIENCE LAKE SUB-MEMBERS, THICKNESS (IN METRES)

Patience Lake Sub-Members			
Thickness (m)			
Sub-Member	**Average**	**Minimum**	**Maximum**
PLM 4*	2.20	1.59	2.89
PLM 3	2.81	1.99	3.53
PLM 2	3.77	2.22	4.64
PLM 1	3.88	3.30	4.26

*Note that the PLM 4 thicknesses excludes the wells 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 3.23 m. The Allan Marker, present throughout the project area, is a bit more variable, ranging between 0.3 m and 0.65 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 2.4 m and 3.23 m thickness. The Belle Plaine itself ranges from 8.54 m for V-1-16 to 10.52 m at SST-4. As discussed before, due to technical issues no core recovery was possible below the Patience Lake Member for Y-5-29.

The Belle Plaine presented seven sub-members. A summary of these is given in Table 15.

TABLE 15: BELLE PLAINE SUB-MEMBERS, THICKNESS (IN METRES)

Belle Plaine Sub-Members			
Thickness (m)			
Sub-Member	**Average**	**Minimum**	**Maximum**
BPM 7	0.68	0.46	0.98
BPM 6	1.51	0.16	1.42
BPM 5	1.61	1.02	2.07
BPM 4	1.95	1.82	2.22
BPM 3	1.19	0.89	1.34
BPM 2	2.07	1.82	2.49
BPM 1	0.95	0.74	1.22

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 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 lease area, ranging between 5.80 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 4.86 m to 6.18 m. The Esterhazy itself is quite variable across the 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 1-18 and SST-14. A summary of these is given in Table 16.

Table 16: 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	1.65	1.14	1.98
EZM 3	1.53	0.61	2.43
EZM 2	1.56	1.17	2.33
EZM 1	2.35	1.04	4.27
IES	0.18	0.16	0.19
LEZ	2.40	1.22	3.57

7.3 GEOLOGICAL CROSS-SECTIONS

The overall thickness of each potash-bearing Member is consistent, as expected, across the KL245 lease area. The cross section in the following figure shows good correlation of the Prairie Evaporite potash-bearing Members in drill holes Y-1-18, V-1-16, and V-1-14, as depicted in the "West to East" direction (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.

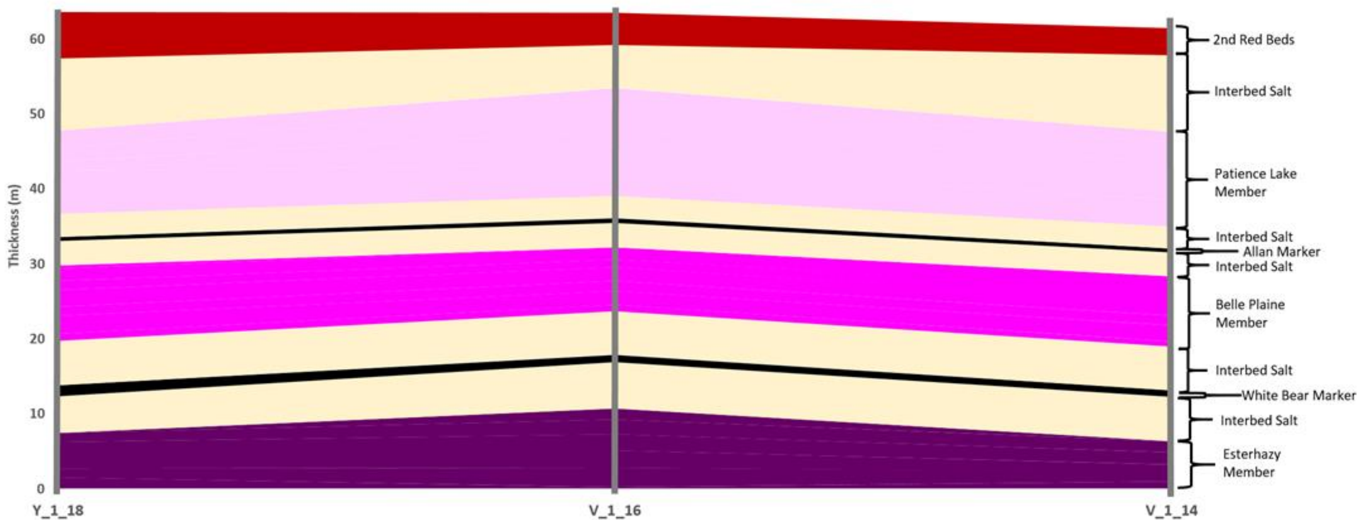

FIGURE 4: CROSS SECTION (ESTERHAZY FLOOR SET HORIZONTAL)

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". 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. It 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 Saskatchewan Research Laboratories. Note that quantitative XRD is still 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 is summarized in Table 17.

TABLE 17: CLAY SEAM MINERALOGY

	Ankerite*	Dolomite	Chlinochlore	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 18, 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 or the Belle Plaine, it more often occurs interstitially at higher average grades within the Esterhazy Member.

A summary of the property mineralogy is given in Table 18, which are shown in chronological order of the wells drilled. Note that the grades given are entire sub-member composites.

TABLE 18: MINERALISATION WITHIN THE PROJECT AREA

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
SST-14	Patience Lake	PLM 3	32.422	0.64	9.418	-
		PLM 2	27.16	0.656	7.06	-
		PLM 1	42.541	0.437	6.701	-
	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		PLM 4	32.473	0.5	11.216	-

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
	Patience Lake	PLM 3	42.609	0.504	9.136	-
		PLM 2	24.305	0.579	7.255	-
		PLM 1	41.513	0.29	5.238	-
	Belle Plaine	BPM 7	47.293	-	1.286	-
		BPM 6	46.358	-	3.298	-
		BPM 5	29.303	1.469	3.842	-
		BPM 4	25.842	1.182	3.98	-
		BPM 3	38.188	-	4.512	-
		BPM 2	26.665	4.626	3.278	-
		BPM 1	40.035	15.637	0.82	-
Y-1-18	Patience Lake	PLM 3	50.778	0.397	4.164	0.928
		PLM 2	21.325	0.79	8.419	1.351
		PLM 1	40.843	0.723	5.347	1.098
	Belle Plaine	BPM 7	31.242	1.296	7.636	0.489
		BPM 6	32.95	1.379	7.9	1.796
		BPM 5	36.215	0.533	1.682	0.484
		BPM 4	25.252	1.026	3.184	0.852
		BPM 3	31.593	9.745	4.098	0.806
		BPM 2	31.44	19.336	3.798	0.593
		BPM 1	53.802	17.706	0.932	0.309
Y-5-29	Patience Lake	PLM 3	33.986	1.104	11.806	0.762
		PLM 2	29.698	1.233	16.355	2.41
		PLM 1	47.655	0.635	5.467	0.956
V-1-16	Patience Lake	PLM 4	25.484	0.882	18.517	2.287
		PLM 3	50.476	0.368	5.85	1.138
		PLM 2	24.349	0.597	7.236	1.36
		PLM 1	38.883	0.597	6.256	1.432
	Belle Plaine	BPM 6	40.812	0.611	4.586	0.593
		BPM 5	46.603	0.296	1.752	0.551
		BPM 4	27.902	0.447	2.997	0.59
		BPM 3	31.033	0.768	6.708	1.044
		BPM 2	23.345	0.323	1.872	0.265
		BPM 1	59.547	0.183	0.523	0.316
V-1-14	Patience Lake	PLM 4	29.584	0.976	10.992	1.951
		PLM 3	42.646	0.528	7.07	1.378
		PLM 2	26.823	0.487	5.122	0.919
		PLM 1	45.115	0.937	6.102	1.051

Well	Potash Member	Sub-Member	KCl (weight %)	Carnallite (weight %)	Insolubles (weight %)	Anhydrite (weight %)
	Belle Plaine	BPM 6	37.584	0.397	3.794	0.864
		BPM 5	28.78	0.292	1.894	1.151
		BPM 4	31.123	0.398	3.908	0.756
		BPM 3	39.585	0.403	3.447	0.907
		BPM 2	27.558	0.3	1.925	0.483
		BPM 1	54.476	0.208	0.642	0.527

Whereas it is common practice to assume a density of 2.08 tonnes per cubic metre (tonnes/m^3) for potash evaporite lithologies, the QP deemed this practice to be less than desirable based on the requirements of NI43-101. As such, representative samples were taken from all 3 members and submitted for bulk density. The results are summarised in Table 19.

TABLE 19: BULK DENSITY

Member	Number of Samples	Density Range	Average Density
		tonnes*/m^3	tonnes*/m^3
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**

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. A helpful graphic from Halabura and Hardy (2007) 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 KP 245; which is well outside the project area.

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.

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.

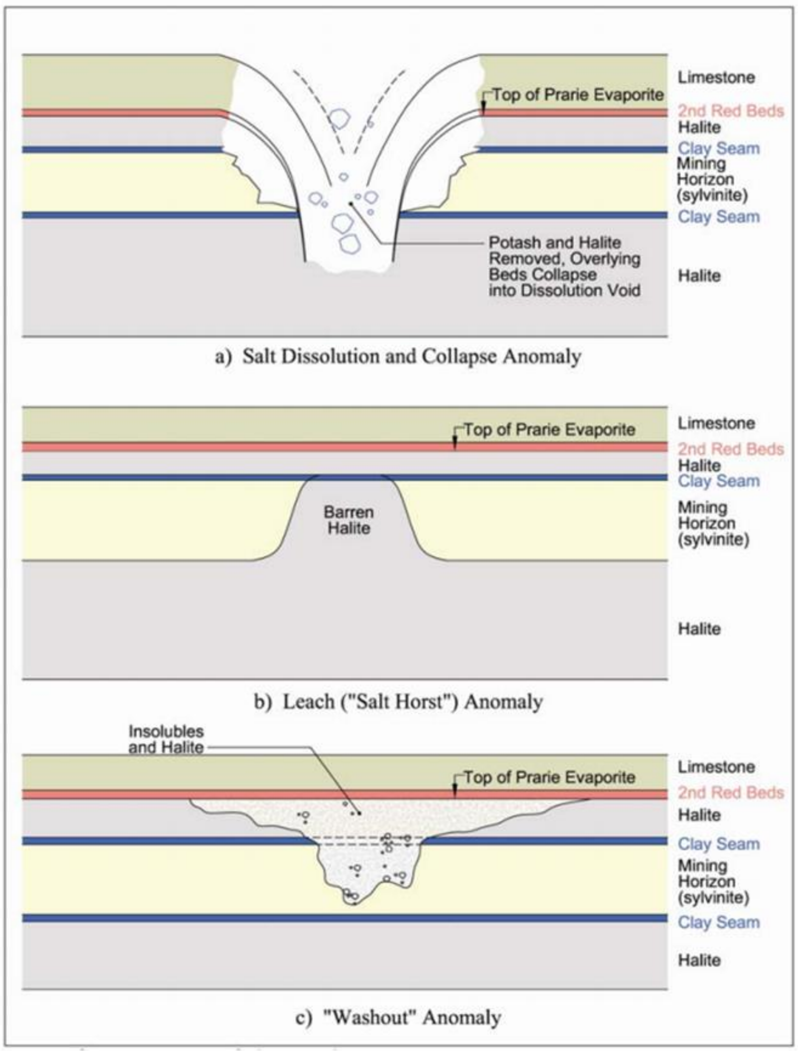

Figure 5: Factors Influencing Potash Grade Post-Mineralisation (From Halabura & Hardy, 2007)

7.6 STRUCTURE

The deposit 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 affect mineralisation locally, one needs to look to area specific geological and geophysical information, to provide evidence to support not excluding them from the Resource calculations. Such was the case in the project area.

Also, as discussed in the Section 9.3, 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 potash lease KL245. As mentioned, this is well outside the project area.

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.

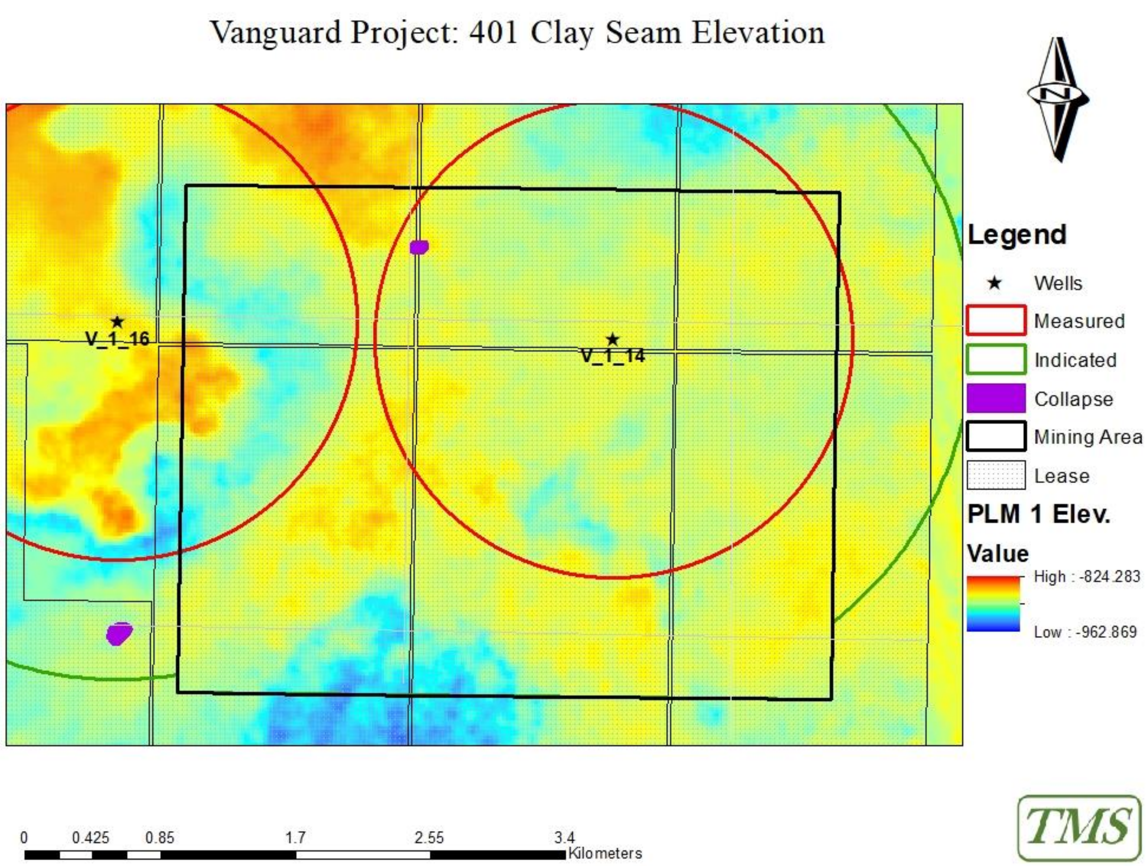

FIGURE 6: FLOOR ELEVATION OF THE PLM 1

8 DEPOSIT TYPE

Potash generally refers to "muriate of potash" (MOP), or KCl, otherwise 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 Basin. See the following figure for a graphical representation of the Prairie Evaporite deposit in Saskatchewan.

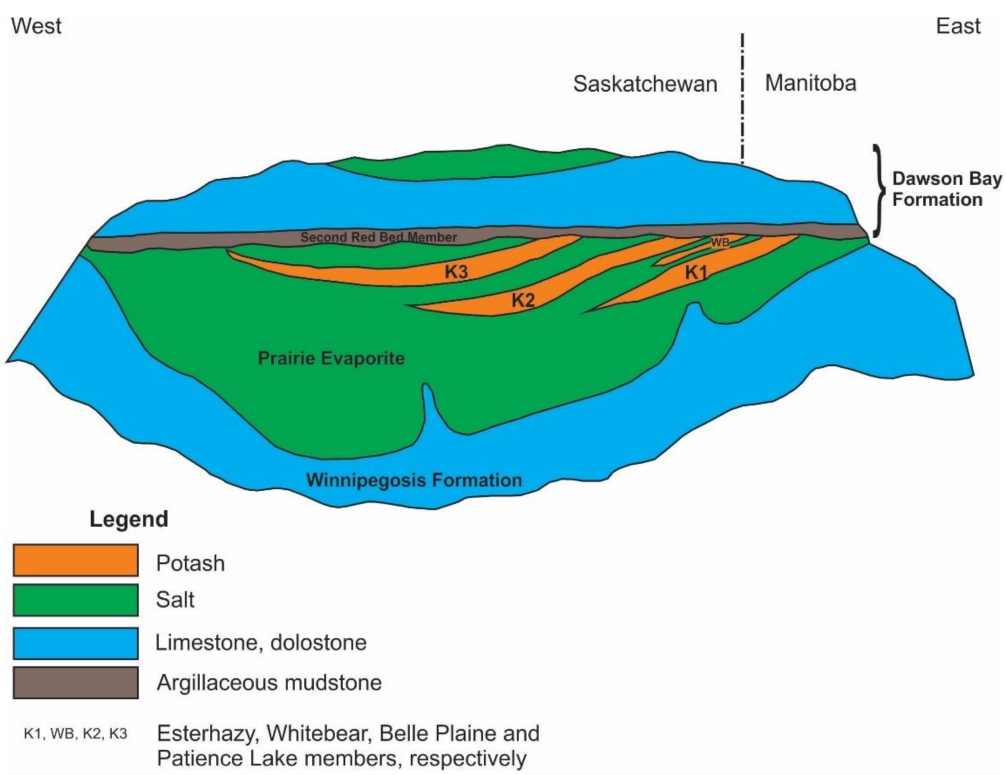

FIGURE 7: POTASH DEPOSITION IN SASKATCHEWAN (SOURCE: POTASHWORKS, DECEMBER 16, 2014)

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 2 historic wells previously described. 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 K2O 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 1963-1964 EXPLORATION PROGRAMS IN THE TUGASKE AREA

9.2 YANCOAL CANADA RESOURCES CO. LTD. & NORTH RIM EXPLORATION LTD.

Yancoal Canada Resources Co. Ltd. undertook an exploration program on its potash permits which preceded the 2 leases currently owned by Gensource. The exploration was managed and directed by North Rim Exploration Ltd. of Saskatoon, SK., Canada.

The program consisted of a 2D seismic component, and 2 potash wells. The program is outlined in detail in Fourie (2016). An example of core from this program is shown in the following photo.

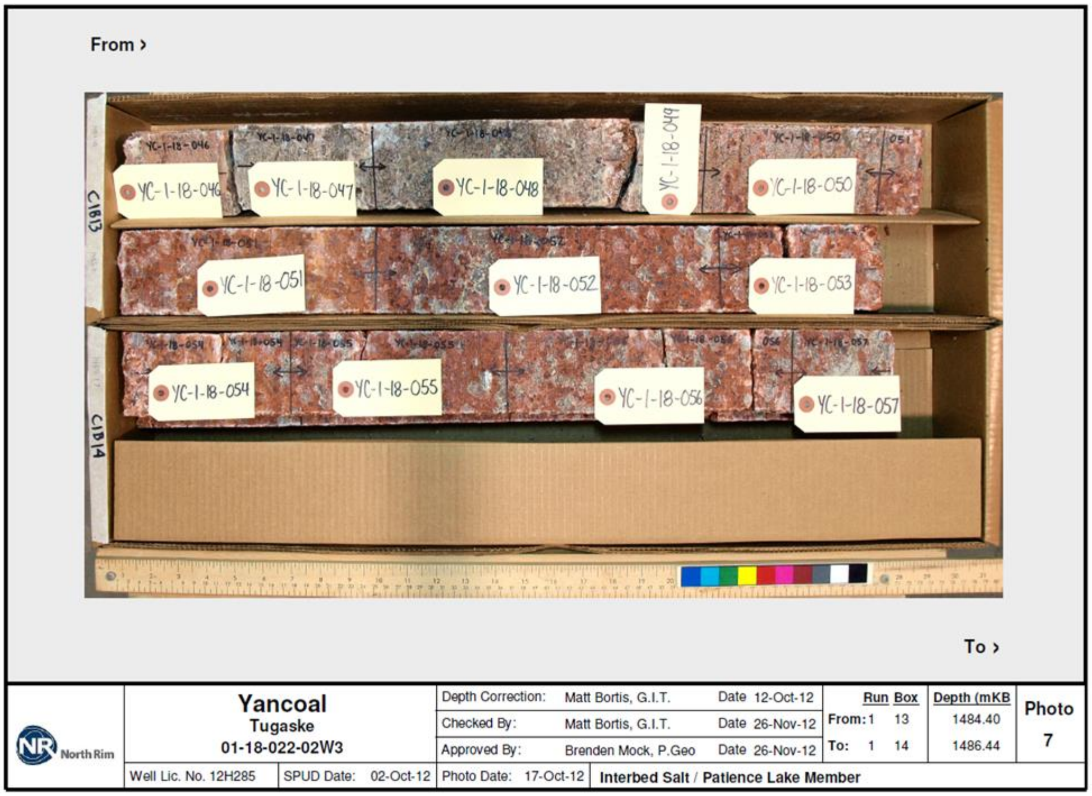

FIGURE 9: EXAMPLE OF CORE PHOTO BY NORTH RIM

9.3 SEISMIC

9.3.1 2D SEISMIC REINTERPRETATION

RPS Energy Canada, who were responsible for the initial 2D seismic survey, added the pertinent geophysical logging information from the new drilling (Section 10 below) 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 provided subsurface information that facilitates the assessment of the geologic conditions that future mining operations may encounter on KL245. 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.

9.3.2 3D SEISMIC

In February 2017, Gensource engaged Boyd Exploration Consultants Ltd., a wholly-owned subsidiary of RPS Energy Canada Ltd. (RPS) of Calgary, 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 in Saskatchewan, Canada and other basins around the world. RPS was responsible for the 2D seismic previously completed on KL244 and KL245.

The 3D seismic area focused on a portion of KL245 only, which was selected to be as focused as possible to define the resource to the extent necessary while being large enough to provide many options in terms of the selection of the initial well field area. Overall, the 3D seismic program covered an area of 34.37 square kilometres (13.27 square miles). The following figure illustrates the areal extent of the 2017 Vanguard 3D program.

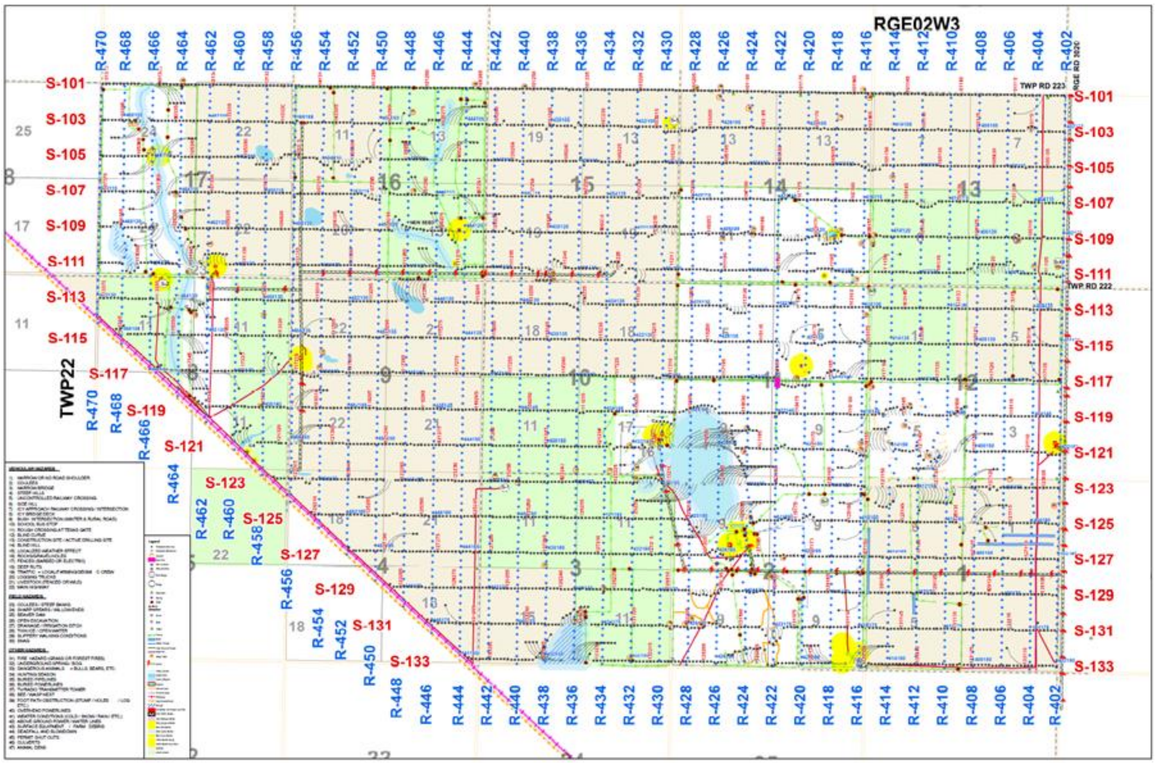

Figure 10: 2017 Vanguard 3D Program (KL245)

The final interpretation was completed in Q2, 2017, matching the schedule required by the 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 Tugaske 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.

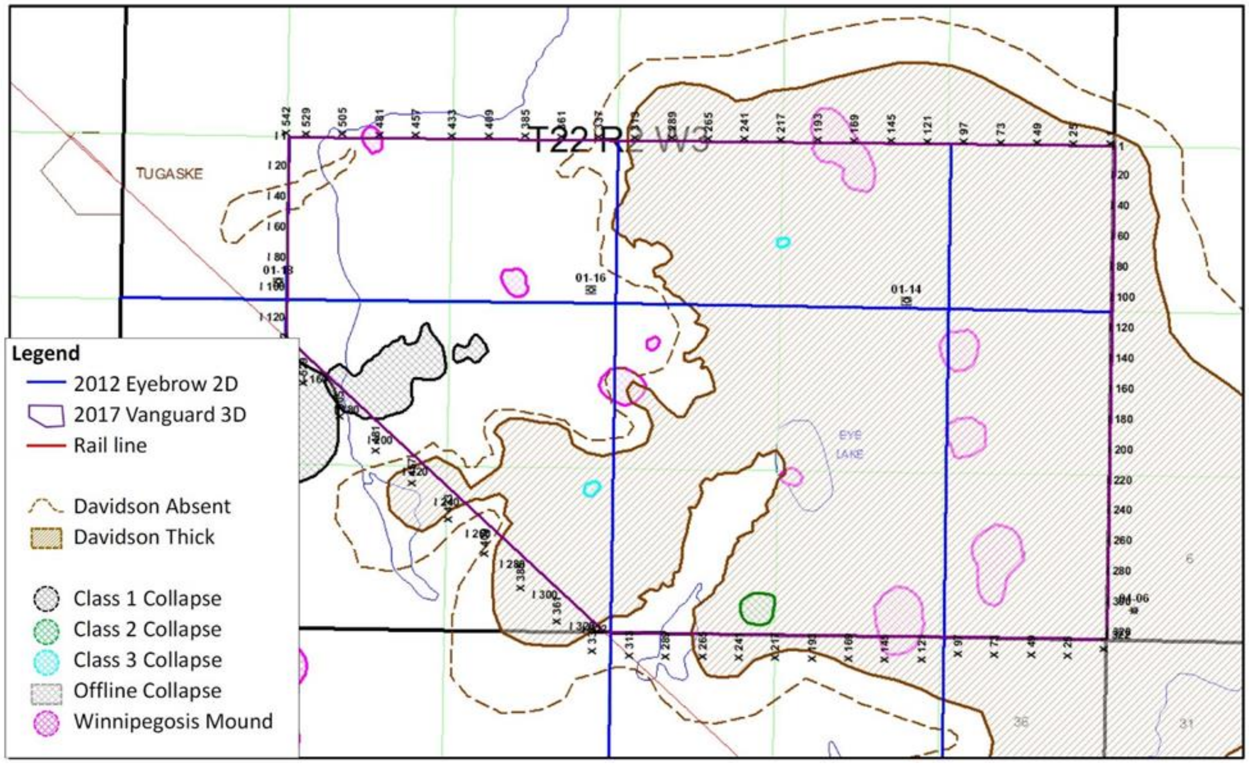

FIGURE 11: GEOLOGICAL ANOMALIES IN 3D SEISMIC AREA

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. The presence of several mounds in the Winnipegosis are present 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 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 are made to the Prairie Evaporite solution edge.

The 2017 Vanguard 3D 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

Gensource successfully completed a two-well exploration drilling program in its 100% owned Vanguard project area, in late fall/early winter of 2016. The two wells drilled were at locations 01-16-22-02 W3 (named V-1-16) and 01-14-22-02 W3M (named V-1-14). The program builds upon the two wells drilled on the property in 2012, and will enable Gensource to advance the determination of the resource extent, grade, and ultimately allow for updating and issuing of this report. The following figure shows the location of the new drill holes, in relation to the existing drill holes, on KL245.

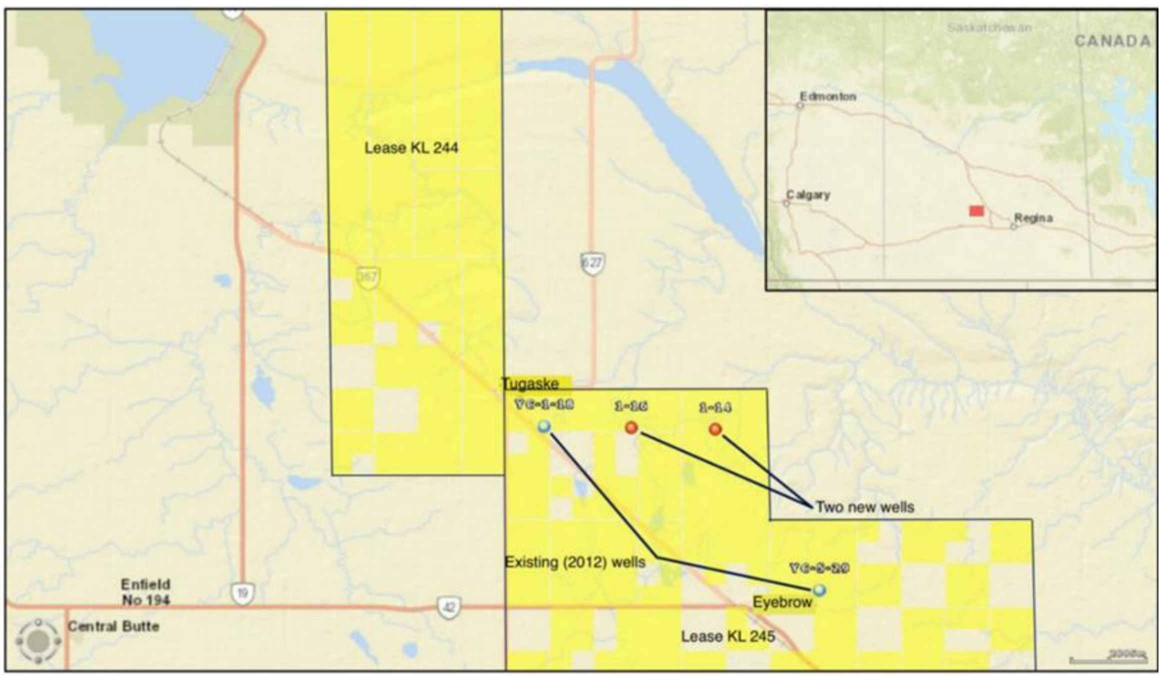

FIGURE 12: EXPLORATION DRILLING LOCATIONS

10.1 ENVIRONMENTAL MONITORING

Golder Associates did a pre-disturbance site assessment as well completed the checklist for development on private land as required by the Saskatchewan Ministry of Environment, for both wells (Gonari & Novecosky, 2016). A program of environmental practice was outlined for the drilling program. Eventual reclamation will be completed by the same.

10.2 DRILLING PROCEDURES

Gensource engaged Artisan Consulting Services Ltd. (referred to as Artisan hereafter), to provide drilling consulting and oversight. As part of their execution expertise, Artisan developed drilling programs and stick diagrams for each of the exploration wells. A summary of the drilling procedures for these wells is as follows:

- **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

10.3 GEOPHYSICAL LOGGING

A suite of geophysical logging was completed on both Gensource exploration wells. The wireline program was completed by Weatherford. The following downhole geophysical logs were run:

- **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
  - Borehole 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
  - Borehole Navigation
  - Sector Bond Log

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY OF CORE

11.1 CORE RECOVERY & HANDLING PROCEDURES

Wellsite geology was provided by Heelstone Resources Inc., and coring completed by Blackies Coring. The following is a summary of the core recovery and handling procedures used on site, during Gensource's two-well exploration program:

- **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.
    - It 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.

Note: In all methods, two (2) core hands and two (2) 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, etc., core was transported securely to a Saskatchewan Research Council (SRC) facility in Saskatoon, Sk. 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 and received for archival in the Subsurface Geological Laboratory of the Saskatchewan Geological Survey in Regina, Sk.

11.3 CORE LOGGING PROCEDURES

Drill holes V-1-16 and V-1-14 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. An example of the core boxes is shown in Figure 13.

FIGURE 13: SPLIT CORE FROM V-1-14

11.4 SRC ASSAYING PROCEDURES

11.4.1 SAMPLE PREPARATION

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. The pulp is then transferred to a labeled plastic snap top vial.

11.4.2 SOLUBLE & INSOLUBLE DIGESTION AND ICP-OES ANALYSIS

An aliquot of pulp is placed in a 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 ICP-OES.

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 %.

12 DATA VERIFICATION

The only available quality control procedures are those of the SRC. Further quality assurance / quality control (QA/QC) is covered in Section 12.2. The SRC is ISO17025 certified for potash analysis. It 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 LABORATORY QUALITY CONTROL

QC 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 QUALITY ASSURANCE/QUALITY CONTROL

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, Sifto Salt Tugaske 4-10-23-02 W3M and Sifto Salt Tugaske 14-34-22-02 W3M at the Saskatchewan Provincial Core Holding Facility in Regina, SK on 11 April 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 14).

12.2.2 YANCOAL DRILLING PROGRAM

It was also possible to examine the Yancoal drill core at the Core and Sample Repositories, Subsurface Laboratory, Saskatchewan Geological Survey, Regina, Saskatchewan. Visual confirmation of drill logs as received from Yancoal could be 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 Technical Reports. The drilling of the 2012 holes was done under supervision of North Rim Exploration Limited, and logged and sampled by North Rim personnel. Assaying was done at the Saskatchewan Research Council Facility in Saskatoon, Saskatchewan. While assays were available for some of the historic wells (Sifto Salt Tugaske 4-10-23-2 and Sifto Salt Tugaske 14-34-22-2, named SST-4 and SST-14 hereafter) in the government database, no information as to drilling, sampling or assaying procedure was available.

FIGURE 14: WRAPPED DRILL CORE FROM YANCOAL TUGASKE 1-18-22-2 W3M

12.2.3 Standards & Repeats

Figure 15 and Figure 16 demonstrate the veracity of the assaying through standard verification and repeat correlation.

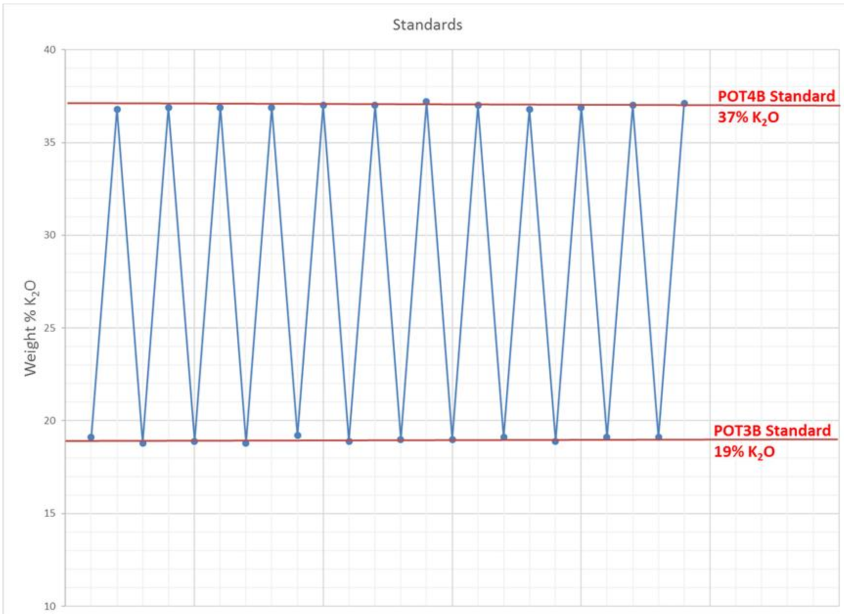

Figure 15: Standard Verification, Both Wells

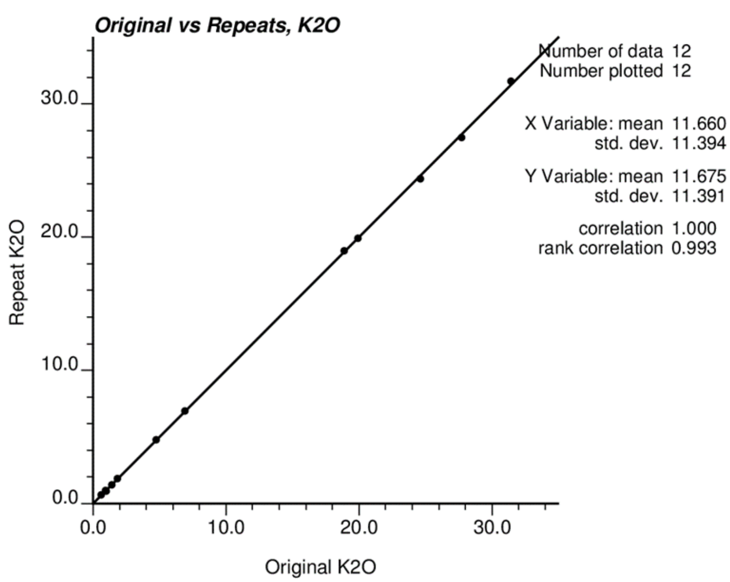

Figure 16: Correlation Of Original Assays With Repeats

While both of the above Figures indicate well established and reliable assaying techniques, the strong repeat-correlation in Figure 16 is highly commendable.

12.2.4 Adequacy of Quality Assurance/Quality Control Program

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

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 OVERVIEW

The plant is designed to produce 250,000 tonnes per year of saleable Muriate of Potash (MOP), Standard Grade, SGN 83 potash product. Return brine from processing will be heated 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 production of potash product (nominally 96% purity KCl) is accomplished by the removal of KCl from the recirculating brine stream by temperature reduction. Temperature reduction is accomplished by a vacuum crystallizer, followed by a surface cooling crystallizer operation. 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

Crystallization design and fabrication experts Whiting Equipment Canada Inc. (Whiting) have developed the mass balance and process arrangement for the crystallization circuit. They relied on 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 station, has been 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 conveyance, chute work, screens, ducts, crusher and compactor. An Excel spreadsheet heat and material balance model, developed by Innovare, incorporated Whiting scope of supply modelled parameters, as well as ENGCOMP’s. It also simulated the wellfield circulation and all auxiliary equipment, which includes steam and electrical generation, water cooling and chilling, etc.

Each stream has been assigned a number, depicting the quantity of KCl solids product or the volume of solution. Other information, such as brine constituent, slurry specific gravity, slurry % solids, slurry volumes, temperature, solids tonnages, solids particle size distribution is reported in summary tables called a “Mass Balance”. This information supports the development of equipment datasheets sent to vendors for sizing equipment.

The process design criteria, process flow diagrams (PFD’s), and mass balance tables were all included as part of the Vanguard One Feasibility Report, by ENGCOMP et al. A summary of the process design basis is as follows:

Selective Mining Enhanced Recovery Potash Plant Design Basis

Production Rate

250,000 t/y of sellable potash product (1)

Plant Utilization

Available Operating Hours:	8760	=	365	days
Annual Turnaround:	-160	=	-6.7	days
Scheduled Downtime:	-300	=	-12.5	days
Unscheduled Downtime:	-300	=	-12.5	days
Plant Utilization:	8000	hours =	333.3	days

Process Losses

Purge Losses		1.20%
Spills Washdowns		0.50%
Transportation Losses:		1.00%
	Tot.	2.70%
Plant Recovery:		97.30%
KCl Mining Required.		256,937 t/y KCl

Products Produced	**Amount t/y**	**Purity**
Industrial	0	99.0%
Standard	250,000	96.0%
Granular	0	95.5%
	250,000	

Weighted Avg. KCl purity : 96.0%

For process design purposes, design for 99.9% product purity

KCl Mining Required: 256,937 t/y Product = 32.09 t/h pure KCl

Mining Temperatures

Injection Stream Leaving Plant:	100 °C
Injection Stream at Wellhead:	99 °C
Production Stream at Wellhead:	62 °C
Production Steam at Plant:	60 °C

Production Stream at Wellhead

	g/l	**Wt%**
KCl =	155	12.64
$NaCl$ =	242	19.73
$MgCl_2$ =	2.00	0.16
$CaSO_4$ =	1.50	0.12

Ore Deposit

Ore deposit specific gravity = 2.10

Processing Agents

Anticaking Amine= 320 g/t

Dedusting Oil (18 wt.%) = 4,500 g/t

(1) t/y = metric tons per year

FIGURE 17: PROCESS DESIGN BASIS

13.3 TESTING

As discussed in Section 16 of this report, selective solution mining (aka "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). While selective solution mining of potash as the sole mining method has not yet been deployed 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 mining of potash has been conducted in Saskatchewan for decades, but as a secondary mining method in solution mines using the conventional "Belle Plaine 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 mining. Gensource simply intends to produce KCl solely using selective mining. It is noted that other potash proponents in Saskatchewan are also exploring the use of selective mining techniques.

Substantial data and knowledge exists regarding the relationship of dissolution of KCl and NaCl. To support the knowledge of selective dissolution, dissolution testing on site specific core can be 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. As such, during Gensource's exploration drilling program, core samples of all three members of the Prairie Evaporite (including all sub-members, such as the lower Patience Lake potash zone or "PLM 1") were obtained. These cores were examined, and representative cores were selected for potential bench testing.

During the feasibility study, the project team was comfortable with the existing industry data, in-house knowledge and expertise in the mining and processing techniques, and conservative assumptions and factors applied in the engineering and design, to complete the study work without performing dissolution testing of the recovered core. In the engineering work completed at this stage of the project, 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 overdesign 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 allowed for 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 equipment design changes. There remains an opportunity, though, for further dissolution testing on Gensource's recovered core, during the next phase project development (i.e. detailed engineering), to potentially optimize various cavern and process design parameters.

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 methodology.

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

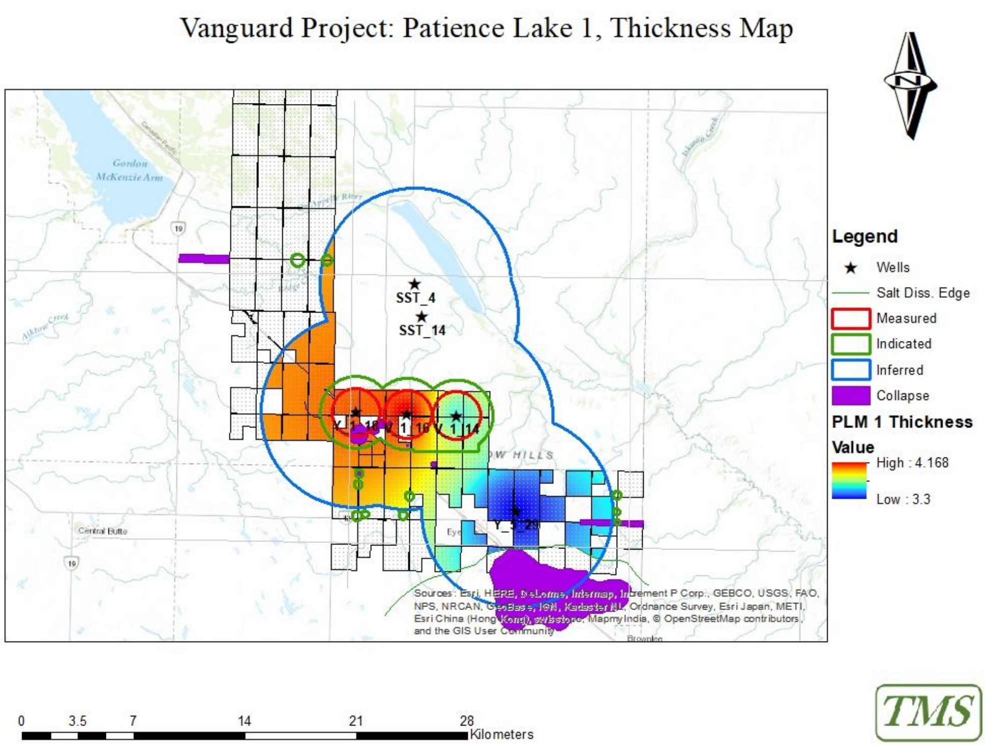

FIGURE 18: VANGUARD AREA THICKNESS GRID FOR THE PLM 1 SUB-MEMBER

14.2 GRADE INTERPOLATION & ASSUMPTIONS

Variograms were constructed for all major constituents, except the insolubles, due to the latter's distribution in well-defined, thin seams.

Figure 19 gives an example of one variogram, while Table 20 gives a summary of the variogram information. Note the following:

- For the two (2) lowest Belle Plaine members, variograms for Sylvite were developed in addition to those for KCl, as the significant presence of carnallite acting as secondary source of KCl distorts the KCl variography.
- Anhydrite variograms were only modelled for the Patience Lake, as the anhydrite presence in the Belle Plaine is relatively minor.
- No variography was completed for the Esterhazy Member, as it mostly falls below cut-off, both in terms of KCl grade as well as carnallite presence.
- All variograms utilized entire sub-seam composites.

Grade Interpolation was made using the variograms, and Ordinary Kriging. A resultant KCL grade grid for the PLM 1 sub-member is shown in Figure 20. Comparative statistics of the seam composites and the Model grade of the PLM 1 sub-member indicate the efficacy of the Ordinary Kriging: The mean grade of the well composites is 42.76 weight % KCl, while the weighted mean grade of the entire Resource is 42.81% KCl.

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

The minor reorganisation of lithological picks did not significantly affect the variography as presented in the previous Technical Report (March 2017).

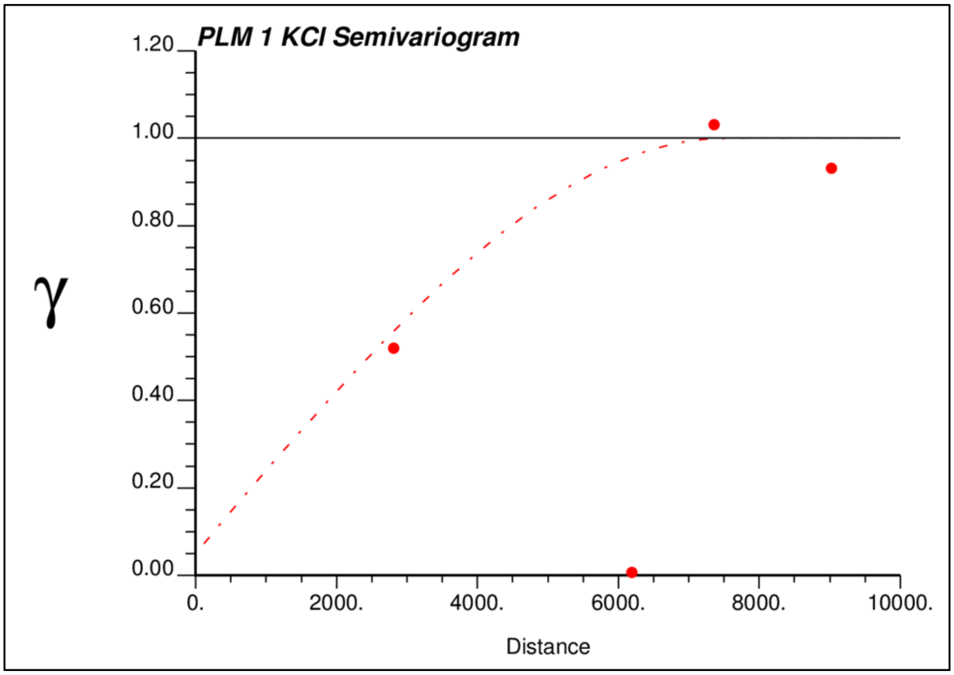

FIGURE 19: PLM 1 KCL OMNIDIRECTIONAL VARIOGRAM

TABLE 20: SUMMARY OF VARIOGRAPHY

Lithological Unit	Variable	Main Direction	Main Nugget	Main Range	Secondary Nugget	Secondary Range
PLM 4	KCl	Omnidirectional	0	**9500**	-	-
	Carnallite	Omnidirectional	0	3200	-	-
	Anhydrite	Omnidirectional	0	7200	-	-
PLM 3	KCl	Omnidirectional	0	**20500**	-	-
	Carnallite	Omnidirectional	0	3200	-	-
	Anhydrite	Omnidirectional	0	7200	-	-
PLM 2	KCl	40	0	**12000**		9000
	Carnallite	Omnidirectional	0.5	9000	-	-
	Anhydrite	Omnidirectional	0	7200	-	-
PLM 1	KCl	Omnidirectional	0.05	**7500**	-	-
	Carnallite	Omnidirectional	0	9000	-	-
	Anhydrite	340	0	30000	0	3000
BPM 7	KCl	Omnidirectional	0	**7300**	-	-
	Carnallite	Omnidirectional	0	7300	-	-
BPM 6	KCl	Omnidirectional	0	**9000**	-	-
	Carnallite	Omnidirectional	0	6300	-	-
BPM 5	KCl	345	0	**6200**	0	3200
	Carnallite	90	0	32500	0	2000
BPM 4	KCl	90	0	**7500**	0	**2000**
	Carnallite	90	0	8200	0	3200
BPM 3	KCl	0	0	**8300**	0	**3000**
	Carnallite	180	0	8200	0	3200
BPM 2	KCl	Omnidirectional	0	**7400**	-	-
	Sylvite	0	0	6500	0	3200
	Carnallite	180	0	7700	0	3100
BPM 1	KCl	250	0	**7500**	0	**2000**
	Sylvite	90	0	7700	0	2000
	Carnallite	Omnidirectional	0	2100	0	2100

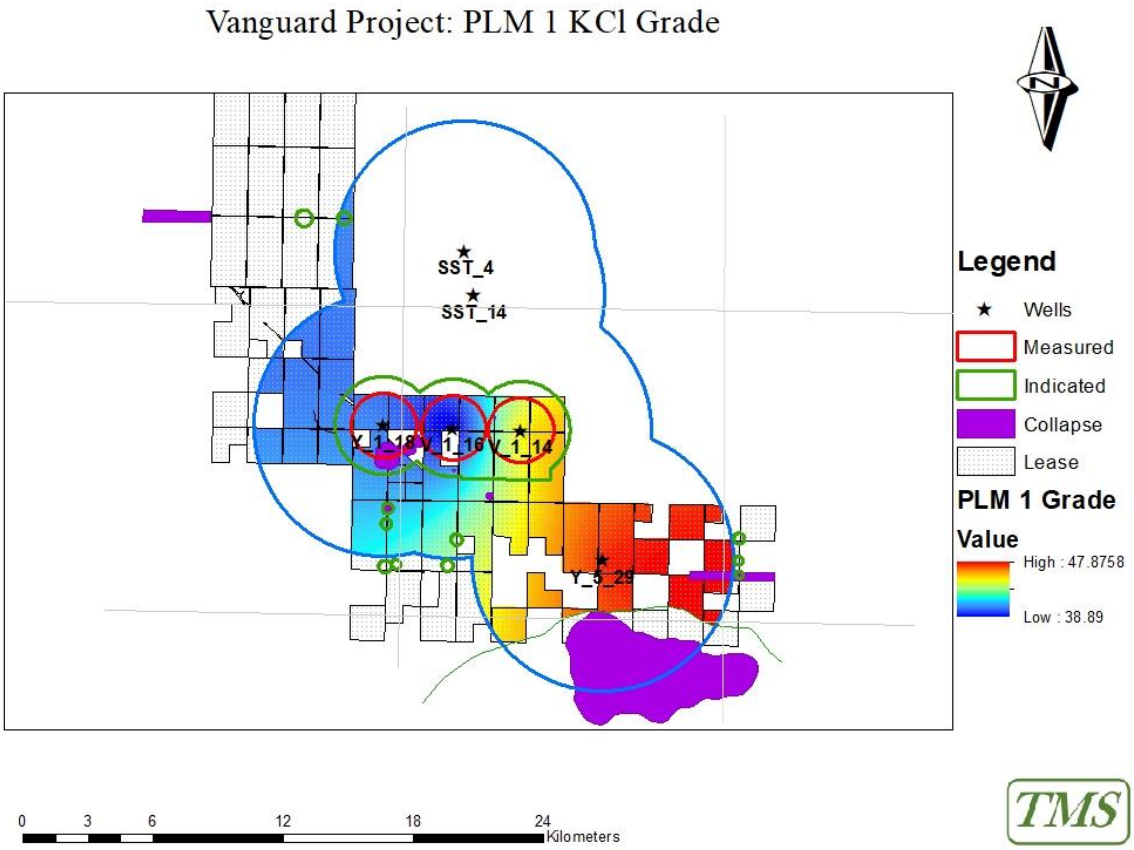

FIGURE 20: VANGUARD AREA KCL GRADE GRID FOR THE PLM 1 SUB-MEMBER

The following assumptions were applied during the Resource Estimation:

- 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 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 6000 m Inferred interpolation range. The former was clipped out of the model altogether. The 6000 m Inferred Interpolation ROI was that used in the previous Technical Report (Fourie, 2017).
- An Indicated Radius-of-Influence of 2250 m was used for wells that overlap (thus excluding Well Y-5-29). For a more detailed discussion of this ROI, see below.
- A Measured Radius-of-Influence of 1500 m was used for the Indicated Wells. For a more detailed discussion of this ROI, see below.

- All other anomalies were also clipped out of 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 category, and based on the results of the 3D seismic, this deduction was reduced to 10% for the Indicated Resource, and 5% for the Measured Resource; as Indicated and Measured were largely covered by the 3D seismic survey.
- Recovery rates: Based on the preliminary horizontal cavern selective solution mining design assumptions, 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%, with 30% and 50% as sensitivity analyses (Debusschere et. al., 2016).
- Density used are as reported in Table 19.

14.3 RADII OF INFLUENCE (ROI)

There are substantially different methodologies and justifications for determining Radii-of-Influence (ROI), whereas the only consistent practice in literature is to (almost) never employ the Measured classification outside of 3D seismic survey areas. Indicated resource has been classified with or without 3D seismic, with varying Radii-of-influence depending on drilling density and whether the radii are applied on the inside or outside of the drilling field.

In the opinion and experience of the QP, the proper application of geostatistics is not common practice in the potash industry. While drilling density is helpful, data variability is a key item in aiding the determination of the continuity of a Resource. Therefore, showing the continuity of a large stratigraphic deposit by means of geostatistical analysis, is in the opinion of the QP, a prerequisite for upgrading the resource to an Indicated Resource; whether the continuity is in terms of grade, thickness, or a combination of the two.

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 discrete distortion events, such as those previously described in Section 7. However, such surveys are of little use when determining the continuity of mineralisation, which is the main object of this study, and again a critical part of the Resource definitions as employed by the CIM Standards (2014). Thus, the QP believes a rigorous application of the geostatistical results, based on generally accepted geostatistical standards applied in the industry, combined with prudence based on the known seismic surveys, are the appropriate basis on which to determine the ROI's for this report.

Parker & Dohm (2014) gives a best practice guide, and mentions 50% of the sill for Measured, 75% for Indicated and 100 – 200% for Inferred, with the added provision that cross sections and plans should be inspected – amongst others the difference between grade and thickness variation should be examined, cross sections should be looked at, and "spotted dog" classification should be avoided through local reclassification.

This best practice was applied to the deposit and variography at hand. The two shortest, outlier variogram ranges were discarded as these contributed very little to the total tonnage. The next shortest Range is 3000 m, thus yielding an Indicated ROI of 2250 m, and confirming the previous Inferred ROI of 6000 m. Using the same approach, the Measured ROI is thus defined as 50% of the range, or 1500 m.

For the PLM 1, which is the target horizon for mine development (See Section 16), minor reclassification was done at the QP's discretion at the southern margin of the boundaries of the Indicated ROPI's of the V-1-16 and V-1-14 wells. For PLM 1, taken in isolation, the variography would be supportive of substantially increased ROI's. In addition, the 3D seismic data indicates very consistent, anomaly-free deposition. A small portion of previously Inferred PLM 1 was re-classified as Indicated in this area. This can clearly be seen in Figure 18 & Figure 20.

14.4 RESOURCE ESTIMATE & CLASSIFICATION

Based on the criteria outlined in 14.2, Inferred, Indicated, and Measured Resource quantities were defined for the sub-members of the Patience Lake and Belle Plaine Members. Due to the pervasive presence of carnallite, and lower grades, no resource was defined for the Esterhazy Member. Note that all tonnages are listed as tonnes (tonnes, or t, = metric tons). An assumed recovery rate of 40% is highlighted as the "base case".

The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

14.4.1 INFERRED MINERAL RESOURCE

The CIM standards (2014) defines an Inferred 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 Section 14.2, the following Inferred Resource was estimated, with the "base case" of an assumed 40% recovery indicated in red. This results in 313.71 million tonnes of resource in the Inferred category.

TABLE 21: INFERRED RESOURCE (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 %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
Patience Lake Member	PLM1	43.10	0.66	5.77	3.84	659.58	494.69	63.96	85.28	106.60
	PLM2	24.44	0.76	8.98	3.75	650.81	488.11	35.79	47.72	59.65
	PLM3	43.46	0.63	7.72	2.57	505.13	378.85	49.39	65.86	82.32
Sub-Total		36.51	0.69	7.46	10.16	1815.52	1452.41	149.14	198.85	248.57
Belle Plaine Member	BPM1	54.84	4.17	0.74	0.86	72.82	54.62	8.99	11.98	14.98
	BPM2	27.06	3.81	2.42	2.08	191.76	143.82	11.68	15.57	19.46
	BPM3	35.05	3.25	4.76	1.24	180.92	135.69	14.27	19.02	23.78
	BPM4	28.19	0.7	3.65	1.99	341.06	255.79	21.63	28.84	36.05
	BPM5	35.69	0.51	1.92	1.69	289.83	217.37	23.27	31.03	38.79
	BPM6	36.73	0.97	6.41	0.99	59.03	44.27	4.88	6.50	8.13
	BPM7	39.23	0.92	4.92	0.47	16.19	12.15	1.43	1.91	2.38
Sub-Total		33.25	1.81	3.16	9.32	1151.61	863.71	86.14	114.86	143.57
Total							2316.12	235.28	313.71	392.14
									BASE CASE	

14.4.2 INDICATED MINERAL RESOURCE

The CIM standards (2014) defines an Indicated 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 Section 14.2, the following Indicated Resource was estimated, with the "base case" of an assumed 40% recovery indicated in red. This results in 63.75 million tonnes of resource in the Indicated category.

TABLE 22: INDICATED RESOURCE (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 %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
Patience Lake Member	PLM1	42.37	0.73	5.90	3.92	116.72	105.05	13.35	17.81	22.26
	PLM2	26.51	0.58	6.59	3.72	55.49	49.94	3.97	5.30	6.62
	PLM3	45.71	0.48	6.31	2.82	78.50	70.65	9.69	12.92	16.15
	PLM4	25.30	0.96	13.61	2.34	15.06	13.55	1.03	1.37	1.71
Sub-Total		39.08	0.64	6.60	12.80	265.77	239.20	28.04	37.39	46.74
Belle Plaine Member	BPM1	55.07	2.1	0.67	0.81	14.10	12.69	2.10	2.80	3.49
	BPM2	26.6	1.95	2.12	2.07	35.08	31.57	2.52	3.36	4.20
	BPM3	35.86	1.77	4.73	1.27	24.95	22.46	2.42	3.22	4.03
	BPM4	28.42	0.64	3.51	1.99	54.76	49.29	4.20	5.60	7.00
	BPM5	36.02	0.43	1.81	1.65	45.43	40.89	4.42	5.89	7.36
	BPM6	37.72	0.65	4.97	1.39	38.13	34.32	3.88	5.18	6.47
	BPM7	31.58	1.11	6.37	0.41	2.73	2.46	0.23	0.31	0.39
Sub-Total		34.03	1.04	3.17	9.59	215.19	193.67	19.77	26.36	32.95
Total							432.87	47.81	63.75	79.69
									BASE CASE	

14.4.3 MEASURED MINERAL RESOURCE

The CIM standards (2014) defines an Measured 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 Section 14.2, the following Measured Resource was estimated, with the "base case" of an assumed 40% recovery indicated in red. This results in 93.68 million tonnes of resource in the Measured category.

TABLE 23: MEASURED RESOURCE (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 %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
Patience Lake Member	PLM1	41.88	0.74	5.93	3.93	148.80	141.36	17.76	23.68	29.60
	PLM2	26.20	0.55	6.14	3.74	78.89	74.94	5.89	7.85	9.82
	PLM3	46.09	0.46	6.17	2.86	108.15	102.74	14.21	18.94	23.68
	PLM4	26.55	0.96	13.47	2.32	44.00	41.80	3.33	4.44	5.55
Sub-Total		38.05	0.65	6.92	12.85	379.84	360.85	41.19	54.92	68.64
Belle Plaine Member	BPM1	55.68	1.33	0.63	0.8	21.44	20.37	3.40	4.54	5.67
	BPM2	26.62	1.35	2.04	2.07	48.37	45.95	3.67	4.89	6.12
	BPM3	35.64	1.11	4.89	1.28	34.80	33.06	3.53	4.71	5.89
	BPM4	28.56	0.61	3.45	1.98	74.15	70.44	6.04	8.05	10.06
	BPM5	36.21	0.41	1.79	1.6	59.94	56.95	6.19	8.25	10.31
	BPM6	38.52	0.58	4.61	1.44	53.91	51.21	5.92	7.89	9.86
	BPM7	30.07	1.21	7.06	0.44	3.81	3.62	0.33	0.44	0.54
Sub-Total		34.41	0.80	3.11	9.61	296.42	281.59	29.07	38.76	48.45
Total							642.44	70.26	93.68	117.10
									BASE CASE	

14.4.4 SUMMARY OF MEASURED & INDICATED RESOURCE

A summary of the Measured and Indicated Resource categories, as quantified for the Vanguard One project, on Gensource's KL245 lease, is as follows:

TABLE 24: MEASURED & INDICATED RESOURCE SUMMARY (WITH BASE CASE HIGHLIGHTED)

Resource Category	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 %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
INDICATED	36.82	0.82	5.07	11.19	480.96	432.87	47.81	63.75	79.69
MEASURED	36.45	0.72	5.25	11.23	676.25	642.44	70.26	93.68	117.10
TOTAL	36.61	0.76	5.17	11.21	1157.22	1075.31	118.07	157.43	196.78
								BASE CASE	

Due to the pervasive presence of carnallite, and lower grades, no resource was defined for the Esterhazy Member.

15 MINERAL RESERVE ESTIMATES

The CIM 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.

The CIM Definition Standards provide for a direct relationship between Indicated Mineral Resources and Probable Mineral Reserves, and between Measured Mineral Resources and Proven Mineral Reserves. In other words, the level of geoscientific confidence for Probable Mineral Reserves is the same as that required for the in-situ determination of Indicated Mineral Resources, and the level of confidence for Proven Mineral Reserves is the same as that required for the in-situ determination of Measured Mineral Resources. The following figure displays the relationship between the Mineral Resource and Mineral Reserve categories.

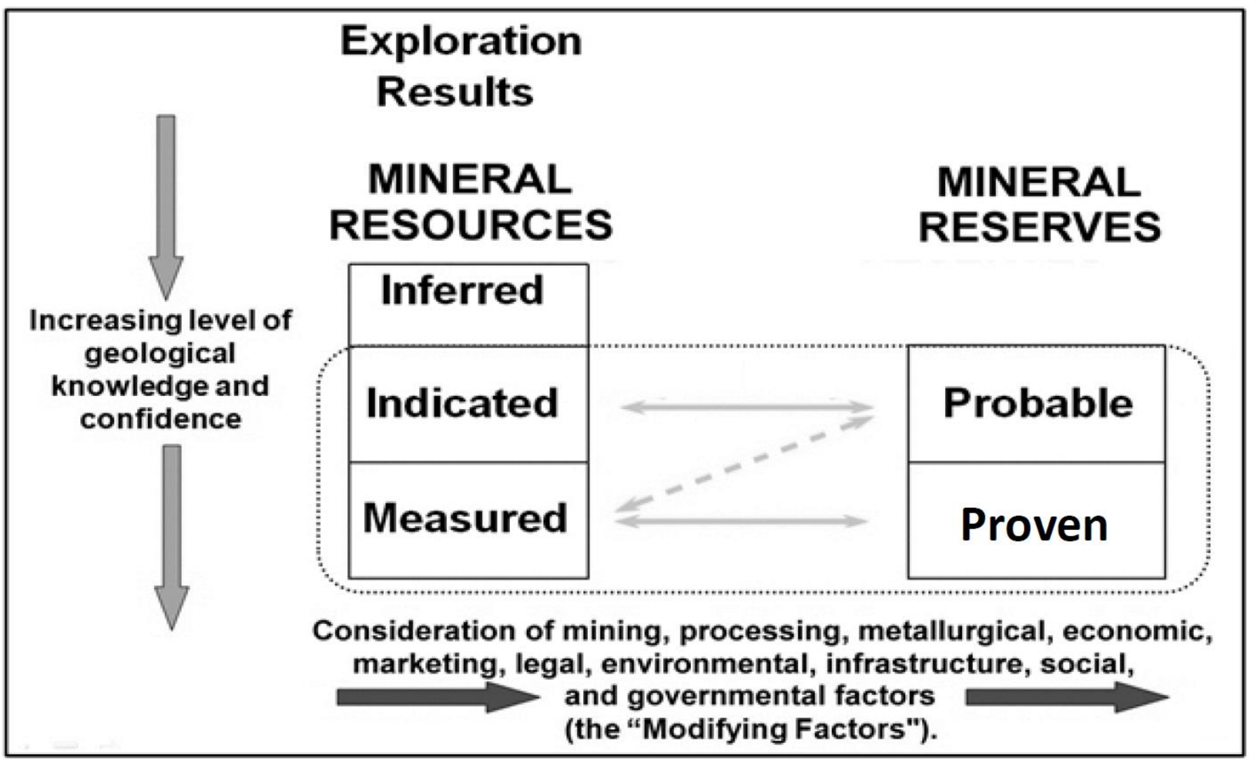

FIGURE 21: RELATIONSHIP BETWEEN MINERAL RESOURCE & RESERVE (CIM STANDARDS, 2014)

What should be noted is that in for the Feasibility Study, only the continuous operation of the solution mining cavern, focused on one sub-member of the Patience Lake (PLM 1), was incorporated into the feasibility economics. Therefore, Reserve data represents only the base case for the FS for the Vanguard One project. Since the mine plan is focused initially only on the Patience Lake sub-member 1 (PLM 1) within the Patience Lake member of the Prairie Evaporite, and focuses on a relatively small component of the area of 3D seismic coverage, only a small portion of the overall Resource is converted to Reserve for the base case.

To support the determination of Reserve, an initial mine plan was developed during the Feasibility Study. The ultimate recovered KCl tonnages were obtained by applying conservative mining factors, in addition to the deductions discussed in Section 14 (i.e. base case 40% recovery). For instance, using the average cavern height, the average grade, and a cavern recovery factor (as discussed in Section 16) were all applied against the sylvite tonnage. The resultant Recovery Factor applied to Reserve was 23%. It should be noted that recovery losses in the process (i.e. purge losses, transportation losses, etc.) are accounted for in the annual required production tonnages, as outlined in Section 13, Figure 17.

The completion of the Feasibility Study confirmed favorable economic results surrounding Gensource's Vanguard One project and its selective solution mining and enhance recovery process. As such, Measured and Indicated Resources defined were upgraded during the FS to Proven and Probable Mineral Reserves, respectively.

Note that all tonnages are listed as tonnes (tonnes, or t, = metric tons).

15.1 PROVEN RESERVES

The CIM Definition Standards (2014) define Proven Reserves 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 RESERVES

Patience Lake sub-Member 1 (PLM 1): Proven Reserve						
Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl)	Recovered Tonnage KCl
Weight %	Weight %	Weight %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
43.49	0.82	6.12	3.79	58.45	25.42	5.85

15.2 PROBABLE RESERVES

The CIM Definition Standards (2014) define Probable Reserves 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 RESERVES

Patience Lake sub-Member 1 (PLM 1): Probable Reserve						
Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl)	Recovered Tonnage KCl
Weight %	Weight %	Weight %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
43.37	0.77	6.07	3.83	39.53	17.15	3.94

15.3 SUMMARY OF RESERVES

A summary of the two (2) Reserve categories, as quantified for the Vanguard One project, on Gensource's KL245 lease, is as follows:

TABLE 27: PLM 1 PROVEN & PROBABLE RESERVE SUMMARY

Patience Lake sub-Member 1 (PLM 1): Proven & Probable Reserve							
Reserve Category	Total KCl Grade	Carnallite Grade	Insoluble Grade	Average Thickness	Sylvinite Tonnage with Deductions	Sylvite Tonnage (KCl)	Recovered Tonnage KCl
	Weight %	Weight %	Weight %	meters	Million Tonnes (Mt)	Million Tonnes (Mt)	Million Tonnes (Mt)
Probable	43.37	0.77	6.07	3.83	39.53	17.15	3.94
Proven	43.49	0.82	6.12	3.79	58.45	25.42	5.85
Total	43.44	0.80	6.10	3.81	97.98	42.56	9.79

16 MINING METHOD

16.1 OVERVIEW

Selective solution mining (a.k.a. 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 mining process is currently being utilized by Mosaic for secondary recovery of potash from vertical caverns at their Belle Plaine facility in Saskatchewan, and by Intrepid Potash for primary recovery of potash in horizontal caverns at their Cane Creek Mine in Moab, Utah.

Since only KCl crystals are dissolved by the NaCl brine, the KCl mineral grade in the potash bed must be high enough to sustain a KCl crystal to KCl crystal flow path within the potash bed. The goal of the selective dissolution process is to dissolve the KCl while minimizing precipitation from the solvent brine of NaCl, which could coat KCl crystals and block the KCl-dissolution flow path.

Based on geologic data four (4) exploration boreholes and a 3D seismic survey, the Vanguard One Project is targeting, as a base case, a continuous potash zone at the base of the Patience Lake sub-Member 1 potash bed (PLM 1) that averages 3.9 metres thick and a potash grade of 43% KCl.

Analysis of the relative economics of a range of approaches for the selective solution mining at the Vanguard 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 wells (thus forming one cavern system) that are drilled along the base of the target potash bed in a fan style configuration from a central production well as shown in Figure 22. This solution mining 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 about 2003 and is described in more detail in subsequent subsections.

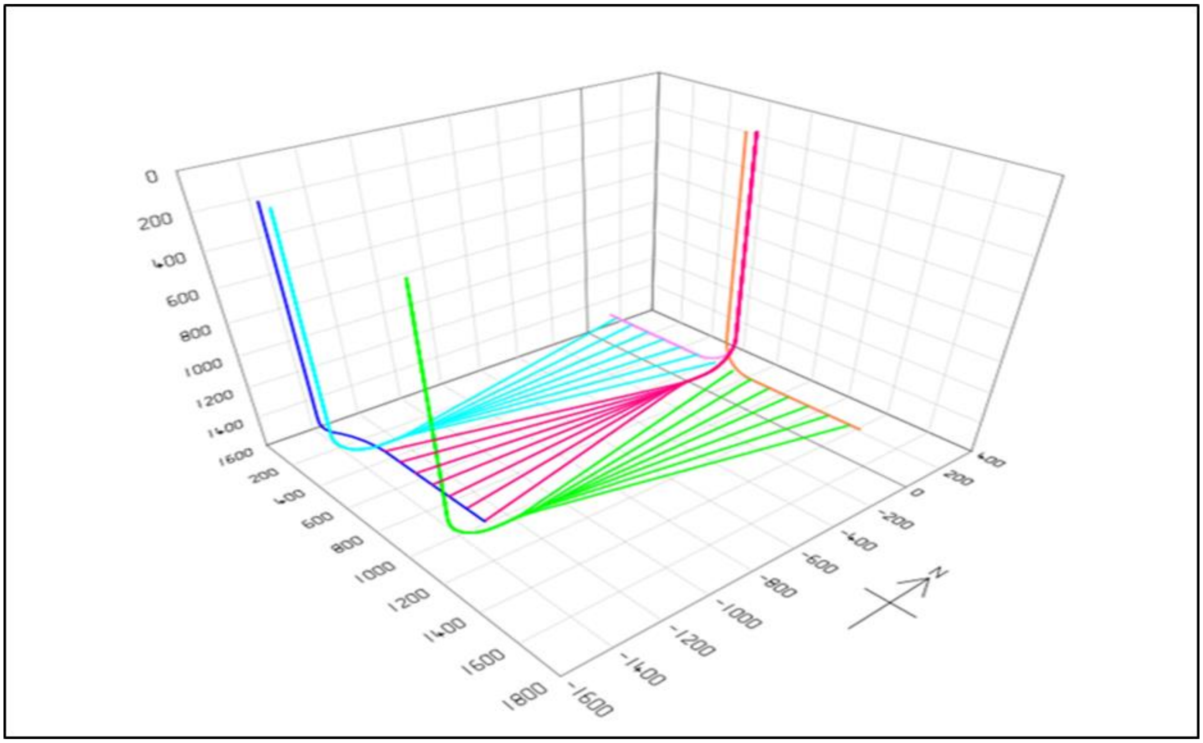

FIGURE 22: CAVERN CONFIGURATION (3 CAVERNS SHOWN)

To attain the design production rate of 250,000 tonnes of KCl product per year (t/y), six (6) solution mining caverns are required. On this basis, each cavern will produce about 45,000 t/y and has a design cavern life of approximately 12.4 years within the PLM 1 sub-member only.

16.2 CAVERN DIMENSIONS & LAYOUT

The Vanguard 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 22, 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 1600-m right triangle. More details on the layout of the initial mining area, and solution mining caverns, is discussed in 16.6, while specific design parameters for the caverns, and subsequent values used, are shown in Table 28.

16.3 CAVERN PRODUCTION & CAVERN LIFE

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

Based on the cavern plan dimensions discussed in the previous subsection, the following conservative factors were applied to develop the cavern production and resulting cavern life estimates. Using an average cavern height of 1.95 m (i.e. the average thickness of the PLM 1 is 3.9m), an average potash grade of 43% KCl within each horizontal cavern, and a 70% cavern recovery factor based, it is estimated that each solution mining cavern will produce about 515,000 tonnes. The planned cavern production is 45,000 tonnes per year (t/y) per cavern. Therefore, each cavern has an estimated operating life of approximately 12.4 years (y). Table 28 outlines the main multi-lateral horizontal cavern assumptions.

TABLE 28: HORIZONTAL CAVERN ASSUMPTIONS

Design Parameter	Unit	Value Used
Average Lateral Cavern length	m	1,415
Cavern Width Maximum	m	80
Cavern Width Minimum	m	0
Average Cavern Width	m	40
Cavern Height	m	3.9
Average Cavern Height	m	1.95
Borehole size	m	0.16
Cavern Cross Section Shape		Triangular
Cavern Planar Area		Triangular
In-place % KCl (Grade)	%	43
Cavern Recovery Factor	%	70
Injection Brine Flow Rate	t/h	650
Injection Brine Specific Gravity		1.210
Tonnes per Cavern	t	514,634
Cavern life	y	12.4
# of Laterals (Per Production Well/Cavern)	each	7
Distance Between Laterals at Widest Point	m	100

Design Parameter	Unit	Value Used
Average Dissolution Rate Prod Factor	t/y per m^2	12.3
Selective Tonnes per year per lateral	t/y	6,429
Tonnes per cavern per year	t/y	45,000
Caverns Systems required	each	6
Overall Production Capacity	t/y	270,000

As each solution mining cavern grows over time, additional KCl surface area will be available for dissolution, which could yield additional tonnages. The dissolution testing results and temperature modeling of the solution mining cavern, at several stages of the cavern life, will provide insight to the precision of the average dissolution rate assumption and how the average dissolution rate may change over time. This information will help optimize both the cavern design and operations.

Detailed temperature modeling of the solution mining cavern is required to ensure no crystallization within the cavern or pipeline system is observed. Mitigation measures are designed into the system should crystallization occur. It is recommended that cavern temperature modelling be completed during the next phase of the project.

16.4 INJECTION & PRODUCTION WELL DRILLING

As can been seen in Figure 22, multiple wells can be drilled from a single drilling pad. Each pad will consist of two (2) or three (3) 406.4-millimetre (mm) (16 inches) conductor casings that will be installed before the drilling is initiated. The drill pad is temporary and drill mats will be used for the central portion of the drill pad, which will be surrounded by gravel to outer dimensions of approximately 140 m × 140 m.

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 Feasibility Study report (ENGCOMP et al., 2017), along with a proposed drilling program scope of work, complete with capital cost estimate and drilling schedule.

With a single drilling rig, the drilling for the initial six (6) caverns will require 10 to 11 months to complete. Upon completion of the initial drilling phase, drilling activities will be suspended until extraction from these caverns nears completion in approximately 10 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, it is planned to spend about 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 1000 psi).

A service rig and the necessary temporary equipment, services, and tie-ins may be required to support cavern development, because all 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.

In conjunction with future thermal cavern modelling, a detailed solution mining cavern start-up procedure will be created.

16.6 WELL FIELD INITIAL SOLUTION MINING AREA & CAVERNS

The initial solution mining area in Gensource's KL245 lease was selected for the Vanguard One project based upon exploration well confidence, 3D seismic survey results, Gensource Potash controlled mineral rights, and provincial lease offset regulations. The initial solution mining area is bounded on the north by a 600-m offset from the northern lease line, on the east by a 600-m offset from the eastern lease line, on the west by a 150-m offset from the eastern boundary of unleased freehold mineral rights, and on the south by the radius of influence confidence boundaries of exploration wells 1-16-22-02W3 and 1-14-22-02W3. Figure 23 shows the initial solution mining area (outlined in black).

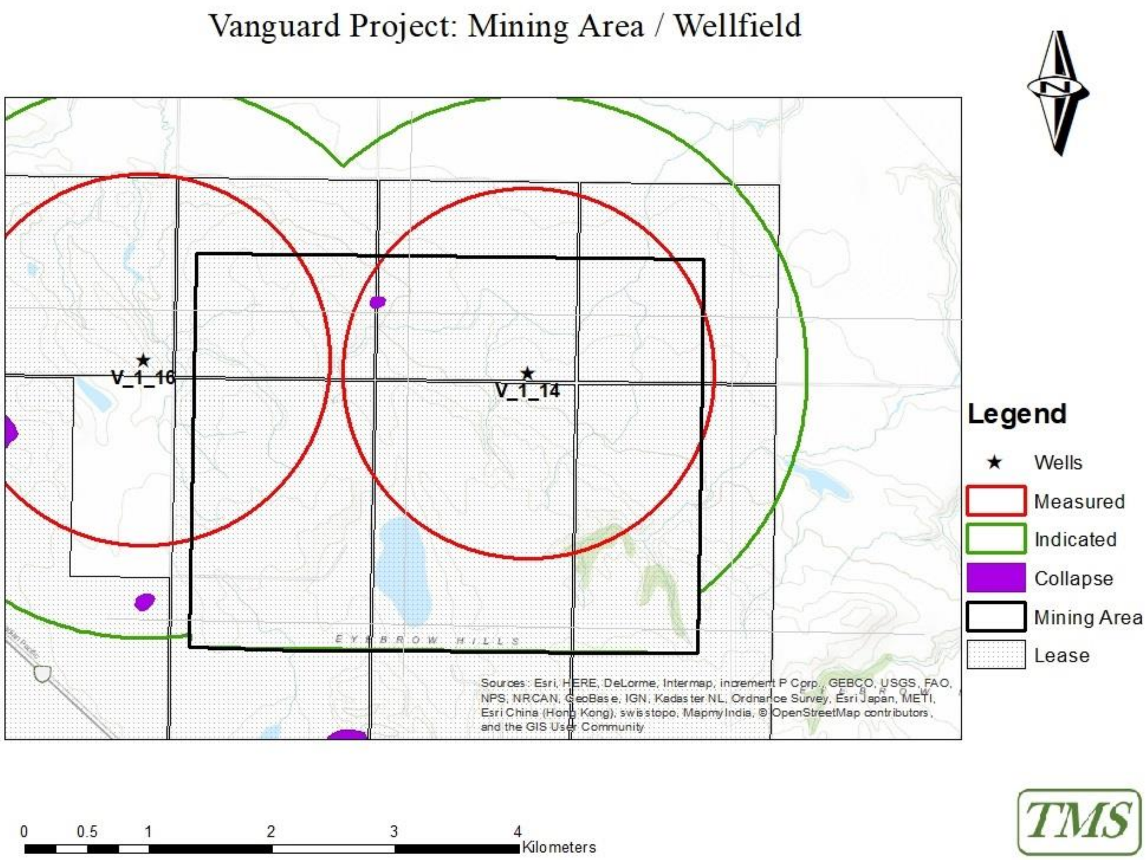

FIGURE 23: INITIAL SOLUTION MINING AREA

The initial solution mining area was divided into 10 rectangles approximately 800 m by 1600 m in size. Due to the size of the initial solution mining area, the 2 rectangles on the western edge of the initial area are about 860 m wide. The 800 m by 1600 m rectangles were bisected to create two 800 m by 1600 m triangles within each rectangle. A mining cavern will be arranged within each 800 m by 1600 m triangle. Figure 24 shows the triangle locations within the initial solution mining area.

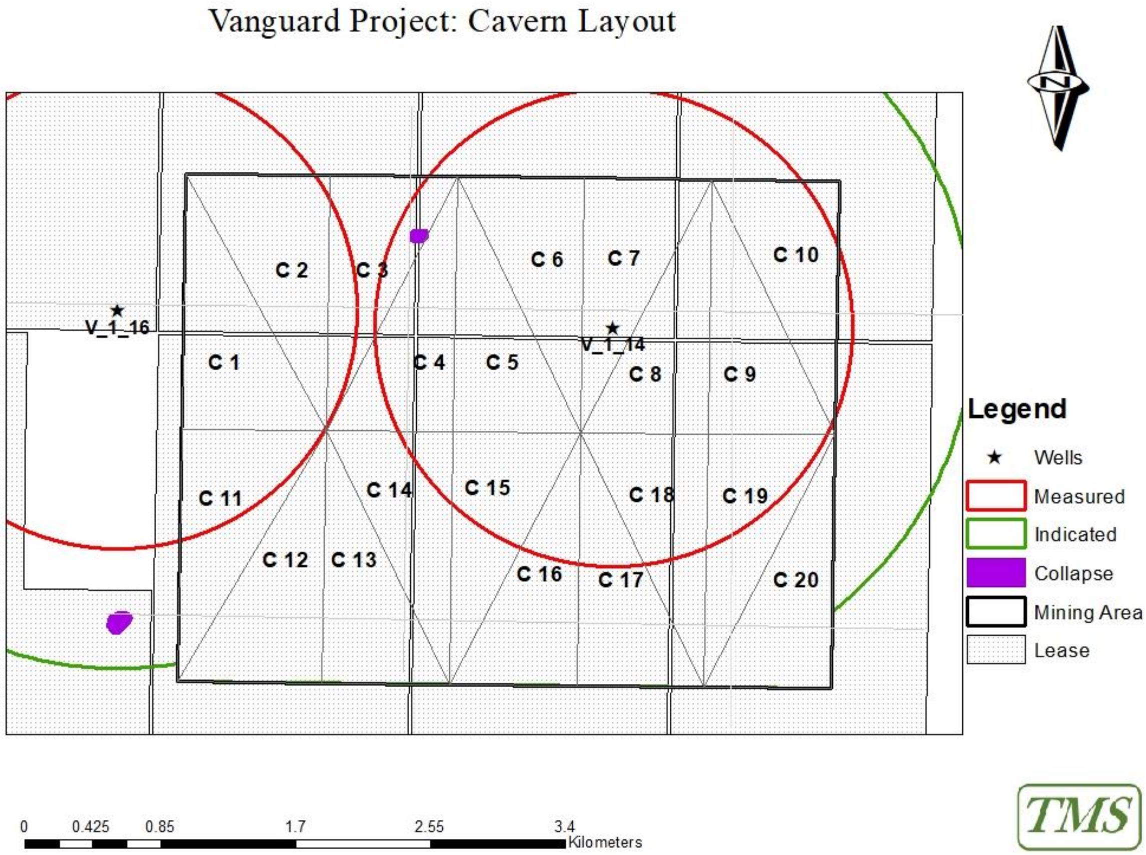

FIGURE 24: INITIAL SOLUTION MINING CAVERN LAYOUT

A maximum cavern dissolution radius of 40 meters (80 m cavern width) and an average cavern height of 50% of the PLM 1 thickness were estimated for each cavern lateral for the continuous production phase based upon experience from similar solution mining caverns. A cavern recovery factor of 70% was estimated due to the necessity 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, an 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%. It is anticipated 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 be closer to 30%. It is anticipated that as specific solution mining performance in the Vanguard Area is gained, the mine plan will be re-evaluated and updated as appropriate, with methods aimed at improving the recovered tonnes per cavern.

Table 29 tabulates the estimated KCl tonnage that can be solution mined from each cavern. Based upon the radius of influence confidence boundaries associated with the exploration wells 1-16-22-02W3 and 1-14-22-02W3, the cavern KCl production estimates, and the relatively small elevation changes of the bottom of the PLM 1 sub-member, caverns 5 through 10 have been selected as the initial 6 solution mining caverns.

TABLE 29: INITIAL SOLUTION MINING CAVERN KCL TONNAGE ESTIMATES

Cavern Number	Thickness (m)	KCl (wt %)	Estimated Cavern Tonnes (Tonnes KCl)*	Insolubles (wt %)	Halite (wt %)	Carnallite (wt %)	Anhydrite (wt %)
1	4.10	40.47	509,193	6.20	53.67	0.63	1.33
2	4.04	41.00	508,313	6.17	53.04	0.66	1.30
3	3.90	42.04	503,145	6.13	51.52	0.74	1.24
4	3.82	42.65	499,975	6.11	50.62	0.80	1.20
5	3.69	43.66	494,397	6.10	49.36	0.88	1.14
6	3.67	44.02	495,772	6.10	49.11	0.90	1.12
7	3.64	44.77	500,097	6.10	48.85	0.92	1.07
8	3.64	45.15	504,342	6.10	48.81	0.92	1.05
9	3.66	45.43	510,258	6.09	48.99	0.90	1.04
10	3.68	45.39	512,594	6.08	49.16	0.87	1.04
11	4.03	41.21	509,652	6.13	52.94	0.67	1.28
12	3.96	41.98	510,156	6.08	52.16	0.70	1.23
13	3.89	42.68	509,495	6.07	51.40	0.74	1.20
14	3.84	42.88	505,303	6.09	50.89	0.77	1.19
15	3.75	43.73	503,242	6.08	49.93	0.83	1.14
16	3.76	44.10	508,853	6.06	50.00	0.81	1.12
17	3.72	44.69	510,175	6.05	49.67	0.83	1.09
18	3.69	45.01	509,684	6.07	49.26	0.87	1.07
19	3.69	45.41	514,214	6.06	49.30	0.85	1.05
20	3.71	45.55	518,595	6.02	49.48	0.81	1.04
Sum			**10,137,454**				
Averages	**3.79**	**43.59**	**506,873**	**6.09**	**50.41**	**0.81**	**1.15**

*The tonnages indicated do not include the reductions for unknown anomalies, assigned to the Resource as discussed in the Mineral Resource Estimates (i.e. 5% reduction in the Measured category and 10% reduction in the Indicated Category) and thus are slightly higher than the reported Reserve.

16.7 ESTIMATED PRODUCTION SCHEDULE

Based on experience at similar potash solution mining operations, it is anticipated that full KCl production capacity will be achieved by approximately the end of year 2. Table 30 shows the expected production schedule with production capacity in tonnes per year (t/y).

TABLE 30: PRODUCTION CAPACITY BY YEAR

Year	Caverns	Average t/y per Cavern	Production Capacity t/y	% of Full Capacity
1	6	11250	67500	25%
2	6	33750	202500	75%
3-12	6	45,000	270000	100%

It is estimated that the second set of solution mining caverns will be required about year 12, assuming that the first set of caverns is ultimately limited to only the PLM 1 sub-member. This expenditure has been included in the project economics, every 13 years, as part of the operating cost estimate and economic model. Each additional set of caverns will experience a production ramp up similar to the initial caverns. It is possible that continuous operation of the initial caverns can be extended or that the initial cavern can be transitioned to batch production to supplement production from the future caverns.

16.8 SUBSIDENCE ESTIMATE

As selective mining extracts only the KCl, about 57% of the original potash bed will be left in place (i.e. NaCl). Thus, the maximum subsidence in the case of sinkhole subsidence (chimney failure) is 43% of the cavern height if the brine is completely removed. However, 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). Golder Associates Ltd. estimated surface subsidence of approximately 0.6 m over several hundred years as part of the FS. 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). Consequently, the impacts of subsidence caused by selective solution mining were determined to have negligible residual effects.

16.9 ROCK MECHANICS

Since the selective mining multi-lateral horizontal cavern design does not use an oil blanket, a stable cavern roof is not a design requirement. Since the vertical portions of the cavern wells are designed to be drilled within a protected pillar, the casings will not be subject to significant cavern stresses associated with salt creep. In addition, due to the geometry of the horizontal caverns, creep testing results are considered to have very limited influence on selective mining and hence, creep tests were not performed.

16.10 BATCH OPERATIONS

The solution mining at the Gensource Potash Vanguard Project is envisaged to have two distinct solution mining cavern production phases. The first phase is the 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.

It is generally reported that as a Mosaic Belle Plaine 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 and the brine grade can approach saturation at the cavern temperature.

After sufficient time, the brine within the cavern is harvested and processed until the brine grade diminishes to a predetermined minimum grade. At this point, the cavern is placed on standby and the process is repeated.

As such, it is very possible that the Vanguard selective mining multi-lateral horizontal caverns will have a batch operations mode that will increase the total tonnes of KCl that are produced by the cavern by 20 to 100%.

16.11 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. While the base case of this study is just the 3.9 m thick lower Patience Lake potash zone (i.e. PLM 1), there are upside opportunities to produce more tonnes per cavern by developing strategies to create permeability to upper Patience Lake potash zones (i.e. PLM 2 through PLM 4).

The failure of the cavern roof could connect 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 and Belle Plaine, Saskatchewan.

16.12 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 the Economy (ECON).
- 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 of the Saskatchewan Ministry of the Economy (ECON).

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.

17 RECOVERY METHODS

17.1 OVERVIEW

The plant is designed to produce 250,000 tonnes per year of saleable Muriate of Potash (MOP), Standard Grade, SGN 83 potash product. Return brine from processing will be heated 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 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 Vacuum Crystallizer, followed by a four (4) effect Surface Cooled Crystallizer (SCC) system. Slurry containing KCl solids is de-watered in a drum filter prior to feeding a rotary drum dryer. The KCl is then compacted and screened to produce the final potash product of typical particle size distribution for standard potash product (i.e. 98% + 0.21 mm). A dust collection system will remove particulate matter produced prior to discharging to the atmosphere. The hot product is cooled prior to being loaded directly into intermodal shipping containers, for storage and shipping.

Figure 25 presents an overview of the main process circuits and how they are linked to one another.

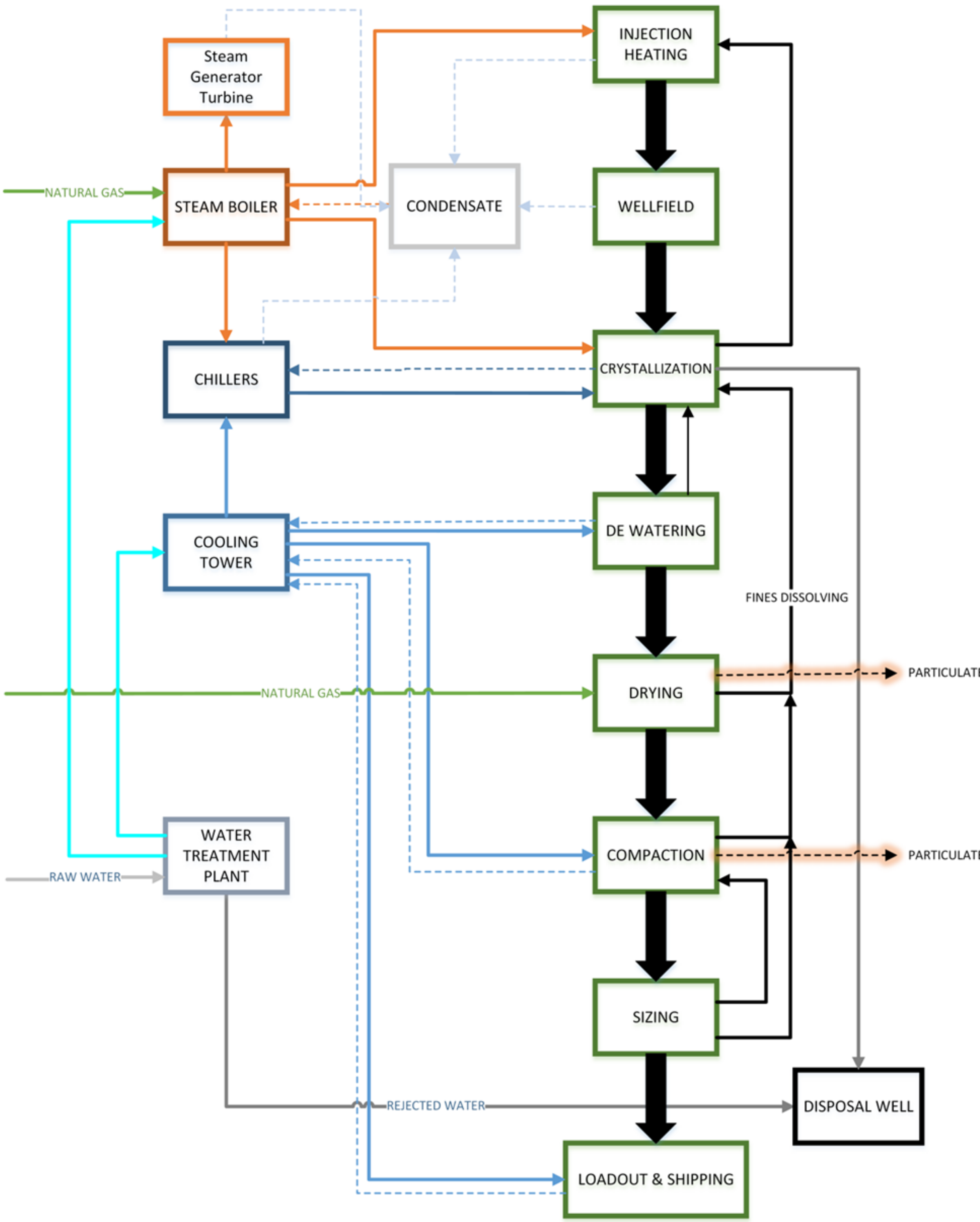

FIGURE 25: GENSOURCE VANGUARD ONE PROCESS BLOCK DIAGRAM

17.2 PROCESS BRINE, MINE, CIRCULATION & STORAGE

Return brine from processing is heated to 100 °C and pumped to the well field 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. KCl mineral is selectively dissolved within the ore body when saturated brine solution (fully dissolved) NaCl and under saturated KCl is injected at high temperature. The return brine has a concentration of approximately 8.8 weight % (wt. %) KCl and 20 wt. % NaCl.

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

The production brine from the wellfield is expected to increase in KCl concentration to 12.6 wt. % and will be collected at the surface plant site in the Vacuum Crystallizer Feed Tank. Prior to the feed tank, the brine will be pre-cooled in a heat exchanger with the mine return brine which also pre-heats the return brine as an energy saving step.

From the feed tank, the brine will be pumped to the Vacuum Crystallizer for the initial recovery of KCl from the mine solution.

17.3 CRYSTALLIZATION

The Crystallization Process circuit was designed by Whiting Equipment Canada Inc. (Whiting), in collaboration with Innovare and ENGCOMP. In the Vacuum Crystallizer, brine is cooled to 47 °C. Normally, crystallization will not take place in the vacuum crystallizer.

The first stage of 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. The water vapour is condensed in barometric condensers, using cooling water as the condensing media. The return brine will be pre-heated in the barometric condenser, resulting in an energy saving step.

Vacuum cooled brine from the Vacuum Crystallizer is pumped to a four (4) 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. Five (5) axial flow recirculation pumps will pump the crystallizer contents from the four (4) stages SCC bodies through shell-and-tube heat exchangers for cooling and then back to the crystallizers for crystal growth. The cooled media in the exchangers will be chilled water from the chiller installation.

Mother liquor from the 4th stage crystallizer is pumped to the 3rd stage crystallizer and, thereby, provides the cooling media for that stage. This is repeated for the 2nd and 1st stages. The mother liquor leaving the 1st stage will be pumped to the Vacuum Crystallizer Barometric Condenser, for condensing overhead vapours from the Vacuum Crystallizer, then flow into the Vacuum Crystallizer Hotwell Tank, where it will be pumped into the Mine Return Tank before returning to the wellfield. The KCl slurry from the 4th stage SCC is pumped to the de-brining process.

17.4 DE-BRINING (DE-WATERING OR SEPARATION)

Slurry containing KCl solids from the Crystallizers is pumped to a rotary drum filter, where a vacuum force will be applied to remove the solution. The cake accumulation along the cloth will be dislodged by injecting compressed air. The drum will produce a dryer feed cake with a solids weight fraction of approximately 90% to 93%. The cake will be discharged into a screw conveyor and fed to the KCl Dryer. The strong filtrate solution, consisting of brine and very fine KCl crystals evacuated from the slurry, is re-introduced back to the crystallization circuit via the Vacuum Crystallizer Feed Tank.

17.5 DRYING

A rotary dryer will be used to dry the residual moisture from the KCl solids and produce a potash product with a maximum of 0.2 wt. % H_2O. Combustion air will be heated to 800 °C and mixed with incoming feed material. Heat is provided by burning natural gas. The exit temperature for the dried solids is expected to reach 146 °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 contact will remove finer dust particles before it exits the scrubber stack. Dust collected in the cyclone and scrubber water flows to the Fines Dissolver Tank.

17.6 REAGENTS

The only process reagents required for operating the plant are: anti-caking agent to aid in maintaining a free-flowing final product and de-dusting oil used as dust controlling agent when loading shipping containers.

17.7 COMPACTION, SIZING & PRODUCT STORAGE

Due the relatively high nucleation rates prevalent inside the SCC, it is expected that the particle size distribution of the KCl crystals will be finer than what is usual for other Saskatchewan producers. Therefore, it is expected all dryer discharge (100%) is compacted in a compactor. The compactor will be fitted with extra deep grooved rolls, rotating at low speed, to allow for the entrapped air to escape. The compactor product (flake) will be broken in smaller pieces prior to reporting to a sizing screen. The screen product oversize will be further reduced in an impact crusher and re-sized. The very fine material will be re-introduced back to the compactor. The screen middling fraction constitutes the final product, which will have a size typical for standard potash product (i.e. 98% + 0.21 mm). It will be conveyed to the Product Cooler, where it is cooled down to approximately 65 °C using a water jacketed solids cooler. As an energy saving step, the heated water exiting the cooler is used for make-up water for the mine and recovery process.

Anti-caking agent and de-dusting oil will be added to the cooled standard potash product before discharging to the 150 tonne Loadout Bin. The Bin discharge is controlled and loaded into standard 20-foot (6.1 m) or 40-foot (12.2 m) intermodal shipping containers for storage and shipment. An extendable conveyor delivers the final KCl product from the bin into the container, which rests on an at-grade weigh scale. Dedicated mobile equipment will handle the empty and loaded containers to and from the rail siding and container stack.

18 PROJECT INFRASTRUCTURE

18.1 PLANT SITE

The Process Plant (Plant) and its Outbuildings (non-process facilities) are arranged on a square grid with a “two-facility” site requiring a footprint of approximately 340 m x 430 m (14.62 hectares). This essentially means that consideration was given in development of the site layout and plot plan, for the future ease of incorporating a second plant module, should it be desired. The Facility is positioned on the NE side of and aligning with the existing CP rail line. Plant North is set at 42 degrees east of true North.

Main vehicle access is from the east, with two main egress roads running on the north and south sides of the Plant.

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

- The process plant is housed in a single long, narrow enclosure, nominally 122.6 m long x 26 m wide. Equipment is arranged north to south, matching the process flow. Wellfield feed is on the north end and product loading at the south. Space is allocated for a second, similar-sized Production Plant to be located due west of the first plant and connected by a future overhead gallery that will serve as a walkway and services enclosure. The building proposed is a “hybrid” structure, which consists of a traditional engineered “stick-built” steel structure, with a pre-engineered fabric-covered top.
- The control room is located on the upper floor of the process plant, as are offices and facilities for the operators and shift foremen. It is envisaged that this combined structure will be “modular”, meaning that it is pre-fabricated offsite, and comes pre-assembled with much of the internal elements.
- There are several electrical rooms situated within the different facilities, and like the control room, these will also be modular where appropriate.
- A loadout “lean to” is constructed immediately adjacent to the south-end of the process plant, and is a single-story stick-built steel structure, which will provide shelter and protection from the elements, to allow for handling and loading of the intermodal shipping containers from the loadout bin and extensible horizontal conveyor.
- A product storage area is identified directly to the south of the loadout area for on-surface loaded and empty intermodal shipping container placing and stacking.
- The power generation/utility building is nominally 45 m square and is positioned east of the process 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. An elevated and enclosed gallery creates a pipe chase

to the plant. Expansion of this building to the east will house equipment necessary to accommodate a future production plant.

- Cooling towers are located remotely to the south-east, downwind to the process plant (as winds are predominantly from the north-west)
- The storm runoff (retention) pond is located at the south-east extremity of the site, at the natural grades' low point
- The disposal well is located to the north-east of the maintenance parking lot. Space is also allocated for a future or second disposal well.
- The maintenance shop & warehouse share a common enclosure (nominally 37 m long and 24 m wide), and are located due north of the process plant. This facility has offices and services to support the maintenance and warehousing staff. Expansion of this building to the west is possible to support a future production 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 are housed in a common, single-floor enclosure to the east of the plant, north of the utility building. 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 (38) staff and (6) 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, east of the administration building.
- 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 environmental code. Tanks containing reagents will be heated and contained as per the regulations.

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.

Figure 26 is a plot plan of the site, as well as a 3D model rendering of the process plant.

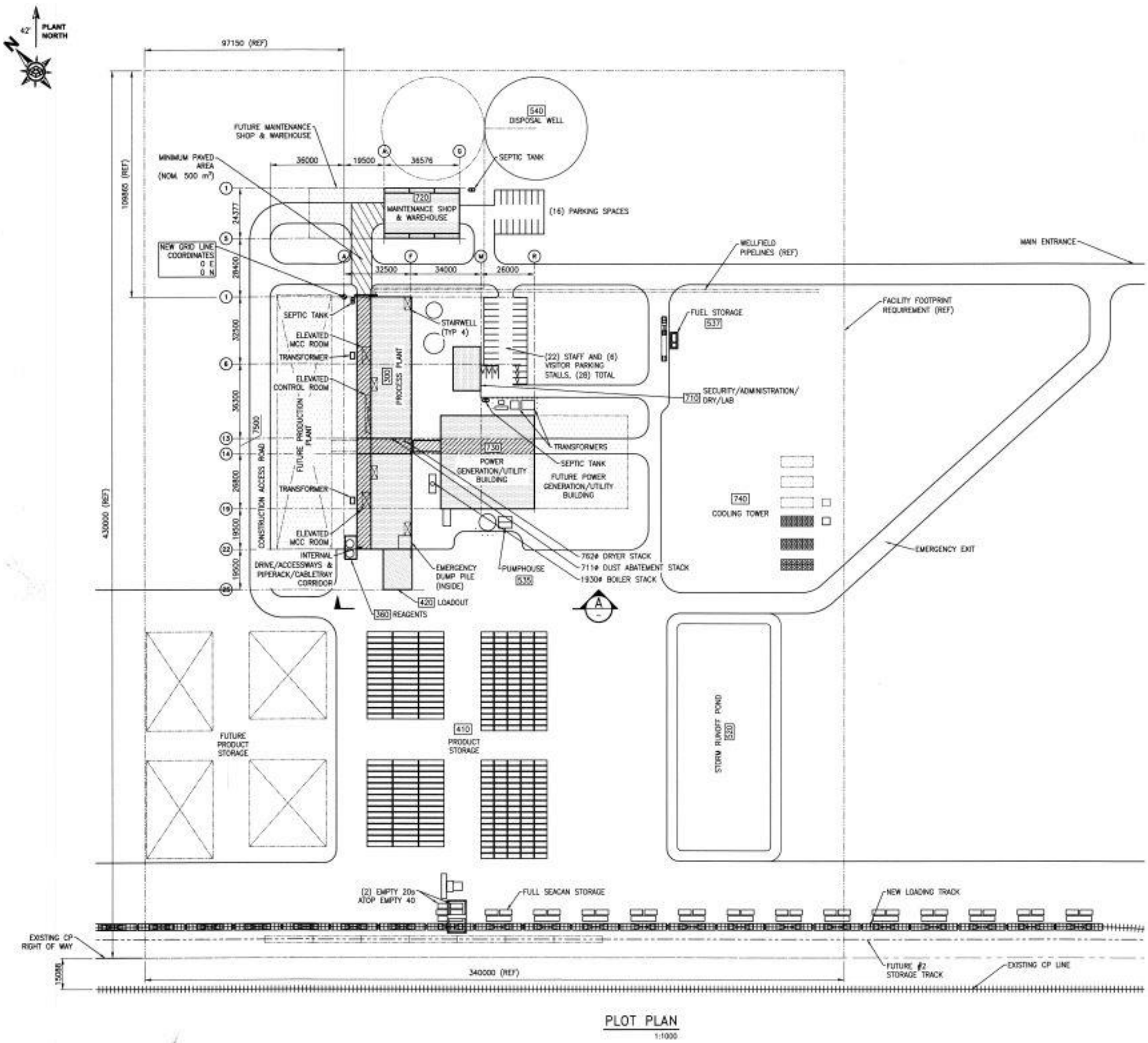

FIGURE 26: SITE PLOT PLAN

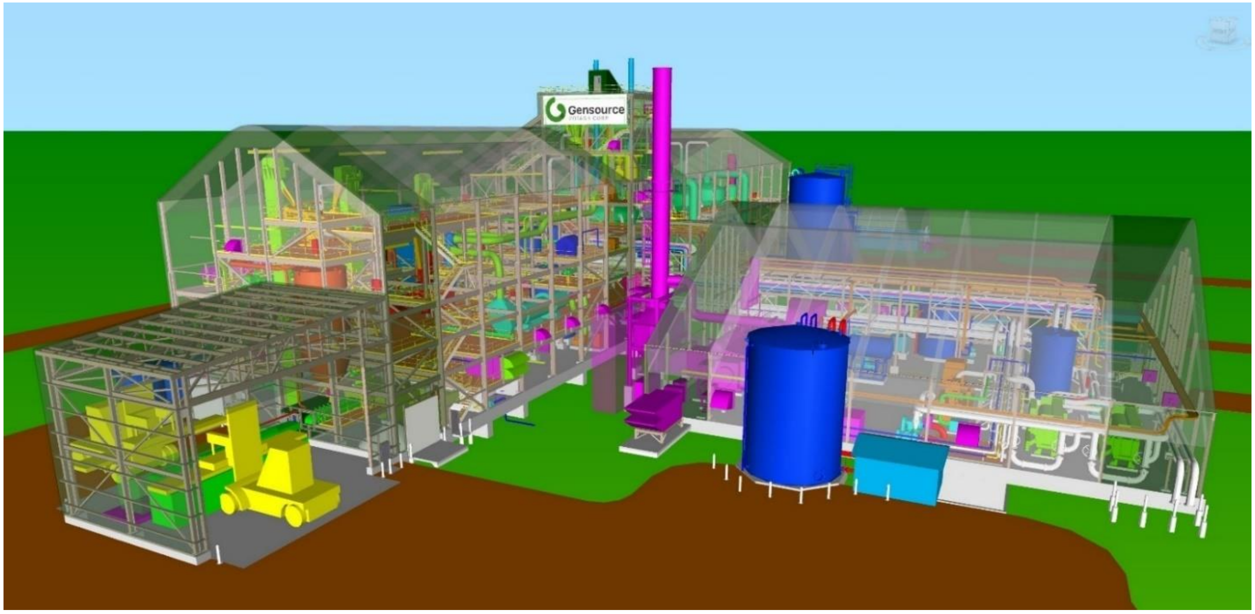

FIGURE 27: 3D MODEL RENDERING

18.2 SITE CIVIL

The process plant site is located near the south boundary of the project area and consists of: the process plant, load out “lean to”, maintenance shop & warehouse, power generation/utility building, security/administration/dry building, cooling tower, outdoor tankage, fuel storage, container storage, storm runoff pond, and roads and parking lots. The process plant has direct access to the existing highway (Highway 367) and CP Branch rail line (CP Outlook). The existing grid road provides primary access to the process plant site. In general, the site presents a mild, continuous slope from the northeast corner towards southwest. It should be noted that consideration for a future expansion (i.e. the addition of another process plant and required facilities) has been given to the current site layout.

A rail spur approximately 1.5 km in length runs parallel to the existing rail line on the north side to provide rail access to the site.

Four (4) raw water wells which provide raw water to the water treatment system are located northwest of the process plant site, spaced at 500 metre intervals.

Overhead SaskPower 25kV service (construction power and backup power) is fed to the process plant site from the northwest, underground SaskTel communication service (fibre optic) is from the east, and underground TransGas natural gas supply for the site is routed from the north. These are all preliminary utility routes gathered from the various utility providers, which will be confirmed during detailed engineering.

The second main feature of the project area is the well field, which is located approximately 2.4 km north-east of the process plant site. Primary access to the well field is provided by the existing north-south grid road from the highway. Secondary access to the wellfield is provided by an existing east-west grid road, which also connects to the highway, approximately 3.6 km west of the well field. The well field consists of four (4) well pads, with each well pad containing a combination of injection and production well heads. The injection and productions lines are fed from, and return to, the process plant site along the east side of the north-south grid. These lines will be buried in a “Right-of-Way” (ROW) to be obtained by Gensource.

The 25kV power supply to the well field is fed from the power generation/utility building and follows the routing of the injection and production pipelines, and will be buried in an underground trench adjacent to the pipelines (as required by code).

The process plant site is being laid out to fit approximately within one Legal Sub-Division (LSD), which is 400 m x 400 m (16 ha or 40 acres). It should be noted that the potential future expansion/addition of a second project “module” could fit within this same plant site footprint, and the site layout has taken this into consideration. In general, the assumed process plant site consists of a mild, continuous slope from the northeast corner of the quarter section to the southwest. The site is cultivated, and currently serves as agricultural land.

A detailed site-specific geotechnical investigation is required to support detailed engineering of the optimal foundations.

Primary access to the process plant site is from the existing grid road bordering the site to the east. The on-site roadways are made up of six (6) different roadway structure types based on the equivalent single axle loads (ESALs) estimated for construction and operation of the site.

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 heaters, make-up air units and burners utilized in the process system. Since the project relies on its own internal power generation, natural gas is also the main fuel for the packaged boiler system, which creates steam for the steam turbine generator to self-produce power. Steam generated from the boiler/STG is also required for process purposes. The daily peak demand for all uses is approximately 257 GJ/hr. The Vanguard One site requires approximately 8.8MW of electrical power, under normal operations. However, for conservativism at the time of the study, 9.4MW is used for system design and sizing (resulting in an annual gas consumption of 1.95 million GJ/y, used for OPEX calculations).

On-site natural gas consists of the servicing of the site from the TransGas custody transfer location to the individual site buildings which require service.

The main underground service, from the custody transfer location to the site, is a 200-mm dia. Polyethylene coated gas main. Branching off this main, is a 100-mm dia. service to the administration building, a 150-mm dia. service to the shop/warehouse building and a 150-mm dia. service to the process plant.

All underground natural gas piping, from the custody transfer point to the site buildings, including the main service, is PE4710 DR9 polyethylene pipe.

18.3.2 Petroleum Fuel

There are several fuel-powered vehicles required on site for Maintenance, Operations and Loadout duties. Some of these will not be able to be registered or licensed for travel on public roads. The continuous fuel requirements of the wheeled vehicles have been taken into consideration in both the layout of the site, and for OPEX calculations.

An allowance has been made on the site for a horizontal, double-walled two-compartment, skid-mounted tank for diesel (7610 litres) and gas (3240 litres) containment ("Westeel #HFV-11000 S7030" or equivalent). Access to these will be restricted to authorized personnel only.

18.3.3 Steam

The main power source for the mine and process plant is via a steam turbine driven generator (STG). The configuration considered as part of this study is a high pressure packaged, natural gas fired, steam boiler system, feeding a non-condensing steam turbine, which, in turn, drives an electrical generator. The boiler produces superheated steam at 50 bar(a) and 435˚C (150˚C of superheat). Tail steam from the turbine is utilised, both as-is and re-heated, in process and ancillary applications wherever possible.

The boiler system package will be designed by and procured from one supplier to ensure the system operates safely and efficiently. Major system components include: the boiler, deaerator, boiler water feed pumps, boiler combustion air blower, economizer and steam boiler feed water treatment system.

Raw water is treated by the plant water treatment system for use in various process and ancillary applications. Boiler feed water quality is achieved by conditioning treated water, as determined by the boiler supplier, via the steam boiler feed water treatment system, designed and supplied by the boiler supplier.

18.3.4 Power

The steam requirements of the plant and overall process at Gensource's Vanguard One site are significant. As such, Gensource identified an opportunity to harness this steam and generate the electrical power required on site using a steam turbine generator (STG). However, a connection to SaskPower's 25kV distribution line is still required for construction power, and for back-up power when the STG or the boiler is down or being maintained, as well as plant start-up.

Power is 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. Power is supplied to the well field at 25kV via buried cables, and stepped down at each well pad to 5kV.

The Vanguard One site requires approximately 8.8MW of electrical power, under normal operations. However, for conservativism at the time of the study, 9.4MW is used for system design and sizing (resulting in an annual gas consumption of 1.95 million GJ/y, used for OPEX calculations). For the CAPEX, a 90,000 kg/hr boiler and a 10.6MW STG were selected as the basis of estimate.

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.

18.3.4.1 STEAM TURBINE GENERATOR (STG)

The boiler produces steam at 435 °C and 50bar (absolute) and is fed directly to the STG. A bypass valve is required on the piping feeding steam to the STG and the boiler is programmed to always output a specific amount of steam more than what the STG requires to power the plant at any given moment. This excess steam is required due to the delayed response from the boiler to produce more steam. The STG must respond to an increase in load immediately and therefore must have additional steam available to handle a potential increase in electrical load. The plant control system blocks the start of large motors, in the event that insufficient excess steam is being produced, so as to not overload the electrical system.

When the boiler and STG are operational, the STG is the only source of electrical power to the plant, utilizing the SaskPower connection only as backup. The STG control system operates in "island mode", meaning that the STG control system continuously monitors the voltage and frequency of the electrical system and then subsequently modifies the steam input valve to the turbine to compensate for load changes. This mode of operation is required because the instantaneous electrical load of the plant is ever changing. The control system will continuously monitor and adjust the steam input valve to the turbine to keep the voltage and frequency outputs of the generator within acceptable limits.

The STG package comes equipped with a combined trip and throttle inlet steam valve, a multi-valve-multi-stage steam turbine, a single stage gearbox to connect the turbine to the generator, a synchronous electrical generator, auxiliary systems, and a protection and control system.

For the sake of continuity is should be noted that the design can accommodate an 11.9MW STG (fed by a 100,000 kg/hr boiler); however, for purposes of the capital cost estimate, a 10.6MW generate was selected (along with a 90,000 kg/hr boiler), which is more than adequate for the current estimated power demands.

18.3.4.2 SASKPOWER BACK-UP CONNECTION

The plant's main source of electrical power is the STG, as described above. When the STG is offline, in either a planned or unplanned outage, the connection to the SaskPower grid is the back-up source of electrical power. The maximum amount of power that the control system allows to be drawn while connected to SaskPower is 2MVA. Only those essential loads required to keep the plant ready for re-start during an STG outage, or those needed to bring the STG online, are permitted to start by the control system when connected to the grid

During a controlled shutdown of the STG, the operators ramp down the electrical load of the plant by shutting down all non-essential loads. Once the electrical load is below the 2MVA threshold allowed by grid connection, the control system allows the operator to perform a "bump-less" transition to grid power and away from the STG. Once the plant is powered from the grid, the STG automatically goes into an idling condition, and the operator can shut it off.

During an uncontrolled shutdown of the STG, an upset condition where it trips offline, all electrical loads in the plant shut off and the plant site goes dark, with the exception of DC powered emergency lighting for safe egress of the building. Once the control system ensures that all non-essential loads are disconnected from the electrical system, it closes the SaskPower breaker and returns electrical power to the essential loads of the plant.

The control system is powered from a DC source with a battery backup, and is unaffected by STG and/or SaskPower outages less than 24 hours in duration.

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 (lps). Compressed air utilised in process and ancillary applications, includes:

- Dust baghouse purge
- Steam boiler purge
- KCl dryer burner purge
- Instruments, control valves, splitter and flop gates, fire alarm valves
- Reagent unloading system
- Utility stations

The Rotary Drum Filter requires air at 305 lps and 48 kPa(g). This is a high flow, low pressure application, which can be accomplished using a blower rather than compressed air. Compressed air has a higher operating cost than a blower, so by using a blower for the Rotary Drum Filter, both the operating cost and capital cost are reduced with a significantly smaller compressed air system being required.

18.3.6 WATER

18.3.6.1 RAW WATER

A groundwater assessment desktop study was completed by Golder Associates Ltd., which evaluated and recommended the potential groundwater sources to be considered for the supply of raw water to the site. Subsequent to this study, Golder led a field drilling investigation to determine potential capacity and water quality.

During the field drilling investigation, a shallow (60 metre) aquifer known as the Ardkenneth formation was found. The Ardkenneth was interpreted to be present across the site, ranging from 5 m to 30 m in thickness and consisting of fine-grained sands and silts.

As part of the field investigation, one production well was installed, consisting of a 200-mm dia. carbon steel well casing and 175 mm stainless steel screen. The well was drilled to an approximate depth of approximately 60 metres below existing ground surface, with the bottom 30 metres fitted with a stainless-steel screen. The static water level was observed to be approximately 12 metres below existing ground. Two observations wells were also installed during the field investigation.

Pump testing of the well resulted in an anticipated capacity for the well of 300 – 500 m^3/day. The raw water requirements for the site are in the order of 2,000 m^3/day. Therefore, for the purposes of the study, the construction of four (4) raw water wells was assumed for the capital cost estimate, based on the high end of the anticipated well capacity.

The four raw water wells are proposed to be located northwest of the process plant site, spaced at 500 metre intervals. The completion of the wells will include the installation of a submersible well pump, riser pipe and pitless adapter. Each well will pump into a common 150 mm dia. HDPE raw water supply main, 2,600 metres in length, which will convey raw water to the plant site. Once raw water reaches the plant site, approximately 360 m^3/day will be diverted to a Raw Water Tank, located within the utility building/powerhouse, with the remaining flow feeding the water treatment system.

18.3.6.2 TREATED WATER

Treated water is required for use in the cooling tower, boilers, and domestic usage (washrooms, showers, etc.). Other treated water users include the desuperheaters and gland water system. The proposed water treatment system is a direct feed, reverse osmosis (RO) membrane treatment unit. It is anticipated that a system of this nature will produce a waste stream in the order of 20-25% (for conservatism, the mass balance assumed 30%), based on the raw water quality and required permeate flow rate. Prior to the raw water entering the membrane unit, it is dosed with an anti-scalant in order to keep specific minerals in solution, allowing them to be filtered out. Additional chemical usage includes a pH adjustment following the RO membrane unit. It should be noted that disinfection has not been included in the treatment system, as potable water for the site will be supplied by a contracted bottled water service.

The treated water quality requirements of the cooling tower water and domestic water are such that a single pass of the RO membrane unit, and chemical additions noted above, will provide an adequate permeate for these uses.

Boiler feed water quality requirements are much more stringent than the cooling tower and domestic requirements. Preliminary analysis suggests that secondary treatment is required following the RO membrane unit to treat approximately 200 m^3/day of side stream designated for boiler feed water. The secondary treatment system for treating boiler feed water, in which capital costs have been based on for this project, is a continuous electrode deionization process consisting of three modules operating in parallel to meet the flow rate required for the boiler feed. Treated water for use in the various plant processes, including fire water, will be temporarily stored in an above ground polyethylene tank within the treatment plant area. A distribution pump will pump the water from the tank to the outdoor Treated Water Storage Tank located on the west side of the utility building/powerhouse. Treated water for domestic purposes will be temporarily stored in an additional polyethylene tank, within the treatment plant area, with a designated pump utilized for distribution of the water to the process plant, utility building/powerhouse, administration building and shop/warehouse.

18.3.6.3 POTABLE WATER

Potable water for staff consumption will be provided by a contracted bottled water supplier, with regularly scheduled delivery/return of 5-gallon water jugs compatible with typical office water coolers. This strategy was deemed to be more advantageous than providing additional water treatment equipment, chemical feeds, etc. to provide potable water through the water treatment plant and distribution system to the site buildings.

18.3.6.4 COOLING WATER

The cooling water circuit is a self-contained loop that circulates treated water through a number of equipment, collects into a collection sump located in the powerhouse, and is then pumped through three cooling towers. The collection sump is gravity fed from the cooling towers, which are located remotely from the plant to provide adequate cooling ventilation. The total users of the cooling water circuit include:

- Absorption chillers (primary demand)
- Generator turbine lube oil heat exchanger vacuum pump
- Product cooler heat exchanger
- Vacuum crystallizer steam condenser
- Compactor cooling heat exchanger
- Steam turbine/generator cooling
- Air compressors

- Drum filter vacuum pump

The cooling water collection sump is also designed so that, in the case of a power outage, the water contained in the cooling towers can drain away into the collection sump to eliminate the risk of freezing. The section of the gravity drain line that is above the frost line will be heat traced, but the remaining pipe will be passively protected from the elements.

18.4 SITE RAIL & STORAGE

Output from the Vanguard One Production facility is loaded into lined metal intermodal shipping containers and shipped by rail to tide water ports for loading onto ocean-going container vessels, to be delivered to international customers.

A single new rail loading siding, running parallel to the existing CP Branch line, provides approximately 1500 m of straight track on Gensource property for conservatively storing approximately 62 well cars, each 23.5 m long (77'), and the two driving locomotives. This length of unit train will hold the equivalent of just over five (5) day's production at maximum Plant design output.

Well cars are the type of cars designed to carry intermodal shipping containers. It should be noted that there are several different well car lengths, and cars can be "mixed and matched" according to the rail carriers. As such, it is conservative to assume the entire length of a unit train will be made up of entirely 23.5 m long cars (referred to as a single 53' well car, which has an outside length of approximately 77'). There is also a single 40' well car, which has an outside length of approximately 64'. Therefore, a unit train made up of any combination of shorter individual cars will increase the production time equivalent. The most efficient container "stack" arrangement on each railcar has two (2) 20' long containers on the bottom the well car and a single (1) 40' long container placed on top of two 20' containers. This is referred to as a "double stack" arrangement (fitting a total of 3 intermodal containers on one well car). Both a 40' and 53' well car is cable of carrying a "double stack" arrangement. Space is allocated in the layout for a second, storage track on Gensource property, between the CP line and the new loading spur.

A 30-m wide (approximately 100') prepared roadbed/storage runway, parallel to and on the "Plant-side" of this spur, accommodates the continuous transportation and linear storage of as-filled containers direct from the Plant Loading Operation. This is intended to be the primary full-container storage area, as well as the interim storage area for empty containers as they are unloaded from the trainset.

The target is to be able to unload the unit train of empty containers and replace with full containers (a.k.a. "strip and load") in 24 hours without having to index the trainset, while maintaining full Plant production. A rubber-tired mobile gantry (RTG) crane straddles the new siding track and three (3) stack "spaces" alongside the track (see Figure 28). Its on-board motive and power generating capabilities allows it to travel the full length of the loading track independently.

After an in-bound trainset arrives on the Loading spur and is braked, the RTG is positioned over a railcar (likely at a terminus of the trainset) and used to off-load its empty containers to grade, then load/stack the full containers onto the same railcar. Minimum linear movement of the gantry crane will be required for these tasks, improving turnaround times.

Additional Container Storage space is allocated directly south of the Process Plant's Loading Area, with two weeks' worth of production equivalent in the form of intermodal containers, shown on the Plot Plan.

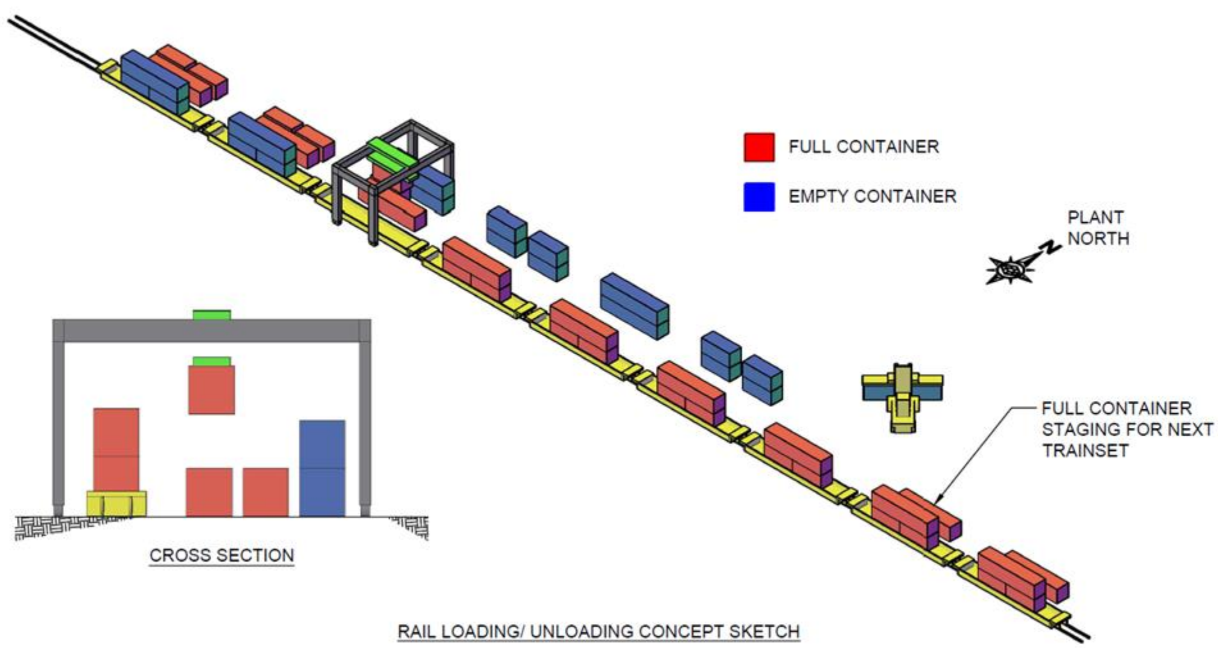

FIGURE 28: RAIL LOADING/UNLOADING CONCEPT SKETCH

18.5 SITE COMMUNICATIONS & DATA

The incoming SaskTel fibre optic line to the Vanguard site is terminated in the Maintenance Shop & Warehouse, which serves 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 included in the SaskTel quote.

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, allowing personnel and guests to the Vanguard site to connect to the internet on their personal devices.

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 Wellfield, hand-held radios and/or personal cellular phones will be required.

18.6 SITE PROCESS CONTROL SYSTEMS

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 process areas of the plant site, namely the power generation/utility building, and the crystallization and compaction areas of the plant. In addition to these controllers, some vendor supplied equipment packages also contain their own PLCs. These sub-systems include the boiler, STG, absorption 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.

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.

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 the 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. Open loop control requires operations to rely on monitoring and alarm points to ensure that those portions of the process are operating favorably.

The control system follows the high-level description of the process described in the Control Philosophy.

18.7 SITE MOBILE EQUIPMENT

Mobile equipment is required for site operations and is to be owned/leased by Gensource. These will include:

- Rubber tire gantry (RTG) crane, such as a Mi-Jack Travelift MJ50HDC or similar, spanning the railway spur line and used to load/unload sea containers from the rail-side storage area onto/from the railway cars.
- Shipping container handling devices, such as a Taylor model 974 top loader or a Taylor model 9972 Reacher stacker, for transporting containers from storage pile to loadout area, from loadout area to railway spur line and back. The plan is to have both machines operating at all times and essentially have a backup in case one goes down and is in need of repair.
- General purpose forklifts, one large capacity (5t) rough terrain and one smaller capacity (2t), such as a Komatsu EX50 and BX50 respectively or similar, for general site operations and warehouse inventory handling.
- Skid-steer loader, such as a Bobcat 500 series or similar, for site maintenance, snow clearing, etc.
- Boom Truck Crane, such as a Manitex 1704 series or similar, for more routine equipment servicing and wellfield maintenance.
- Telescopic handler, such as a JLG E300AJP or similar for elevated maintenance work.
- (6) Gasoline pickup trucks, such as Ford F-150's or similar, for site operations and general-purpose duty.

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-offs for the projects, and be decided at a later date. Included in the feasibility study CAPEX and OPEX is a strategy involving a combination of renting and purchasing.

18.8 SITE SANITARY & WASTE SERVICES

A trade-off study was 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.

It was determined that, 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 most favourable for the site.

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 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

Gensource's process 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, 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. All people entering the site will be required to report to the front-desk, where they will sign-in, provide the appropriate information, 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 security systems, including, but not limited to: video surveillance (i.e. closed-circuit TV systems), radio-frequency identification cards and access

(RFID), emergency alarms, etc. Once installed, regular monitoring will occur, and the system will be maintained and tested on an on-going basis.

18.10 OFF-SITE INFRASTRUCTURE

18.10.1 Off-Site Power

An extension of SaskPower's three phase overhead 25kV distribution line is required to reach the plant site. The current three phase distribution runs north along rural grid road 627 to Tugaske, SK. SaskPower's overhead line extension taps off the existing line and extends along the grid road to reach the plant site. For the construction phase of the project, there is a temporary construction transformer that brings the distribution voltage down to a usable level for the construction crews. 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. This connection to the SaskPower grid is only permitted during maintenance and start-up conditions as the available power from the grid is not sufficient for the entire plant load. 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 Off-Site Natural Gas

Based on the project location and natural gas requirements previously noted, TransGas provided three alternatives for servicing of the site. Option 1A is a 100 mm (NPS 4) diameter pipeline and distribution facilities designed to provide only the natural gas requirements of Vanguard One. Option 1B consists of a 150 mm (NPS 6) diameter pipeline and distribution facilities with capacity to supply the natural gas requirements of Vanguard One, as well as a future module (i.e. Vanguard Two) of similar size. Option 1B would still require upgrades to certain components in the regulating station prior to the operation of Vanguard Two. Option 2 is similar to Option 1B with respect to the pipeline and regulating station infrastructure; however, Option 2 also includes the required upgraded components within the regulating station in order to provide service to Vanguard Two, without future upgrades being required. For the purposes of this study, it is assumed that Option 1B will be accepted as the proposed solution for natural gas service to the site. The new 150 mm diameter pipeline is proposed to be supplied by an existing 400 mm diameter TransGas transmission pipeline, located approximately 10 kilometres north of the project area (See Figure 29). The work includes the tie-in to the existing 400mm diameter transmission line, approximately 10 kilometres 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.

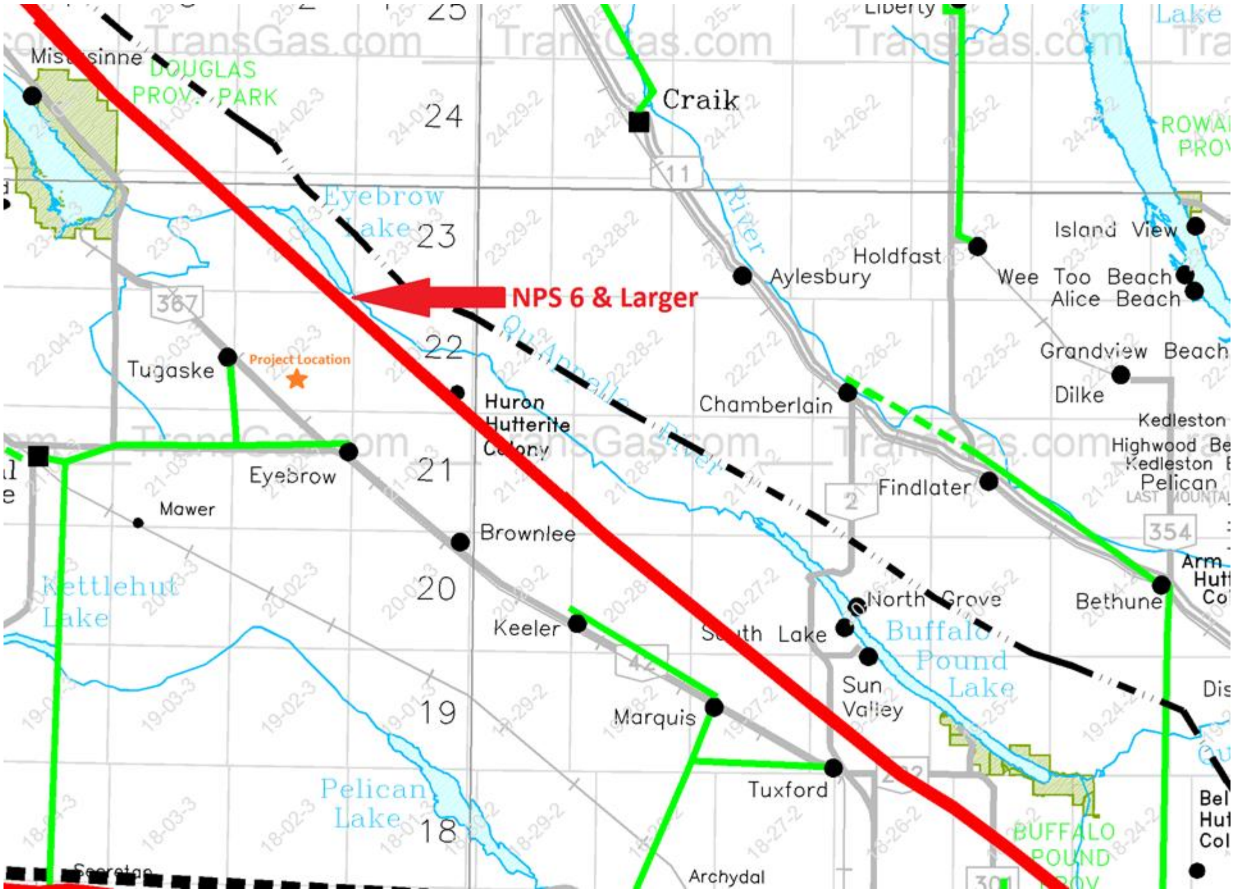

FIGURE 29: LOCAL GAS INFRASTRUCTURE

18.10.3 OFF-SITE RAIL

As previously discussed, Gensource's product loading and hauling strategy utilizes intermodal shipping containers as the primary means of loading, storing, and moving product at the mine site and to the end customers. By utilizing an intermodal shipping strategy, both rail carriers in Canada (CP Rail or CP/CPR, and CN Rail or CN) can be leveraged as potential rail service providers to Gensource. This is because, if warranted, the intermodal containers could be trucked from Gensource's site to any chosen "rail ramp" in the province. For instance, CP Rail operates a substantial inland port facility, capable of intermodal support, which is part of the "Global Transportation Hub" (GTH) in Regina, SK. Another main Saskatchewan transport rail hub for CP Rail is located in Moose Jaw, SK. Alternatively, CN's major rail ramp, which facilitates intermodal capacity, is the CN Ramp in Chappell Yard, Saskatoon, SK. There are also market indications of more plans to construct additional "inland" port facilities in the province to expand on and accommodate the growing intermodal transportation market. Throughout the duration of the study, Gensource had ongoing communications with both rail carriers; including discussion on their total supply chain and logistics offerings, which could help Gensource take care of entire scope of requirements to transport potash from the plant site to the end customer.

The baseline strategy is to rail intermodal shipping containers from the Gensource site, opposed to trucking. CP Outlook Subdivision runs directly through the Vanguard project area. It should be noted that the project site is also located just 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 keeps CN running rights on the line. The following is a graphic depicting Gensource's project site in relation to the CP Outlook line, as well as the LMR/CN line. The following figure shows the proximity of the project site to the surrounding rail lines.

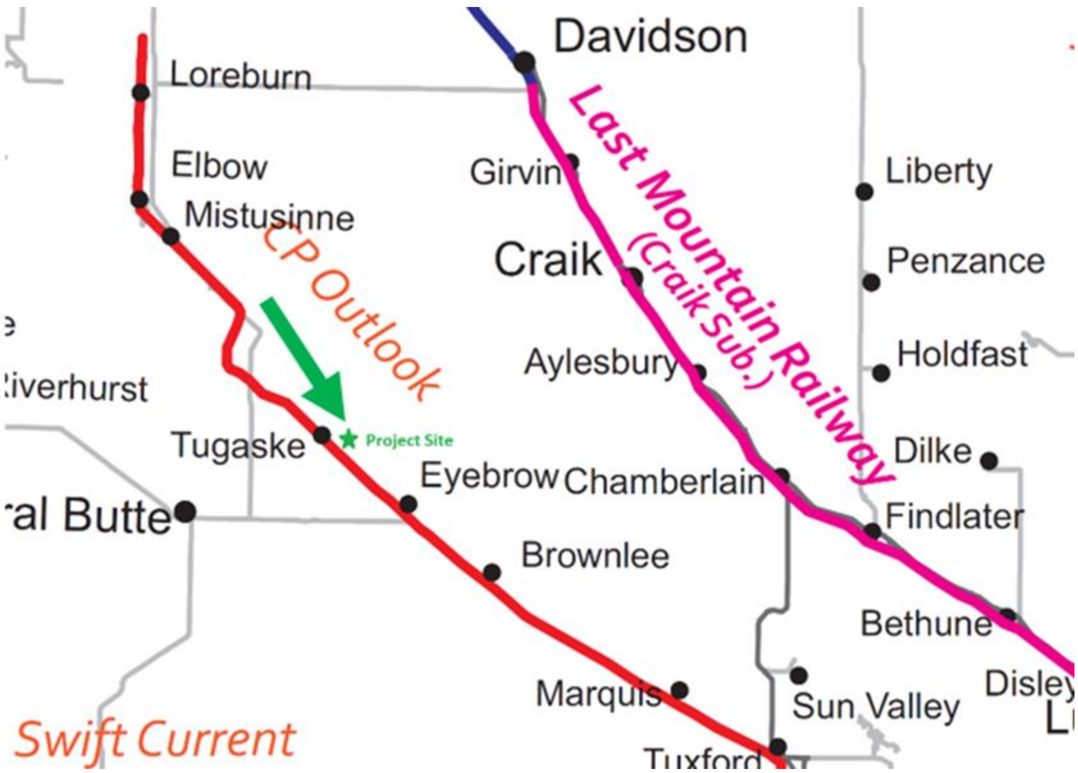

FIGURE 30: LOCAL RAIL INFRASTRUCTURE

Regardless of the rail carrier, the shipment of product will require transport to a west coast port facility, for delivery to overseas customers in Asia. The nearest west coast tide water port is over 1600 kilometres (1000 miles) away, in Vancouver, BC. However, since Gensource's intermodal strategy involves direct filling shipping containers at site, once the containers are loaded onto a train, they are handled from that point onward by that carriers "intermodal system". This means that there is no requirement for an investment in tide water port infrastructure by Gensource, including the "last mile" of rail track that is often required to be constructed by the producer at the port facility when hauling product in bulk.

For the basis of the Feasibility Study, it has been assumed that the rail carrier will be CP, and that they will haul containers west from the mine site, to the Port of Vancouver (Delta Port), in order to deliver product to customers in Asia. As such, Gensource has completed initial designs and costing to construct a "Loading Track" (rail spur/siding) at the plant site, which will tie into the existing CP Outlook line. Gensource collaborated on this design with CP, and also coordinated on the logistics regarding train length, frequency of hauls, loading limits, and approximated loading/unloading times of the intermodal "unit train" at site.

18.10.4 Off-Site Roads

Primary access to the site is from an existing grid road which runs north–south along the east side of the site. The grid road intersects with the existing highway (Highway 367) approximately 400 m southeast of the site, at a four-way intersection. 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.

A traffic impact assessment will be required to determine the potential impacts the increased traffic will have on the existing highway and the necessary intersection treatments that may be required. For the purposes of the feasibility study, a capital cost allowance has been included for intersection upgrades.

A capital cost allowance is also included for upgrading approximately 400 m of the existing grid road, which will be utilized as the primary haul road for aggregate and site construction materials and equipment.

18.10.5 Off-Site Communications & Data

SaskTel is the service provider for establishing network and telecommunications services at Gensource's Vanguard One site. These services include the network infrastructure and fibre optic cabling required for dedicated internet and telecommunications services to the mine site. SaskTel additionally offers several optional services, which are available on an ongoing basis during operations.

The construction costs, estimated by SaskTel, for providing fibre optic cable to the mine site include the trenching required to a location on the 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.

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.

18.11 TRANSPORTATION

During the Feasibility Study, Gensource reviewed and updated the railway and transportation logistics work previously completed for the project. This included a more thorough investigation into rail accessibility, routing options, and a detailed assessment of Gensource's product loading and hauling strategy; which involves utilizing intermodal shipping containers as the primary means of loading, storing, and moving product at the mine site and to the end customers.

An intermodal transportation strategy is beneficial for a variety of reasons such as no onsite bulk storage and handling facilities/systems are required, and no investment in tide water port infrastructure is required. Both help lower CAPEX and OPEX costs. Additionally, each time bulk product is handled, it becomes degraded, and there are product losses as a result (equating to lost revenue). Re-handling also increases the cost of transportation and logistics. Finally, containerization allows for an easier transport and handling for the end-customer, who may not have sufficient bulk handling and/or rail facilities in the country of destination. It should be noted, that to handle intermodal containers onsite, some capital investment is required, such as the purchase of mobile handling equipment; all of which has been accounted for in the design and costing used for the Feasibility Study.

A rail spur is planned to the plant site to allow all product to be transported in intermodal shipping containers by rail, resulting in no heavy-haul truck traffic on the exiting road network. For the basis of the Feasibility Study, it has been assumed that the rail carrier will be CP, and that they will haul containers west from the mine site, to the Port of Vancouver (Deltaport), to deliver product to customers in Asia. The cost of ocean freight, including the cost to move the product from a west coast port in North America to a port in Asia has been accounted for in the project economics.

The containerized shipping strategy and intermodal supply chain facilitates the use of truck and/or train for hauling. As such, instead of loading intermodal containers onto a train from the site, future strategies could include loading intermodal containers onto semi-trucks at the site, which could then be hauled to the desired inland rail terminal ("rail ramp"). This allows Gensource to explore partnering with either of the two major rail carriers, as well as short-line rail providers, and provides additional product transportation flexibility.

18.12 OTHER CONSIDERATIONS

Gensource's long-term business strategy is to construct and operate many plant site "modules", each capable of producing 250,000 tonnes of product, or more, on an annual basis. As more modules become a reality, or the market partners and/or supply chain realities warrant it, there may be a benefit to considering the implementation of bulk loading and hauling strategies. Such options will be explored in the future, on a "case by case" basis by Gensource and their partners. In addition to bulk rail, there is also a possibility to bulk fill semi trucks, as opposed to loading semi-trucks with intermodal containers. The reason for filling trucks remains the same: have additional flexibility to determine which rail carrier to use.

What should be noted is that through the course of the design of the plant site and layout, considerations have been given to accommodate large truck traffic, including the ability to handle and haul product at site via truck. Should there be a desire to explore this hauling option in the future to enhance the product transportation scheme, provisions have been made which easily allow for the integration of this strategy into the site. At that point, Gensource would work proactively with the community, the surrounding RM's, the Ministry of Highways and Infrastructure, and the appropriate government groups, to ensure that any road network issues and improvements would be addressed appropriately.

19 MARKET STUDIES AND CONTRACTS

Gensource has developed a business plan, which is aimed to enable a new producer to enter the highly controlled global potash industry. A key component of the business plan is vertical integration – bringing the end-user of the potash product into the development of the mine to produce it. Additionally, under this model, only capacity that is spoken for, or pre-sold, will be constructed, thus eliminating market-side risk. A second key component of the business model is small-scale production to support the vertical integration strategy. Gensource aims to create several independent joint venture (JV) companies, with each of the JV's owning, constructing, and operating a module of 250,000 t/a production from one small scale facility, and each directing their production to their specified market.

Creating Joint Ventures with market partners creates the vehicles to finance these small facilities and market the potash produced with little to no market risk. Agreements toward such JV's are under negotiation at the time of this report.

Gensource compiled information pertaining to potash supply and demand forecasts, price outlook, taxes, royalties, etc. from a variety of sources, including, but not limited to: Credit Suisse Ag Science Team, CIBC World Markets, BMO Capital Markets and CRU consultants.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENTAL APPROVALS & PERMITTING

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 requires that proponents receive approval from the Minister of Environment before proceeding with a 'development' that is likely to have significant environmental implications. The Environmental Assessment Act (Government of Saskatchewan 2013) 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 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.
- 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.

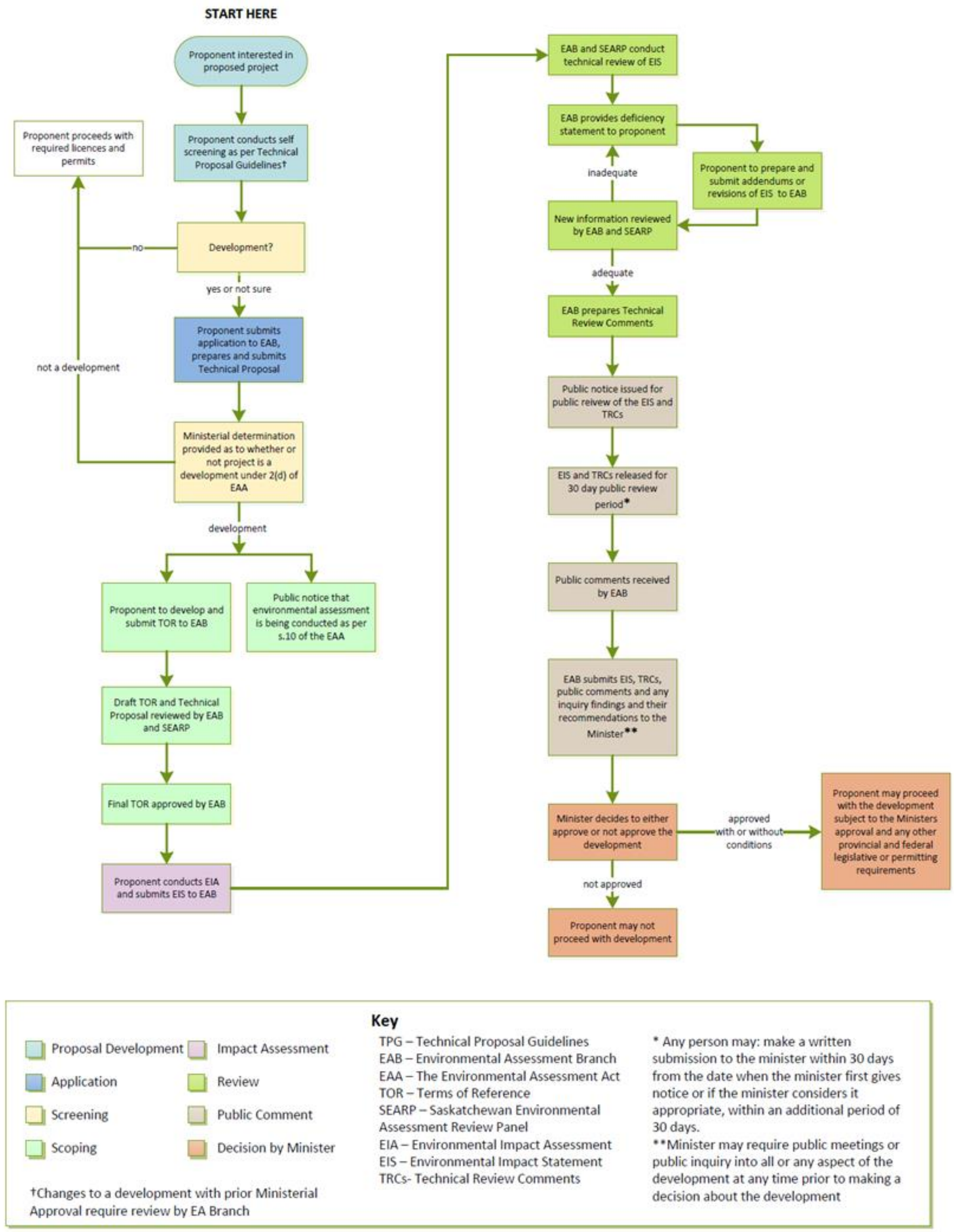

FIGURE 31: THE SASKATCHEWAN ENVIRONMENTAL ASSESSMENT PROCESS

The Vanguard One Project represents a new approach to potash production in Saskatchewan. The mining methods are new to the province, but by no means untested, having been in continuous use for over a decade by Intrepid Potash for primary mining of potash in the United States. The processing methods being implemented are standard potash processing methods of crystallization. The benefits to these methods are significant:

- 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. 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. That means that mining water can 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.
- The processing technologies are tremendously energy efficient, which helps not only reduce carbon footprint, but also reduces operating costs for the facility.

By way of comparison, the project will engage similar technology, as well as have a similar minimalistic footprint, to that of steam assisted gravity drainage (SAGD) projects in Saskatchewan, in the oil and gas industry. While SAGD projects require review under the Environmental Assessment Act, to date, these projects have received determination under section 7.3 of the Act and were not required to undergo an Environmental Impact Assessment.

Gensource has engaged Golder Associates Ltd. to prepare and submit a Technical Proposal to Environmental Assessment & Stewardship Branch.

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

20.2 REGIONAL ENVIRONMENTAL SETTING

To provide context for evaluating potential changes from the Project, Gensource engaged Golder Associates Ltd. to support the environmental and regulatory aspects of the project. For each discipline, Golder completed both field and desktop reviews, in order to provide a description of the existing environment. Such disciplines included:

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

This information provides 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 the Technical Proposal.

20.3 ENVIRONMENTAL ASSESSMENT

The Environmental Assessment (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 environmental assessment 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 Ministry of Environment (the ministry) regarding the provision of a determination on a project under the Environmental Assessment Act (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 EA Branch 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.

Based on the technology, size, and environmental footprint of Gensource's project, Golder believes that the project may not be classified as a development under The Act. The Project will use technology similar to steam assisted gravity drainage (SAGD) technology used in the oil industry. SAGD projects require review under the Act; however, to date, these projects have received determination under section 7.3 of the Act and were not required to undergo an Environmental Impact Assessment. As such, Gensource has engaged Golder to prepare a

Technical Proposal, to be submitted to the Environmental Assessment & Stewardship Branch of the Ministry of Environment, for determination as to whether or not Gensource's project would also not classify as a development, and not require completion of a full EA process. This submission was completed in June 2017, and full details can be found in the Technical Proposal for the Vanguard One Project, prepared by Golder Associates Ltd. (2017)

As part of a proactive approach to the environment, Gensource will implement mitigation and monitoring throughout various phases of the Project, from construction, through operations, and into decommissioning and reclamation.

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 involvement and be aware 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 is committed to working with stakeholders throughout the life of the Project and has been proactive in their efforts to communicate information regarding the Project to the public, landowners, Indigenous communities and regulatory agencies. The following is a summary of such engagement activities on the project to date.

20.4.1 PUBLIC INFORMATION MEETING

On February 1, 2017, Gensource held a public information meeting from 4:00 pm to 7:00 pm, located at the Tugaske Community Hall in the Village of Tugaske. The purpose of the public information meeting was to provide a description of the Project, describe environmental considerations, introduce Gensource and representatives from the company (including management team and board of directors), and to receive feedback and answer any questions from the community stakeholders. A total of 108 people representing 21 communities attended the community information meeting. Overall, the feedback received from the attendees was positive, expressing interest in potential new economic opportunities for the community.

20.4.2 Municipal Engagement Activities

In addition to the public information meeting, Gensource initiated engagement activities, through meetings with the local communities and Rural Municipalities (RM) (RM No. 223 of Huron and RM No. 193 of Eyebrow), as well as other forms of community involvement. Over the course of the Feasibility Study, and even reaching back to the initial Asset Purchase Agreement (APA) where Gensource acquired the Vanguard Area, Gensource has had varied communication, including phone calls, emails, and attending RM council meetings, to promote the flow of information regarding Gensource and the project.

20.4.3 Landowner Relations

Gensource representatives initiated communications with local residents during the exploration drilling and seismic programs in 2016. The communication involved personal visits with specific landowners, where the exploration drilling was occurring. Prior to any field activities and/or lease construction, Gensource and their service providers worked directly with the land owners and occupants, to discuss the plan for activities and collaborate on the preferred approach, so as to have minimal impact on the land and any agricultural operations/uses. The overall response from local residents has been positive. There is a general interest in the Project and economic development in the area.

20.4.4 Local Businesses

As part of a proactive measure to include and stimulate local business, Gensource included local businesses and service providers in the tendering and delivery of applicable elements of the resource confirmation drilling program in the winter of 2016. This will be an ongoing effort from Gensource and its service providers; to actively promote and engage with the local workforce throughout the life of the Project.

20.4.5 Indigenous Engagement

A number of Indigenous communities were identified for involvement in the engagement process. Although these communities are located at a considerable distance from the Project (i.e., 150 kilometres or more), they have been included because the Project is located in proximity to the Qu'Appelle Valley and these communities represent the closest Aboriginal communities to the Project.

The following Aboriginal communities were therefore included in the engagement process:

- Piapot First Nation;
- Muscowpetung First Nation;
- Standing Buffalo Dakota First Nation;
- Pasqua First Nation;
- Whitecap Dakota First Nation;
- Waterwolf Planning Commission;

- Outlook Metis Local #155;
- Riel Metis Council Local #34; and
- Métis Western Region 3

Engagement activities with First Nations and Métis communities were initiated in 2017. The initial engagement activities included an invitation to the public information meeting held in Tugaske on February 1, 2017. Additionally, Gensource held a separate Indigenous information session on April 6, 2017 at the DoubleTree by Hilton Hotel & Conference Centre in Regina.

20.4.6 Government & Regulatory Agencies

Gensource has conducted meetings and communication with representatives from the Ministry of Environment and Ministry of Economy. Face to face meetings were held on December 6, 2016 in Regina at their respective offices.

In addition to these specific meetings, Gensource has attended several government and industry specific events in the last year (e.g., Premier's Reception 2016, Saskatchewan Mining Association Supply Chain Forum 2017, Chamber of Commerce Make a Connection Reception 2017, Premier's Dinner 2017), in order to meet representatives from different government groups, crown corporations, and regulatory agencies, to introduce Gensource and the Project.

Some government representatives attended both the Open House in Tugaske on February 1, 2017, and the First Nations & Metis information session on April 6, 2017.

Gensource will continue to connect with government groups, crown corporations, and regulatory agencies, as possible, in order to continue to foster relationships and share information about the company and the project.

21 CAPITAL AND OPERATING COSTS

21.1 CAPITAL COST ESTIMATE

21.1.1 CAPITAL COST SUMMARY

Gensource, Innovare, ENGCOMP and its engineering sub-consultants (i.e. Bullee, Dynamo), South East Construction (SECON), and Whiting created the necessary engineering, procurement, estimating, scheduling and constructability reviews to develop the AACE International (AACE) Class 3 Capital Cost Estimate (CCE). 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.

The total capital cost required to implement the Project is estimated at approximately $CAD 279M including contingency. Summaries and the details of the estimate can be found in the Basis of Estimate.

The estimate includes the total direct field costs, direct field support costs, indirect costs and a contingency amount chosen from the statistical analysis (75% percentile). The estimate qualifies as an AACE Class 3 estimate with accuracy in the range of -10% to +20% after the application of contingency at a 75% level of confidence.

All costs are reported in 2nd Quarter 2017 Canadian dollars (CAD), with no allowance for escalation beyond this date. No management reserve is included. The following table shows the CCE summary by major area:

TABLE 32: CCE SUMMARY

AREA	$CAD
Mining	$ 23,738,000
Wellfield	$ 17,304,000
Process Plant	$ 70,610,000
Product Storage & Loadout	$ 957,000
Site Infrastructure	$ 27,297,000
Offsites	$ 6,877,000
Non-Process Facilities	$ 29,550,000
Project Indirects	$ 77,972,000
TOTAL (Pre-Contingency)*	**$ 254,305,000**

AREA	$CAD
Contingency (P75)	$ 25,564,000
GRAND TOTAL	**$ 279,869,000**

*A statistical analysis was completed, using Palisade's @Risk software, to yield a range of probable project costs and aid in the determination of a probabilistic contingency to apply to the project. A contingency of $25,564,000 was subsequently selected, representing the value from the 75% percentile (P75) of the analysis output. The 75% percentile (or Level of Confidence) value means that 75% of the total project cost outputs from the statistical analysis were equal to or less than this value.

21.1.2 Estimate Methodology

21.1.2.1 DIRECT COSTS

Direct costs were estimated utilizing a bottom-up estimating methodology. Budget pricing were obtained for process, mechanical, electrical and instrumentation equipment greater than $50,000 in value.

Material take-offs 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.

Drilling and solution mining estimates were based on Innovare's knowledge and quotes from drilling contractors.

SECON provided the direct field cost estimate for installation of process, mechanical, electrical and instrumentation equipment, supply and installation of bulk materials and construction equipment. A minor amount of subcontract costs were provided by contractors other than SECON.

21.1.2.2 INDIRECT COSTS

Indirect field costs including temporary construction facilities, services and utilities, indirect construction labour, construction equipment and materials, distributables, freight duties and taxes were estimated by SECON based on the level 2 construction schedule.

ENGCOMP's detailed engineering costs were estimated based on applying % factors to the direct costs, excluding the solution mining and Whiting's scope. Whiting's engineering costs were provided by Whiting as part of their quote.

Gensource provided a detailed estimate of Owner's costs.

It should be noted that there have been significant changes to the Saskatchewan PST based on the most current provincial budget changes. These changes resulting in an increase in base % applied (i.e. 6%). Additionally, fewer construction items were exempt from PST than in previous estimates. Full PST, based on the latest changes from the Government of Saskatchewan, have been accounted for in the indirect costs.

21.1.2.3 PROVISIONAL COSTS

Quantitative contingency and project risk analyses was performed to establish appropriate contingency and risk reserve estimates. No risk reserve (a.k.a. management reserve, owner's reserve) or escalation is included in the capital cost estimate at this time. Inclusion of these amounts is at the discretion of the owner, and should be taken into consideration when determining project financing and capital appropriation requirements.

21.1.3 BASIS OF ESTIMATE

The following is based on AACE International Recommended Practice RP 34R-05 (AACE International 2014), which provides guidelines for the structure and content of a cost basis of estimate for engineering, procurement and construction (EPC) projects in the process industries.

The purpose of a basis of estimate plan is to:

- Document the overall project scope,
- Communicate the estimator's knowledge of the project by demonstrating an understanding of scope and schedule as it relates to cost,
- Alert the project team to potential cost risks and opportunities,
- Provide a record of key communications made during estimate preparation,
- Provide a record of all documents used to prepare the estimate,
- Act as a source of support during dispute resolutions,
- Establish the initial baseline for scope, quantities and cost for use in cost trending throughout the project,
- Provide the historical relationships between estimates throughout the project lifecycle,
- Facilitate the review and validation of the cost estimate

21.1.3.1 DESIGN BASIS

All engineering deliverables required to qualify the estimate as Class 3 have been met. 3D modelling software was used to model equipment, piping, cable tray, structural steel, foundations, concrete and building finishes. 2D general arrangement drawings were cut from the 3D model.

Civil engineering deliverables such as plot plans, general site grading and drainage, roads and buried services were produced as 2D drawings.

2D drawings were also created to depict the main wellfield distribution piping from the process plant to each of the four (4) well pads.

This estimate qualifies as an AACE Class 3 capital cost estimate for the purpose of obtaining authorization for expenditure (AFE). As per AACE International Recommended Practice No. 47R-11, the maturity level of project definition deliverables is a primary characteristic of the estimate classes. As such, approximately 20% to 30% of project definition was achieved by the project team in support of the estimate. This is well within the AACE guideline of 10% to 40% for a Class 3 estimate.

21.1.3.2 COST BASIS

Multiple budget quotes were obtained from equipment suppliers for process, mechanical, electrical and instrumentation equipment greater than $50,000 in value. Tagged equipment less than $50,000 were estimated based on in-house historical pricing or from on-line catalogue pricing.

Material take-offs 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. Bulk materials pricing was based on budget quotes obtained from suppliers or in-house historical pricing.

Earthwork and site utilities material take-offs were produced from 2D site layout drawings.

Drilling and solution mining estimates were based on Innovare's knowledge and quotes from drilling contractors

Construction labour productivities and labour hours were based on SECON's & ENGCOMP's knowledge and experience, or from commercially available cost estimating handbooks such as RS Means, J.S Page, NECA, etc.

Project specific Labour Productivity Adjustment Factors were developed. The factors vary from 1.10 to 1.43 times the standard labour man-hours.

A construction work week consisting of five (5) - 10 hour days was assumed. Blended labour rates were developed by SECON based on union and non-union crafts to which SECON is signatory.

General construction equipment costs were included in each line item of the estimate based on the SECON's and ENGCOMP's knowledge and experience. Special construction equipment such as heavy lift cranes, light plant, aerial work platforms, telehandlers, graders and loaders were carried as indirect costs. The following table summarizes the total project cost by Cost Source and Cost Type.

TABLE 33: TOTAL CAPITAL COST ESTIMATE BY COST SOURCE AND COST TYPE

Cost Source	Code	Cost Type												Totals	
		Tagged Equipment		Bulk Materials		Labour		Subcontract		Construction Equipment		Other			
Allowance	A	733,355	1%	294,291	1%	-	0%	1,395,159	2%	-	0%	420,000	1%	2,842,805	1%
Firm Price	FP	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%
Budget Quote	B	55,622,091	93%	20,802,792	65%	-	0%	55,082,794	83%	-	0%	5,776,939	8%	137,284,616	49%
Estimated	E	3,649,073	6%	10,592,596	33%	37,450,138	99%	10,043,767	15%	8,519,732	100%	10,942,018	15%	81,197,322	29%
Factored	F	-	0%	134,356	0%	201,534	1%	-	0%	21,568	0%	32,622,345	43%	32,979,802	12%
Contingency	C	-	0%	-	0%	-	0%	-	0%	-	0%	25,564,244	34%	25,564,244	9%
	Total	60,004,519	100%	31,824,034	100%	37,651,672	100%	66,521,720	100%	8,541,300	100%	75,325,545	100%	279,868,789	100%
% of Total Cost		21%		11%		13%		24%		3%		27%		100%	

The base currency for the estimate is Canadian dollars. All foreign pricing received was converted using the official currency exchange rates on May 24th, 2017 at close of the markets. The exchange rates are obtained from the Bank of Canada website at http://www.bankofcanada.ca/rates/exchange/. The table below shows the currency exchanges rates used in the estimate.

TABLE 34: CURRENCY EXCHANGE RATES

Currency	Conv. to $CAD	Date
US	1.346	24-May-17
GBP	1.7428	24-May-17

21.1.3.3 RISK BASIS

Contingency is a cost element of the estimate used to cover the uncertainty and variability associated with a cost estimate, and unforeseeable elements of cost within the defined project scope. Contingency covers inadequacies in complete project scope definition, estimating methods, and estimating data. Contingency specifically excludes changes in project scope, and unforeseen major events such as earthquakes, prolonged labour strikes, etc.

A statistical analysis was completed, using Palisade's @Risk software, to yield a range of probable project costs and aid in the determination of a probabilistic contingency to apply to the project. A contingency of $25,564,000 was selected, representing the value from the 75th percentile (P75) of the analysis output. The 75th percentile (or Level of Confidence) value means that 75% of the total project cost outputs from the statistical analysis were equal to or less than this value.

Management reserve (a.k.a. risk reserve, owner's reserve) is intended to provide an allowance for anticipated changes in scope, or to cover the costs for items that may be required but have not yet been specifically identified as being included in the current project scope. Risk Reserve and Escalation are not included in the base estimate cost. These costs are at the discretion and decision of the owner.

21.1.4 Accuracy of Estimate

As per AACE International Recommended Practice No. 47R-11, the expected accuracy range of an estimate (secondary characteristic) is the typical variation in low and high ranges after the application of contingency (determined at a 50% level of confidence). For this quantitative risk analysis, contingency calculated at the 75 percent level of confidence, for cost uncertainty only (75% LOC or P75), was selected as the budgeted target cost for the project (i.e. $279M). Therefore, to determine the 80% confidence interval for the estimate, the P10 (10th Percentile) and P90 (90th Percentile) values were calculated, to show a distribution of potential project costs.

Using this 80% confidence interval, a "level of accuracy" can be inferred for the chosen target project cost. The analyses yielded $254M for the P10 (considering cost uncertainty only) and $337M for the P90 (considering cost uncertainty + schedule uncertainty + discrete risk events). As such, the P10 is approximately -10% under the target cost (target cost = $279M, as discussed above) and the P90 is approximately +20% over the target cost, representing the level of accuracy for this estimate (-10% to +20%).

According to AACE International standards, the expected accuracy range for a Class 3 estimate with contingency included is (-10% to -20%) for the "low" and (10% to 30%) for the "high". Therefore, the estimate qualifies as an AACE Class 3 estimate. The resulting range of -10%/+20% is indicative of a Class 3 estimate.

21.1.5 Assumptions & Exclusions

The following are assumptions and exclusions considered during the production of the capital cost estimate:

21.1.5.1 ASSUMPTIONS

- A construction camp is not required;
- PST and freight are included as indirect costs (this includes the incorporation of the most current PST changes in Saskatchewan);
- Contractor's overhead and profit are included as indirect costs;
- The project has proper supervision;
- The workers are familiar with and skilled in the performance of the work tasks;
- There is an adequate supply of workers representing the various crafts; and
- The work is being performed by contractors familiar with all the conditions at the project site

21.1.5.2 EXCLUSIONS

- GST;
- Schedule delays such as those caused by scope changes and labor disputes;
- Escalation beyond Q2 2017;
- Sunk costs of any kind, including the cost of this study;
- Environmental remediation of soil discovered during construction;
- Any costs resulting from inadequate construction management;
- Rework

21.2 OPERATING COST ESTIMATE

The total annual operating costs (OPEX) for the Vanguard One potash project with a 31.25 tonnes KCl/h average instantaneous production rate (250,000 tonnes KCl per year) is estimated at $CAD 13,306,501 or $CAD 53.23/t MOP ($US 39.54/t) excluding logistics and royalties. Hourly unit costs were converted to annual costs assuming 8,000 operating hours per year.

The major components of OPEX are natural gas delivered to site and operating personnel count of 46 full time staff.

Natural gas will be the sole energy component for the project and will be used to produce all process steam and plant power requirements. The Vanguard One site requires approximately 8.8MW of power, under normal operations. However, for conservativism at the time of the study, 9.4MW is used for system design and sizing (resulting in an annual gas consumption of 1.95 million GJ/y, used for OPEX calculations). Natural gas costs were estimated using historical AECO gas pricing and a five-year Saskatchewan Gas forecast as provided by Sproule Associates – 2017. It is important to note that total gas costs of $CAD 3.71/GJ is inclusive of delivery and transmission cost. Gas costs were inflated at 1.5% per annum.

Annual labour costs total $CAD 4,979,500 or $CAD 19.92/t ($US 14.80/t). Labour includes payroll expenditures for mine, process plant, maintenance, and general and administration.

OPEX consisted of both fixed costs that are independent of production capacity and variable costs that are dependent on production rates. It should be noted that in addition to the operating staff and natural gas costs, the Operating Costs are inclusive of: fuel for mobile equipment, technology and telephony, standby power, drinking water, sewage and waste disposal, land taxes and right of ways, and additives/consumables.

All operating costs were inflated at 1.5% per annum.

Due to the selective mining method and Gensource's processing enhancements, the small-scale facilities described in the Study will run at extremely low cost per tonne of product produced. As such, the OPEX appears at the low-end of the lowest quartile of all potash operations globally.

21.3 OTHER COSTS

In additional to the annual operating costs, the following cost items are included in the economic model and financial analysis:

- sustaining capital expenditures (sustaining CAPEX) were factored into the economic analysis. An average annual sustaining CAPEX of $CAD 15.68/t ($US 11.65/t) per year was used in the financial model, which includes full cavern replacement approximately every 11 years, annual well work-overs and 2% of plant site equipment.
- transportation and logistics costs of $CAD 100/t ($US 74.29) were included, to an assumed destination, CFR Asia.
- all applicable taxes and royalties have been accounted for.

22 ECONOMIC ANALYSIS

The Vanguard project was evaluated using a nominal discounted cash flow (DCF) analysis.

22.1 FINANCIAL PERFORMANCE SUMMARY

The financial performance of the project is shown in table below, for a range of product prices and costs of capital.

TABLE 35: FINANCIAL PERFORMANCE (POST POTASH PRODUCTION TAX, ROYALTIES, LEVIES AND SURCHARGES)

Price/Tonne US$	Project IRR	NPV @			Opp Margin	Payback (Yrs)
		6.00%	8.00%	10.00%		
$225	9.83%	$ 135,019,994	$49,178,315	($3,494,593)	78.20%	10.00
$250	12.10%	$ 220,792,606	$ 112,507,467	$45,070,745	79.88%	8.00
$275	14.26%	$ 305,333,691	$ 174,755,710	$92,696,697	81.34%	7.00
$300	16.31%	$ 388,540,731	$ 235,822,250	$139,282,488	82.42%	6.30
$325	18.30%	$ 471,047,175	$ 296,232,842	$ 185,262,292	83.45%	5.25
$350	20.24%	$ 553,536,139	$ 356,569,799	$ 231,132,156	83.45%	5.00
$375	22.11%	$ 635,518,277	$ 416,435,959	$ 276,567,150	85.00%	4.80
$400	23.97%	$ 717,756,211	$ 476,482,843	$ 322,125,403	85.78%	4.70
$425	25.75%	$ 799,288,171	$ 535,897,782	$ 367,117,241	86.36%	4.30
$450	27.50%	$ 880,785,576	$ 595,272,298	$ 412,064,642	86.89%	4.00
$475	29.22%	$ 962,232,078	$ 654,587,267	$ 456,946,581	87.35%	3.80
$500	30.92%	$ 1,043,678,579	$ 713,902,236	$ 501,828,519	87.77%	3.00

At a base case potash price of $US 300/t, a 40+ year economic project life, 1.5% operating cost inflation, $CAD 100/t ($US 74.29/t) shipping cost to East Asia, operating costs of $CAD 53.23/t ($US 39.54/t), sustaining capital reinvestment totalling $CAD 15.68/t ($US 11.65/t) and a long-term (historical) constant exchange rate of 1.30:1, $CAD:$US (40-year Bank of Canada average exchange rate) the financial performance of the project can be summarized as follows.

TABLE 36: FINANCIAL PERFORMANCE SUMMARY

Indicator	Pre Sask. Profit Tax	Post Sask. Profit Tax
NPV_8	$329,403,545	$235,822,250
IRR	18.32%	16.31%

The following defines the input parameters and assumptions used in the discounted cash flow model (DCFM) for the Gensource Vanguard project:

- The economic analysis is based on a 100% equity scenario with no debt leverage.
- Potash production is 100% standard grade.
- Cash-flow model reported in $CAD.
- Base case pricing for standard product is US $300/t, cfr Asia starting in 2019 with an escalation of 1% thereafter.
- Operating costs have been inflated at 1.5% per annum.
- There is no expansion in production assumed beyond 250,000 t/y.
- The project life is 43 years, including 40 years of full production.
- Consideration was given to the expected timing and allocation of construction expenses.
- OPEX and sustaining CAPEX are included in the models.
- Annual sustaining CAPEX averages $CAD 15.68/t ($US $11.65/t)
- Insurance during construction is included in the models.
- The cash flows include Saskatchewan Resource Surcharge (3% of Revenue), Provincial Royalties (4.4% of K_2O) and Saskatchewan Potash Profit Tax.
- The economic model includes a 3% per annum “Other Royalty” on net revenue.
- Transportation costs to destination are $CAD 100/t, cfr Asia.
- Revenue generated from future potash sales are converted from $US into $CAD at a long-term historical exchange of 1.30:1 (40-year Bank of Canada average exchange rate).
- Spot $US:$CAD conversion used was 1.346:1, as posted by The Bank of Canada on May 24, 2017 (the effective date of the FS).
- Working capital requirements of $CAD 2.66/t.
- Head office general and administrative expenses of 1.10% of Revenue ($CAD 5/t).
- Economic analysis based upon a mine plan developed during the Feasibility Study, and is summarized in Section 16 of this report.

22.2 BREAK-EVEN TONNES

Based upon the capital cost estimate, a conservative estimate of a single solution mining cavern is tabulated in the following table.

TABLE 37: ESTIMATED SINGLE CAVERN CAPITAL COST

Solution Mining Caverns	6	each
% Contingency	25%	%
Main Pipelines	$11,127,000	CAD
Auxiliary Pipelines	$2,757,207	CAD
Wellfield Structures & Equipment	$3,419,599	CAD
Production Well Drilling	$22,337,691	CAD
Solution Mining Cavern Development	$1,400,000	CAD
Contingency	$10,260,374	CAD
Total Capital Cost	$51,301,871	CAD
Total Capital Cost per Cavern	**$8,550,312**	**CAD**

Based upon the operating cost and financial model estimates, the revenue minus costs margin per tonne of KCl is tabulated in the following table.

TABLE 38: ESTIMATED DELIVERED MARGIN PER TONNE OF KCL

Estimated Revenue per KCl Tonne (US $300/Tonne)	$390.00	CAD/Tonne
Mining and Processing Cost	-$53.23	CAD/Tonne
Administrative Costs	-$5.00	CAD/Tonne
Working Capital Costs	-$2.66	CAD/Tonne
Saskatchewan Potash Production Tax Cost	-$46.76	CAD/Tonne
Saskatchewan Royalties Cost	-$6.51	CAD/Tonne
Other Royalties Cost	-$6.90	CAD/Tonne
Transportation Cost	-$100.00	CAD/Tonne
Estimated Margin Per Tonne of KCl	**$168.94**	**CAD/Tonne**

Using the capital cost per cavern and the estimated margin per tonne of KCl, 50,612 tonnes of KCl must be produced and sold to generate enough revenue to recover the capital for a single solution mining cavern.

Using the cavern shape assumptions previously discussed, it is estimated that a minimum potash zone thickness of 0.4 m of sylvinite at a grade of 43% KCl is required to produce a minimum tonnage of 50,612 tonnes of KCl.

23 ADJACENT PROPERTIES

The most significant neighbouring property was permit KP 329, which was originally held by Athabasca Potash Ltd., whose assets were purchased in 2010 by BHP Billiton and which has since been relinquished. No public information is available on past activities at this location. BHP Billiton has largely scaled down its potash exploration activities during the last 2 years, and has also slowed down (though not abandoned) its development of its flagship property, the Jansen Potash Mine (Financial Post, February 23, 2016).

Gensource's other main project, the Lazlo Project situated around the Town of Craik, consists entirely of Freehold land. No activity other than desktop studies has taken place. A NI 43-101 report was published in December 2014 (Hambley and Halabura, 2014) for the Lazlo Area.

24 OTHER RELEVANT DATA AND INFORMATION

24.1 PROJECT TARGET TIMELINE

A project implementation schedule was developed as part of the Feasibility Study. Input from the general contractor and key equipment vendors, in addition to the traditional project team (Owner, Engineer), provides increased confidence in the validity of the project timeline. In summary, Gensource's small-scale concept facilitates a development timeline of approximately two (2) years from construction to first production. First production is then followed by approximately a 2-year ramp-up period (as shown in 16.7), to arrive at the full production capacity of 250,000 tonnes annually. The following figure is a Gantt chart summary of the key project milestones and a major activity timeline.

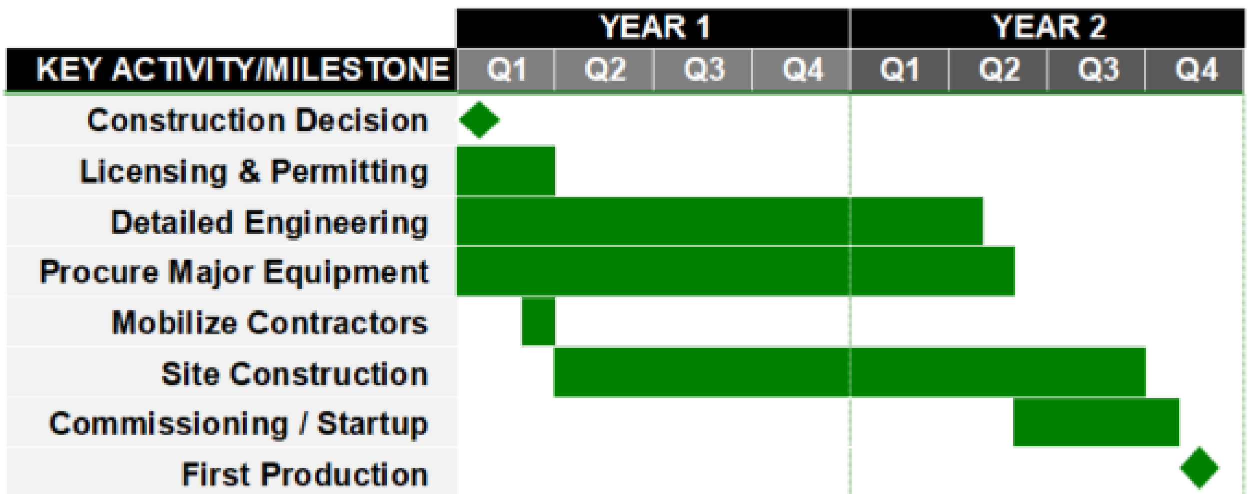

FIGURE 32: PROJECT GANTT CHART OF MAJOR ACTIVITIES

Key Assumptions on the Project Target Time Line to note include:

- An environmental proposal will be sufficient for the ministry of environment and a full EIS will not be required.
- The necessary permits for construction will be obtained in a timely manner;
- Full project financing, and subsequent land purchase, will be completed to begin detailed engineering in a timely fashion
- The process for ordering long lead equipment (engineering and vendor negotiating/purchasing agreements) will begin during the execution planning phase;
- Materials and equipment will be available to execute the work;
- Minor weather and road delays are planned for; however, significant delays are not expected;

24.2 ABSENCE OF TAILINGS

The Project is significantly different than a traditional potash mine. Gensource will be employing selective solution mining techniques combined with proprietary processing enhancements, which demonstrate that it is now possible to be both small and economic. Selective solution mining of potash consists of using an almost saturated salt (NaCl) solution to selectively dissolve potash (KCl) from a potash bed within a solution mining cavern. Because the mining method is selective, only KCl is dissolved from the ore zone, leaving all excess NaCl in place. The mining method is new to the province, but by no means untested. The selective mining process is currently being utilized by Mosaic at their Belle Plaine facility as a means of secondary mining, and have been employed as a primary means of mining potash by Intrepid Potash, at their Moab and Carlsbad facilities.

Due to the use of NaCl brine as the solvent in selective solution mining design for the recovery of KCl potash, no tailings or NaCl salt, requiring surface stockpiling, will be produced. Therefore, a tailings management program will not be required. Compared to conventional underground mining and conventional solution mining for potash, this is a significant advantage for Gensource. There are no capital costs for brine pond and diking systems to contain brine run-off. Also, there are no operating costs for personnel operating and managing the systems, as well as no energy consumption for salt brine recycling. Finally, there is no long term environmental liability and minimal for end of mine life decommissioning.

24.3 RISK ANALYSIS

During the Feasibility Study, the project team completed several exercises to better identify, understand, and plan for the uncertainty related to execution of the Vanguard One project. These efforts are covered by a qualitative risk assessment and a quantitative risk analysis. A Monte Carlo based model using Palisade's @Risk software was used to calculate the contingency and risk reserve budgets at a 75% level of confidence for the project.

The qualitative risk assessment identified 105 risks with an average severity putting the project in the "medium" range of risk severity. The highest severity risks were assessed and mitigation strategies have been identified. This information will form the basis for the risk management plan to be developed at the beginning of the next phase.

The quantitative risk analysis (QRA) is based on a model built from the deterministic cost estimate and project schedule for the project. Subject matter experts from the project team went through calibration training prior to participating in range workshops where all the uncertainty inputs for the model were collected.

The analysis resulted in a P75 total project budget of $279M including a contingency of almost $26M. This provides a 75% level of confidence (LOC) that the budget will not be exceeded.

Contingency is selected based on cost variability only and excludes schedule variability and uncertainty from discrete risk events.

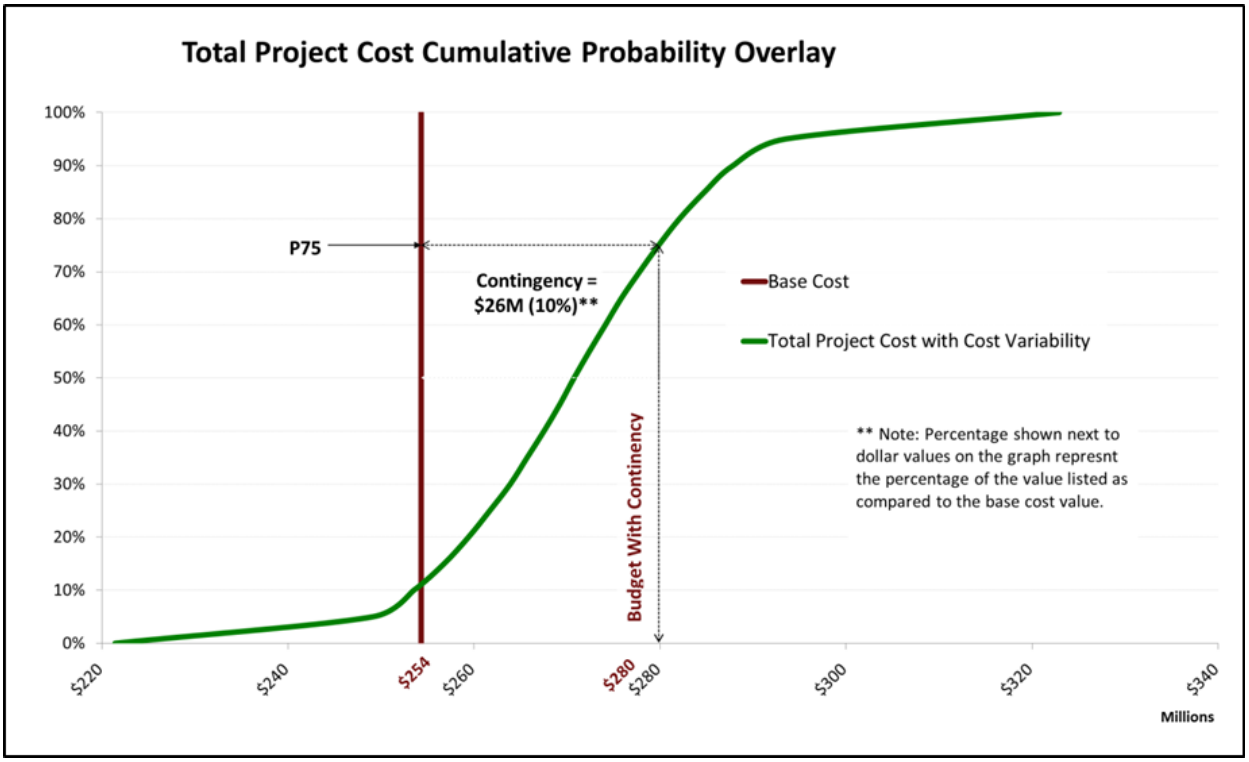

FIGURE 33: OVERALL PROJECT CONTINGENCY

On projects, Owner's may also decide to carry a "Risk Reserve" (a.k.a. "Owner's Reserve", "Management Reserve") for uncertainty on the project beyond costs alone. Owner's reserve is carried and administered by the Owner, and is included in the project financing package.

25 INTERPRETATION AND CONCLUSIONS

It would appear that the data presented here favours the presence of a high grade, consistently mineralised zones throughout the Patience Lake and Belle Plaine Members in the Project area. These zones would appear to be suited to the development of a horizontal cavern selective solution mining project, based on the parameters presented in this report and the Feasibility Study.

25.1 POTENTIAL RISKS

Gensource identified five primary technical risks associated with the solution mining design. As such, the Feasibility Study includes three solution mining recommendations for the next phase of the project so that minor design changes can be implemented in the final design to help mitigate these risks and optimize design. These recommendations are:

1. Perform detailed modeling of the temperature losses within the solution mining cavern;
2. Perform dissolution testing of potash cores from the PLM-1 sub member; and
3. Collaborate with oilfield specialty tool manufactures and service providers to fully explore options to help mitigate well drilling and operational technical risks

Beyond the detailed qualitative risk assessment completed during the Feasibility study, the following potential risks were identified during the creation of this Technical Report:

- Application of technology in a new environment: While horizontal cavern selective solution mining of potash has been successfully applied by Intrepid at their Moab Mine, no producer has yet done so as a primary mining method in Saskatchewan. Unforeseen technological challenges might thus occur. Several recommendations are made to continue to address this risk as the project advances.
- Unseen anomalies: While current drilling data, 2-D seismic interpretation, and 3D seismic interpretation have identified the presence of anomalies, even 3D seismic cannot always identify all anomalies and there is resulting interpretation risk.
- Market Volatility: Fluctuations in potash prices and Canadian dollar/US dollar exchange rates as well as Provincial royalty and tax structures, could place strain on the future economics of the project; however, Gensource's vertically integrated business model helps to offset or de-risk market- and price-risk factors.

25.2 NEXT STEPS

Upon completion of this study, the Project team, along with Gensource and their market partners can make a decision to advance the project to the next stage of development, which is initiation of detailed engineering, procurement, and construction activities (Project Execution Phase). With a "construction decision", the appropriate level of effort can be dedicated to the initiation, planning, and ramp-up to get work proceeding. Once initiated, it is estimated that the Project Execution Phase could last between 18-24 months, wherein the project will transition to operations. The decision to proceed is predicated on securing project financing.

The current intent of the company is to execute the next phase of project by utilizing Lean/Integrated Project Delivery (Lean/IPD of "ILPD") methodologies, which offer significant advantages over traditional systems. ILPD is a relationship-based system that is founded in commitments and accountability, and takes a total value stream approach to the betterment of the project, rather than the individual participants. One main goal of ILPD projects is to tie compensation to achievement of project objectives, aiming to improve project outcomes for all parties.

26 RECOMMENDATIONS

Based on the expertise of the companies and individuals responsible for execution of the Feasibility Study and preparation of this report, the following are high level recommendations for future consideration by Gensource and their partners. These recommendations are grouped into two “areas”, technical and commercial.

Technical Recommendations:

- Complete the environmental assessment and approval process and move into the permitting phase to ensure the appropriate permits, approvals, and licenses are obtained to advance the Project into the construction phase, followed by operations (~ $400,000 CAD for Environmental Work)
- Initiate detailed engineering including final trade-off studies (~$5Million CAD of Total Detailed Engineering $16Million CAD)
- Complete advanced modelling and testing of cavern temperature and dissolution rates (~$200,000 CAD)
- Develop a detailed solution mining cavern start-up procedure designed to minimize potential thermal stresses on the solution mining caverns (~$50,000 CAD)
- Complete a detailed site-specific geotechnical investigation as an early component of detailed engineering (~$100,000 CAD)

Commercial Recommendations:

- Complete the full project financing package (Total Project CAPEX ~ $279 Million CAD)
- Initiate procurement for key long-lead items (~$32Million CAD of $60Million CAD Total Tagged Equipment)

It should be noted that the estimates and breakdown of the above expenditures are included in the overall project CAPEX of $279Million CAD.

27 REFERENCES

Acton, D.F, G.A. Padbury, and C.T. Stushnoff. 1998. The Ecoregions of Saskatchewan. Canadian Plains Research Centre, University of Regina. Hignell Printing Limited, Winnipeg, Manitoba. 205pp.

AACE International. (2012). AACE International Recommended Practice No. 47R-11. COST ESTIMATE CLASSIFICATION SYSTEM - AS APPLIED IN THE MINING AND MINERAL PROCESSING INDUSTRIES. AACE International, Morgantown, West Virginia, 16 p.

AACE International. (2014). AACE International Recommended Practice No. 34R-05. BASIS OF ESTIMATE. AACE International, Morgantown, West Virginia, 7 p.

Bruch, P., Hogan, J. (2017). 13-1362-0117/3200/800 Subsidence and Hydrology Assessment, Golder Associates, Saskatoon, Saskatchewan.

Collerson, K.D., van Schmus, R.W., Lewry, J.F. and Bickford, M.E. (1988): Buried Precambrian basement in south-central Saskatchewan: provisional results from Sm-Nd model ages and U-Pb zircon geochronology. Summary of Investigations 1988, Saskatchewan Geological Survey; Saskatchewan Energy and Mines, Miscellaneous Report 88-4, p 141 – 150.

Debuscherre, S., Ramey, M., McEwan, J., Fourie, L., Wilkie, G. (2016) Technical Report – Preliminary Economic Assessment for the Vanguard Project. Available on Sedar.

Edgecombe, R. (2017). 2016 Vanguard 2D Seismic Interpretation, RPS, Calgary, Alberta.

Edgecombe, R. (2017). 2017 Vanguard 3D Seismic Interpretation Final Report, RPS, Calgary, Alberta.

ENGCOMP et. al. (2017). Vanguard One Feasibility Study Report. Saskatoon, Saskatchewan.

Failler, M., Mehl, M. (2017). Technical Proposal for the Vanguard One Project, Golder Associates, Saskatoon, Saskatchewan.

Fourie, L. (2016) Technical Report for the Acquisition of Potash Dispositions KP 363 & KP 483, Saskatchewan, Terra Modelling Services, Inc., Dalmeny, Saskatchewan. Available on Sedar.

Fourie, L. (2017). Technical Report for the Updated Resource on the Vanguard Potash Project, Saskatchewan, Terra Modelling Services, Inc., Dalmeny, Saskatchewan. Available on Sedar.

Fuzesy, A (1982): Potash in Saskatchewan, Saskatchewan Energy and Mines, Report 181.

Gonari, A., Novecosky, B. (2016). 13-1362-0117 Environmental Evaluation Checklist for Proposed Gensource Potash Corp. Vertical Exploration Well In SE 14-22-2 W3M.

Gonari, A., Novecosky, B. (2016). 13-1362-0117 Environmental Evaluation Checklist for Proposed Gensource Potash Corp. Vertical Exploration Well In SE 16-22-2 W3M.

Hambley, D.F. and Halabura, S.P. (2014). Updated Technical Report Concerning the Lazlo Potash Project, Craik Saskatchewan. Agapito Associates, Inc., Lakewood, Colorado. Available on Sedar.

Heelstone Resource Inc. (2017). Gensource Tugaske 1-16-22-2W3 Prairie Evaporite 'Strat' Well Geological Well Data Report

Heelstone Resource Inc. (2017). Gensource Tugaske 1-14-22-2W3 Prairie Evaporite 'Strat' Well Geological Well Data Report

Holter, M.E. (1969) The Middle Devonian Prairie Evaporite of Saskatchewan. Saskatchewan Department of Mineral resources, Geological Science Branch, Industrial Minerals Division Report no. 123.

Mossman, D.J., Delabio, R.N. and Mackintosh, D. (1982) Mineralogy of clay marker seams in some Saskatchewan potash mines. Canadian Journal of Earth Sciences, 1982, 19(11): 2126-2140

Lischka, L., Debusschere, S., & Brown, C. (2016). Gensource Corp's Exploration Hole Drilling Program. Gensource Corp's Exploration Core Hole KL-244 & KL-245 / Vanguard Project 1-16-22-02 W3.

Lischka, L., Debusschere, S., & Brown, C. (2016). Gensource Corp's Exploration Hole Drilling Program. Gensource Corp's Exploration Core Hole KL-244 & KL-245 / Vanguard Project 1-14-22-02 W3.

Parker, H.M. and Dohm, C.E. Evolution of Mineral Resource Classification from 1980 to 2014 and Current Best Practice. Finex 2014 Julius Wernher Lecture.

Tremblay, M., Higgins, C., & Wozniewicz, J. (2017). 13-1362-0117 Preliminary Water Supply Assessment, Golder Associates, Saskatoon, Saskatchewan.

Tremblay, M., Higgins, C. (2017). 13-1362-0117/3300 Vanguard Project Groundwater Investigation, Golder Associates, Saskatoon, Saskatchewan.

Whittaker, B.N. and Reddish, D.J. (1989). Subsidence: Occurrence, Prediction and Control, Elsevier, Amsterdam, 528 p.

Web References:

CIM Definition Standards for Mineral Resources and Reserves (2014): **http://web.cim.org/standards/menupage.cfm?sections=177&menu=178**

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

Financial Post article dated 23 February 2016: BHP Billiton Ltd still likes giant Saskatchewan potash project, but not in any hurry to develop.

http://business.financialpost.com/news/mining/bhp-billiton-ltd-still-likes-giant-saskatchewan-potash-project-but-not-in-any-hurry-to-develop

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

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

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

Saskatchewan Potash Royalties and Tax

http://www.economy.gov.sk.ca/Potash-Tax-Guide

Saskatchewan Rail Network. Ministry of Highways and Infrastructure. **http://www.highways.gov.sk.ca**

Subsurface Mineral Tenure Regulations, Crown Minerals Act, Government of Saskatchewan:

http://www.qp.gov.sk.ca/documents/English/Regulations/Regulations/C50-2R30.pdf

University of Saskatchewan, Virtual Herbarium, Ecoregions of Saskatchewan:

http://www.usask.ca/biology/rareplants_sk/root/htm/en/researcher/4_ecoreg.php

28 DATE AND SIGNATURES

This report is effective May 31, 2017. Revisions to the sign-off of this report, have been completed, and are dated, signed, and sealed by the undersigned this 23 day of February 2018.

Signed and Sealed

____

Louis Fourie, B.Sc., P. Geo, Pr. Sci. Nat.

Signed and Sealed

____

Douglas F. Hambley, Ph.D., P.E., P.Eng., P.G.

Signed and Sealed

____

Dany Bernard, P.Eng.

Signed and Sealed

____

Sheridan Fjeld, P.Eng.

Signed and Sealed

____

Lindsay Bedard, P.Eng.

Signed and Sealed

____

Devon Atkings, P.Eng.

Signed and Sealed

____

Geoff Wilkie, P.Eng.

Signed and Sealed

____

Kyle Blixt, P.Eng.

29 STATEMENTS OF CERTIFICATION & CONSENT

The following is the list of Qualified Persons, contributing to the content of this technical report, as acknowledge in Section 28, for whom individual certificates of Qualified Persons have been completed:

- Louis Fourie, B.Sc., P. Geo, Pr. Sci. Nat. – Geologist (Terra Modelling Services Inc.)
- Douglas F. Hambley, Ph.D., P.E., P.Eng., P.G. – Mining Engineer (Agapito Associates, Inc.)
- Dany Bernard, P.Eng. – Senior Process Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Sheridan Fjeld, P.Eng. – Senior Mechanical Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Devon Atkings, P.Eng. – Senior Structural Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Lindsay Bedard, P.Eng. – Senior Electrical Engineer (ENGCOMP Engineering and Computing Professionals Inc.)
- Geoff Wilkie, P.Eng. – Senior Cost Consultant (ENGCOMP Engineering and Computing Professionals Inc.)
- Kyle Blixt, P.Eng. – Civil Engineer (Bullee Consulting Ltd)

Statement of Certification

I, Louis Fourie, B.Sc., P. Geo, Pr. Sci. Nat., hereby certify that:

1. I reside at 609 Ross Ave., Dalmeny, SK., S0K 1E0, 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). I am also registered as a Pr. Sci. Nat. in South Africa (registration number 400035/02). 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. Modelling Potash and other evaporite deposits, as well as phosphate deposits, as well as Estimating Resources in various stages of development for a variety of clients for due diligence and other requirements (including JORC) in Canada, Spain, the United States, Brazil and elsewhere.
    d. Advising clients during the development of their projects, especially at the Exploration Stage, both in potash and other commodities.
    e. Doing due diligence on existing potash and related mineral projects, in the Republic of the Congo and elsewhere.
    f. 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 property on April 11, 2016; and also viewed the core pertaining to this project at the Core and Sample Repositories, Subsurface Laboratory, Saskatchewan Geological Survey, Regina, Saskatchewan. Subsequent visits prior and during the current drilling program were conducted on September 27, 2016; December 5, 2016; and December 31, 2016; as well as one post-drilling visit on February 1, 2017.
8. I am the Principal Author of the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation" Effective Date: May 31, 2017 (the "Technical Report"). I have reviewed all sections of this Technical Report. I am asserting sole authorship over Sections 3, 5 – 12, 14 – 15, and 23, and am jointly responsible for Sections 1, 2, 24, 25, 26, and 27. Other QP's as identified have contributed to Sections 13, 16 – 18, and 21; 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 23 day of February 2018

Signed and Sealed

____

Louis Fourie, B.Sc., P. Geo, Pr. Sci. Nat. Professional Seal

Statement of Certification

I, Douglas F. Hambley, Ph.D., P.E., P.Eng., P.G., as coauthor of the independent Technical Report titled *Technical Report Summarizing The Feasibility Study For The Vanguard One Potash Project, Saskatchewan* Effective Date: 31 May 2017 (the Technical Report) do hereby certify that:

1. I am a Mining Engineer and Senior Associate of Agapito Associates, Inc. at its office located at 1536 Cole Blvd., Bldg. 4, Suite 220, Lakewood, Colorado, USA. I am solely responsible for Section 16.0 and jointly responsible for Sections 1, 2, 24, 25, 26 and 27.0 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 and of the Association of Professional Engineers and Geoscientists of Saskatchewan, being registered as a Professional Engineer (No. 16124) since January 2009.
3. I am also licensed as a Professional Engineer in the states of Colorado, Illinois, Michigan, Nebraska, 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). I am a member of the Potash Subcommittee of the CIM Committee on Mineral Resources and Mineral Reserves and of the Resources and Reserves Committee and Registered Member Admissions 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 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 Feasibility Study and 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 23 day of February 2018

Signed and Sealed

____

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

Statement of Certification

I, Dany Bernard, P.Eng., 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. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017
3. 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.
4. I have not visited the Vanguard area
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 13 and 17 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017. As such, I am taking sole responsibility for Sections 13 and 17 of the Technical Report.
6. 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.
7. I have been involved with the Vanguard One project since October 2016.
8. 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
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Dany Bernard, P.Eng. Professional Seal

Statement of Certification

I, Sheridan Fjeld, P.Eng., 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. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017
3. 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.
4. I have not visited the Vanguard area
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 18 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017.
6. 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.
7. I have been involved with the Vanguard One project since December 14, 2014.
8. 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
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Sheridan Fjeld, P.Eng.

Professional Seal

Statement of Certification

I, Devon Atkings, P.Eng., 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. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017
3. 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.
4. I have not visited the Vanguard area
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 18 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017.
6. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101.
7. I have been involved with the Vanguard One project since October 2016.
8. 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
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Devon Atkings, P.Eng. Professional Seal

Statement of Certification

I, Lindsay Bedard, P.Eng., 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. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017.
3. 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.
4. I have not visited the Vanguard area.
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 18 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017.
6. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101.
7. I have been involved with the Vanguard One project since October 1, 2016.
8. 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.
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Lindsay Bedard, P.Eng. Professional Seal

Statement of Certification

I, Geoff Wilkie, P.Eng., 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 Cost Consultant
2. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017
3. My qualifications include:
    a. I am a graduate of the University of British Columbia with a B.A.Sc. in Civil Engineering (1986)
    b. I am a Professional Engineer licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 11116).
    c. I have practised my profession since 1986. My experience with potash and related mineral deposits includes:
        i. Preparation of capital cost estimates for projects at the pre-feasibility, feasibility, detailed engineering and construction stages for potash projects in Saskatchewan
        ii. Independent third-party review and assessment of capital cost estimates prepared by others for green field potash 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.
4. I have not visited the Vanguard area
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 21 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017.
6. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101.
7. I have been involved with the Vanguard One project since December 14, 2014.
8. 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
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Geoff Wilkie, P.Eng. Professional Seal

Statement of Certification

I, Kyle Blixt, P.Eng., hereby certify that:

1. I am employed by Bullee Consulting Ltd., address 200-302 Wellman Lane, Saskatoon, Saskatchewan, S7T 0J1, and my occupation is Civil Engineer.
2. I am a co-author of the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017
3. 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.
4. I have visited the Vanguard area
5. My contributions to the "Vanguard One Project Feasibility Study Report." Effective Date: May 31, 2017 have been used as the basis to create the summary information provided for in Section 18 of this the "Technical Report Summarizing the Feasibility Study for The Vanguard One Potash Project, Saskatchewan: Prepared for Gensource Potash Corporation." Effective Date: May 31, 2017.
6. I am independent of Gensource Potash Corp. as described in Section 1.5 of NI 43-101.
7. I have been involved with the Vanguard One project since October 3, 2016.
8. 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
9. 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.
10. 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.
11. 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 23 day of February 2018

Signed and Sealed

____

Kyle Blixt, P.Eng. Professional Seal