

## **Appendix: Summary of the resource report on KP 405**

### **Potash Project in Saskatchewan, Canada**

The Canadian Potash Project is located in the central Saskatchewan Potash district that represents nearly 26% of the world production and over half of the known potash reserves. The district has nine operating potash mines one of which is a solution mine.

The Joint Venture between North Atlantic Potash Inc. (“North Atlantic” or “NAPI”), a subsidiary of JSC Acron, and Rio Tinto Potash Management Inc. (“RTPM”), a subsidiary of Rio Tinto plc, consists of nine potash permits covering 237,000 hectares in the southern region of the district. The work undertaken has focused on permit KP 405 with the completion of drilling 13 wells and a 3D Seismic Survey.

This overview was prepared by North Atlantic from the results of an extensive program carried out under the direction of RTPM and the following summary was prepared from data and reports from that work. Although the distribution of this summary is the sole and entire responsibility of North Atlantic, access to the original exploration data and resources report approved by North Atlantic’s Qualified Person is available to interested parties upon signing a Non-Disclosure Agreement.

The work has defined an Inferred Resource of 1.4 billion tonnes at 31% KCl which, based on solution mining operation, would be sufficient to produce 329 million tonnes KCl to the well head. Based on a potential annual production rate of 3.0 million tonne of KCl product, the current resource could support an operation for many years. The critically important downhole ambient temperature averaged 63°C which ranks this deposit one of the highest in Saskatchewan.

### **Deposit Location and Ownership**

The project area is located within the Elk Point Basin in central Saskatchewan, Canada where approximately 14 million tonnes of potash are extracted annually, representing around 26% per cent of the world production. It is located approximately 30 kilometers southeast of the city of Regina in Saskatchewan Canada. (Figure 1)

The project area is within the nine exploration properties jointly held by North Atlantic and RTPM. The resource is defined within the southernmost permit, KP405 (Figure 2), following a programme of exploration drilling and 3D seismic work. The mineral tenure is secured as both crown rights and agreements with freehold owners of mineral rights.

Figure 1 Project Location Map

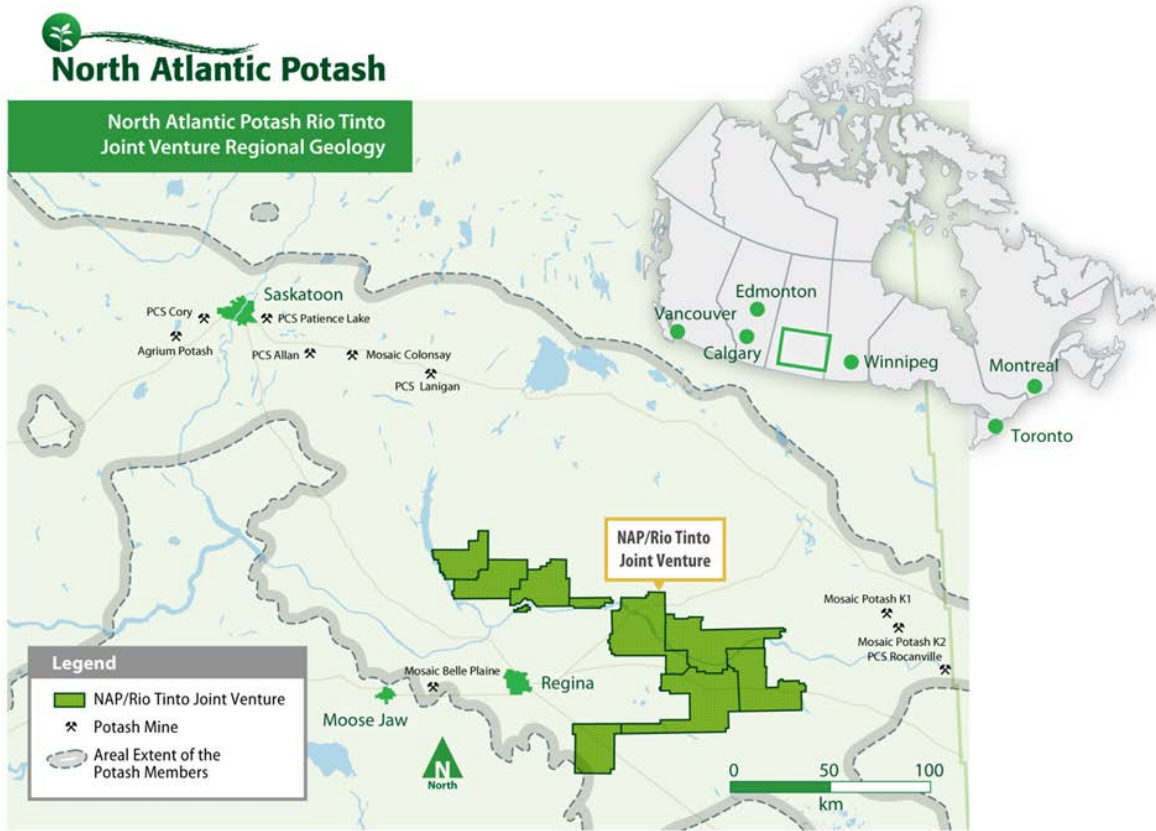
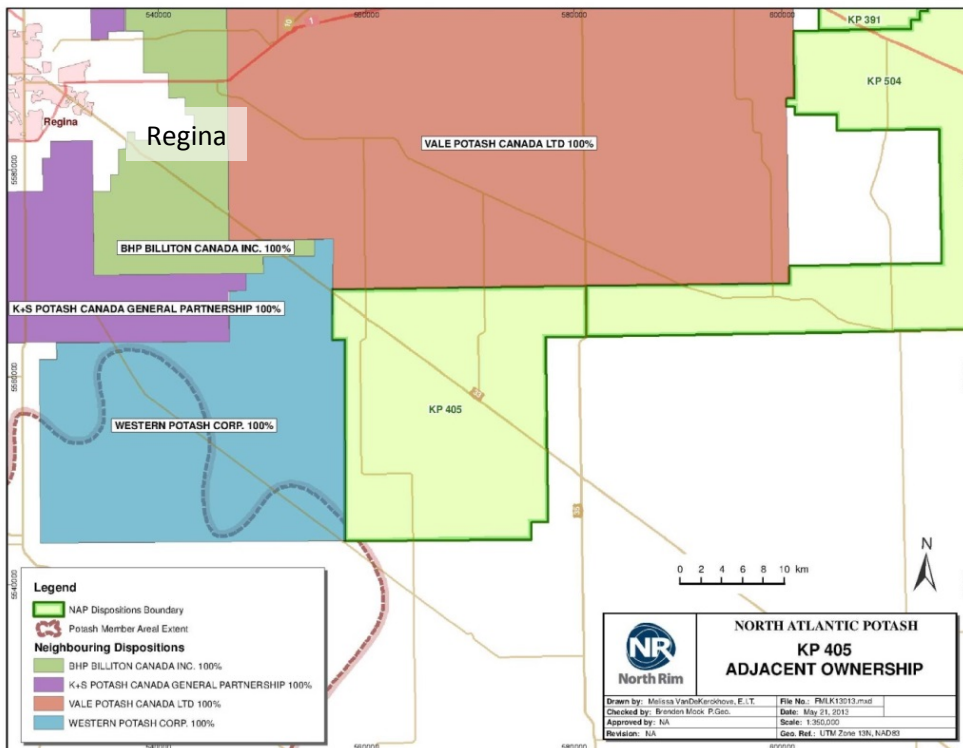


Figure 2 Permit Ownership Map



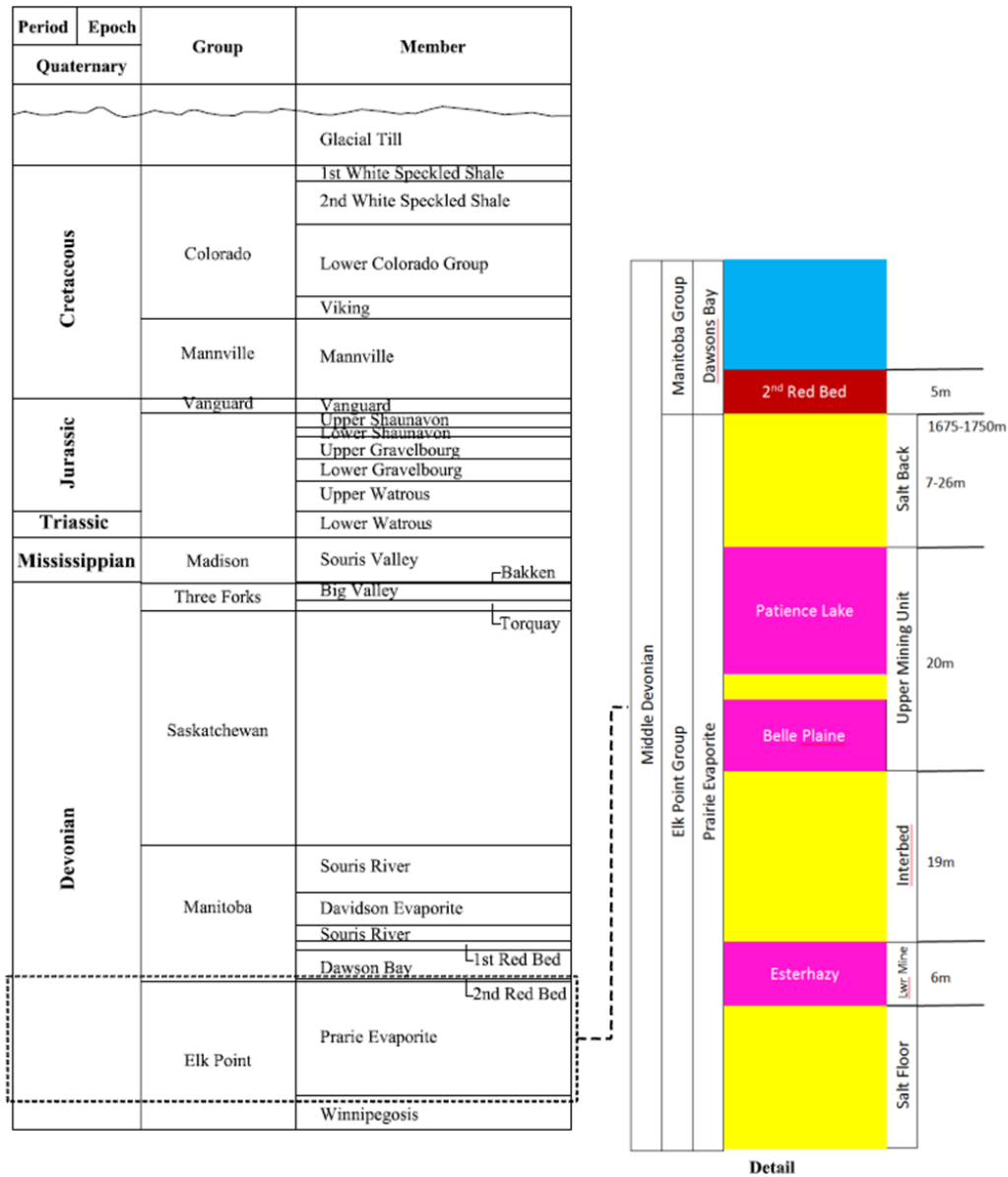
## **Deposit Geology and Proposed Mining Method**

The project area sits on the southern margin of the Elk Point Basin within the Devonian Prairie Evaporite sequence (Figure 3) which contains an extensive set of mineralised potash units. The potash beds consist of three major units, the Patience Lake, the Belle Plaine and the Esterhazy all of which are mineralised and form the target for solution mine development. Importantly, the units sit at a depth of around 1,750m and have formation temperatures of around 62°C which is beneficial for the extraction of high concentration KCL brine from the caverns. The salt back, part of the formation that protects developing caverns from the overlying clastic formations, is relatively thick at around 10m.

The potash members consist of halite and sylvite with minor amounts of the deleterious mineral, carnallite, seen only within the Esterhazy member in four of the wells drilled, at levels of around 1.5% MgO where present. The members also contain around 7-8% insolubles as clay bands that act as markers through the basin. The project aims to extract the full sequence of potash in two lifts using solution mining to develop a sequence of caverns, each serviced by two wells which circulate water to dissolve the evaporite salts and pump the salt rich brine to the surface for processing. The lower unit consisting of the Esterhazy member has an average thickness in the wells of 5.6m would be developed first. The development would then bypass the interbed of halite separating it from the upper units and these would then be extracted as one with an average thickness of around 18m, whilst minimising dissolution of the thinner halite interbed.

The project area contains some structural disruption to the potash in the form of a single, circular collapse with a diameter of around 1.3 kilometres, representing a very minor proportion of the resource. The nature of this style of deposit is such that there are also areas where the potash minerals have been leached out and replaced by halite. One of these was encountered in drilling and as these are not directly detectable, a factor has been allowed for in the resource to account for these zones.

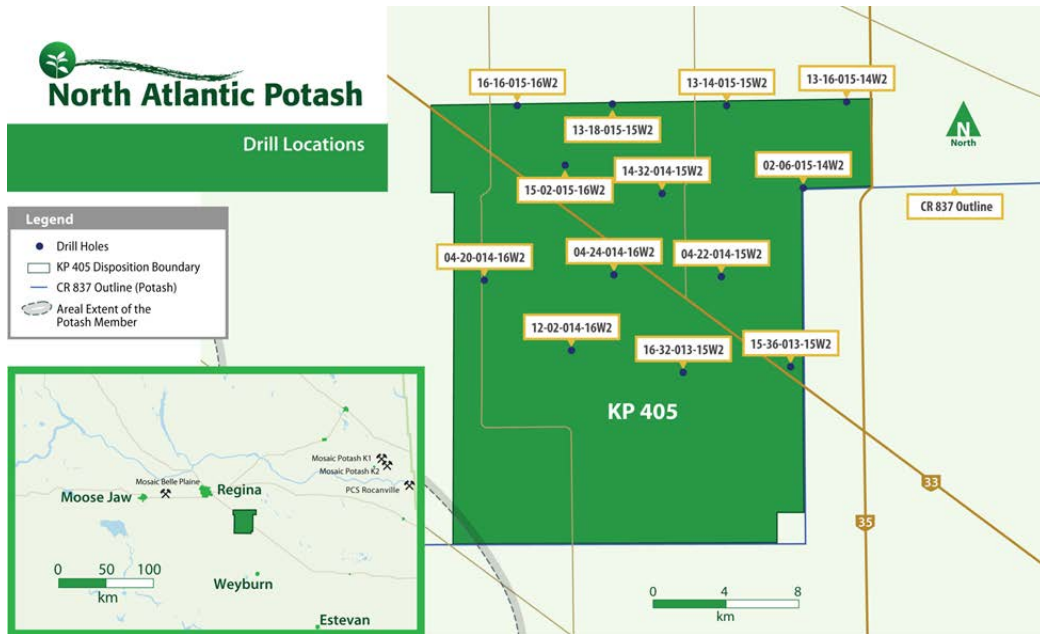
**Figure 3 Stratigraphy of the project**



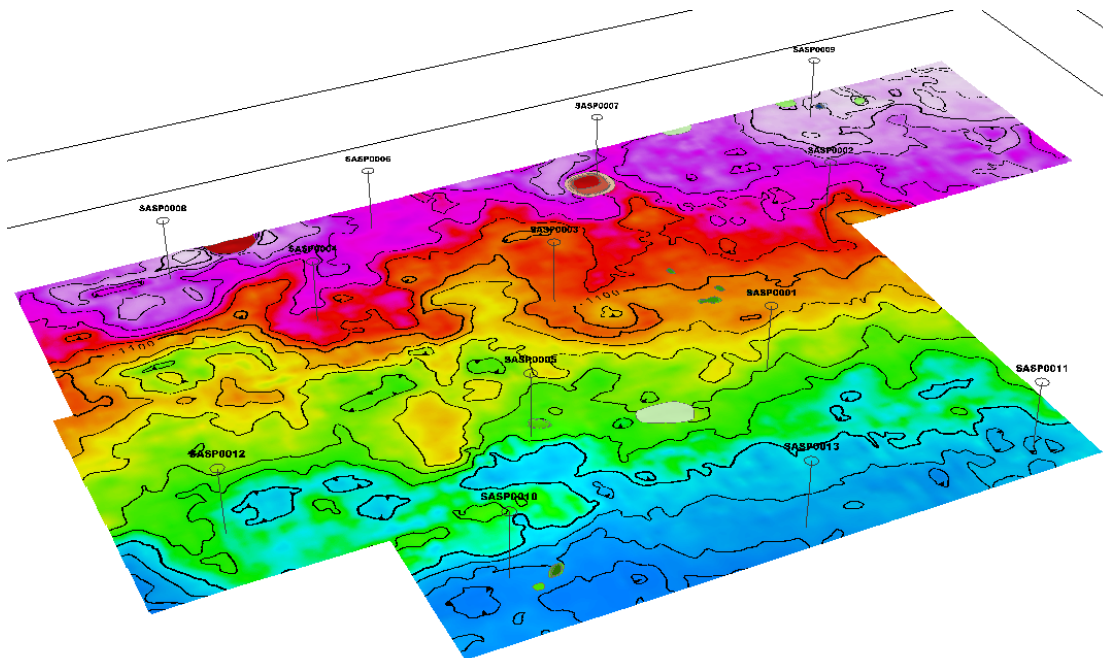
**Work Undertaken**

The work undertaken since October 2011 by RTPM has focused on one property, KP405 and has outlined a potash resource over an area of around 250km<sup>2</sup> through the drilling of thirteen wells at around six kilometres spacing. (Figure 3) Of these, eleven intersected the full sequence of the potash beds, one intercepted the only collapse zone in the project area and one intercepted a zone of potash leaching. A 3D seismic survey has also been completed over 300km<sup>2</sup> and an additional two 2D lines shot to the southern edge of the permit confirming the presence of the full thickness of the Prairie Evaporite up to the boundary. The 3D survey confirmed a single solution collapse on the property and a regional dip of 0.6 degrees with local variations throughout. Work is continuing on the interpretation of the seismic survey.

**Figure 4 Plan showing work area**



**Figure 5 View of structure at the potash horizon from 3D seismic work**



### Mineral Resource

The Inferred Resource portion of the mineralisation that lies wholly within mineral tenure controlled by the project and is covered by drilling at a nominal spacing of six kilometres with extrapolation no more than three kilometres from wells that intersected the potash units. It is

supported by 3D seismics and is limited to minimum bed thicknesses of over 2m with a cut off of 15% K<sub>2</sub>O applied to the mineable units. Additionally, the Esterhazy unit has been removed from caverns where the MgCl<sub>2</sub> : KCl ratio exceeds the expected plant design after blending.

The Inferred Resource is stated as only mineralisation contained within a cavern layout and is considered to be extractable to surface with a number of factors applied to account for known and likely variables encountered in this style of deposit and extraction method. These include an 85% recovery of brine from the cavern allowing for losses within the cavern on closure. A 92% recovery factor allowing for unknown areas of leaching and a 95.7% recovery factor to allow for losses due to dip in the floor of the caverns. As the brine from the upper interbed is likely to be discarded during mining, the tonnages associated with this interbed unit have been removed.

**Table 1 Inferred Resources**

Unit	In Cavern Tonnes Mt†	Insol %	KCl %	MgO %	Total Rec KCl Mt‡
Patience Lake - Belle Plaine	1,139	8.44	30.72	0.07	262
Esterhazy	293	3.59	30.49	0.21	67
<b>Total</b>	<b>1,432</b>	<b>7.45</b>	<b>30.67</b>	<b>0.10</b>	<b>329</b>

† Material tonnages contained within cavern designs

‡ Recoverable KCl after application of recovery factors

Geological work planned for the next phase will include infill drilling in a start-up area, to be selected, a series of close spaced intersections of the potash to investigate short range variability and geotechnical sampling and modelling to support cavern design.

### Qualified Person Statement

The summary resource report prepared by North Atlantic is based on a resource report originally prepared by RTPM and has been reviewed and approved by Milton Holter, Consulting Professional Engineer, Professional Geologist and President Holter Consultants Ltd, for North Atlantic. Mr Holter is a Qualified Person under Canadian National Instrument 43-101 (Standards of Disclosure for Mineral Projects) and has over 50 years experience as industrial minerals geologist including the evaluation of many potash deposits in Saskatchewan. He has been involved in behalf of North Atlantic with the Joint Venture since the beginning of the project in 2011. Mr Holter has certified that the report contains all substantive information that would be required to be included in a 43-101 report and to the best of his knowledge contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

The information presented here contains details of mineralisation that has a reasonable prospect of being economically extracted in the foreseeable future but which is not yet classified as Proved or Probable Reserves. Estimates of such material are based largely on geological information with preliminary consideration of mining, economic and other factors. While in the judgement of the Qualified Person there are reasonable expectations that all or part of the Resources will eventually become Proved or Probable Reserves, there is no guarantee that this will occur as the result depends on further technical and economic studies and prevailing economic conditions in the future.