

**TSX.V: NRM**  
**Frankfurt: N7R**  
**OTCQB: NRVTF**



**FOR IMMEDIATE RELEASE**

## **Noram Achieves Initial Success With Chloride-Based Leaching For Lithium Clay Extraction**

Vancouver, British Columbia – January 14, 2021 – Noram Ventures Inc. (“Noram” or the “Company”) (TSX - Venture: NRM / Frankfurt: N7R / OTCQB: NRVTF) is pleased to announce that in anticipation of Preliminary Economic Assessment studies for the Zeus lithium claystone deposit in Clayton Valley, Nevada, Noram is conducting a series of chemical engineering tests to extract and concentrate lithium. In July and August 2020, Noram conducted successful membrane + electrolysis where 97% pure lithium carbonate was achieved after leaching in sulfate-based solutions. Since then, Noram has initiated chloride-based leaching experiments. These experiments are guided by evidence regarding the cation exchange capacity of some clay minerals, where lithium is liberated relatively easily in chloride solutions if HCl is used to overcome kinetic effects. Noram is contracting Activation Laboratories, Inc., of Ancaster, Ontario for this series of tests. The Actlabs Group of Companies is well-known globally as a research-oriented companies with experienced scientists to help solve analytical challenges.



Noram and Actlabs have already achieved initial success. Initial results using low concentrations of HCl and simple chloride compounds (including NaCl), moderate temperatures, and leaching times of only one hour, have yielded up to 425 ppm lithium in solution. President and CEO C. Tucker Barrie notes that: “These initial tests are producing significant amounts of lithium in solution from our claystone material, with concentrations 2.5 times greater than the current brine pumped from aquifers for Albemarle’s

Silver Peak operations next door /1/. We are very encouraged by these results. We plan a series of leaching tests with variable reagent concentrations, temperatures and duration of leaching to optimize the lithium into solution in Q1 2021, ahead of our PEA to provide guidance for more comprehensive chemical engineering studies.

There are two significant advantages to using chloride chemistry in comparison to sulfate-based chemistry. 1) During processing, sulfate minerals may precipitate governed by their unusual, temperature-dependent solubilities, and this can hinder lithium extraction, whereas chloride compounds are easier to manage. 2) The cost of using HCl in comparison to using H<sub>2</sub>SO<sub>4</sub> is favorable, particularly when considering the Capex of the overall project. Other lithium claystone projects envision sulfuric acid plants on site which constitute a very large portion of the Capex, according to recent PFS and FS studies.”

In addition to the chloride-based leaching studies, Noram is examining other monovalent cations that could be extracted during processing, particularly cesium and rubidium. Although the markets for these metals are restricted, they are quite valuable, and cesium is on the United States’ list of critical minerals /2/. Noram management notes that most of the >900 ppm lithium cutoff lithium claystone material in the February 2020 resource estimate, and in the drill core for the current drill campaign, is > 50 ppm Cs and >250 ppm Rb. These metals should go into solution during processing, and these metals may constitute significant bi-products. The US Geological Survey reports 2019 prices for 50 grams cesium chloride (99.9% pure) and 10 grams rubidium chloride (99.9% pure) as \$US 103.60 and \$US 59.80, respectively /3,4/.

1. [https://www.pureenergyminerals.com/wp-content/uploads/2018/04/PureEnergy\\_ClaytonValleyPEA\\_Rev1\\_23March2018.pdf](https://www.pureenergyminerals.com/wp-content/uploads/2018/04/PureEnergy_ClaytonValleyPEA_Rev1_23March2018.pdf)
2. <https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018>
- 3 - <https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-cesium.pdf>
4. Silver Peak average lithium concentration in brines 2009-2013 - 157 ppm Li n=6: /4/  
<https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-rubidium.pdf>

### **About Noram Ventures Inc.**

Noram Ventures Inc. (TSX - Venture: NRM / Frankfurt: N7R / OTCQB: NRVTF) is a Canadian based junior exploration company, with a goal of developing lithium deposits and becoming a low - cost supplier. The Company’s primary business is the Zeus Lithium Project (“Zeus”) in Clayton Valley, Nevada. The Zeus Project has a current resource estimate of **124 million tonnes at 1136 ppm lithium as Indicated Resources, and 77 million tonnes lithium at 1045 ppm lithium as Inferred Resources** (900 ppm Li cut-off: 1.18 million tonnes lithium carbonate equivalent – “LCE”.

Noram’s long term strategy is to build a multi-national lithium minerals company to produce and sell lithium into the markets of Europe, North America and Asia.

Please visit our web site for further information: [www.noramventures.com](http://www.noramventures.com)

### **ON BEHALF OF THE BOARD OF DIRECTORS**

/s/ “C. Tucker Barrie, Ph.D., P. Geo.”

President and CEO

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