

## Nuinsco Identifies Very High Light Rare Earth Element Content in Apatite Mineralization at Prairie Lake

**Toronto, March 17, 2022** – Nuinsco Resources Limited (“**Nuinsco**” or the “**Company**”) (CSE: NWI) today announced that mineralogical studies at its Prairie Lake Critical Minerals and phosphate project located near Terrace Bay, Ontario (“**Prairie Lake**” or the “**Project**”) indicate that the Project has amongst the world’s highest known light rare earth element (“**LREE**”) content in apatite (see Table 1 below). That most of the LREEs are concentrated in apatite is significant as the Company has already demonstrated that LREEs can be effectively extracted from apatite at Prairie Lake.

Analyses have shown Prairie Lake apatite to contain mean values of 1.54% (13,157 ppm) LREE and, very significantly, 0.33% (2,829 ppm) neodymium oxide (“ $\text{Nd}_2\text{O}_3$ ”). The LREE (and  $\text{Nd}_2\text{O}_3$ )-rich character of Prairie Lake apatite indicates that there is excellent potential for concentrates to return economically significant neodymium.

“The mineralogical studies commissioned by the Company confirm the presence of highly concentrated LREE content in the single mineral species apatite at Prairie Lake. This may ultimately be significant to the Project’s economics due to the potential to simplify processing and improve recoveries as only one mineral concentrate may need to be produced to liberate all the LREEs,” said Paul Jones, Nuinsco’s CEO. “The demand for the LREE neodymium is forecast to increase dramatically as electric vehicles are increasingly adopted on a global scale. However, neodymium is but one of several economically significant components of the mineralogy at Prairie Lake. Other minerals include widespread niobium, tantalum and phosphate mineralization, in addition to other rare earth elements (“**REEs**”), particularly scandium; all of which will be considered in evaluating the economics of the Project.”

The Project benefits from being in a politically stable jurisdiction; is exceptionally located near to available rail, road, shipping, and power infrastructure; and is ideally placed in North America with respect to current supply chain concerns for critical minerals.

Recent work conducted by the Company has focused on expanding the mineralized intersections in the Southwest (“**SW**”) Area of the Prairie Lake complex. The SW Area is more than one kilometre in length and between 100m and 750m wide and contains an Exploration Target of 435-530 Mt (“**Prairie Lake ET**”) of rock endowed with critical elements of economic interest. Recent mineralogical studies commissioned by the Company have identified a suite of rare earth bearing minerals including apatite, monazite, bastnaesite, carbocernaite/ burbankite, and ancylite, and niobium-bearing pyrochlore in the rocks of the complex. Understanding the mineralogy of the critical element bearing phases is central to obtaining positive results from potential extractive processes that might be applied to exploit the mineralization.

Prairie Lake consists of 46 mineral claims covering an area of ~630 ha. Prairie Lake is superbly located, easily accessed by an all-weather road from the TransCanada Highway located 28 kilometres to the south. The Prairie Lake ET is defined by 59 diamond drill holes.

During the second half of 2021 the Company commissioned a mineralogical study of rock samples from the Prairie Lake complex to develop a more thorough understanding of the mineralogy and to determine the location within the contained minerals of elements of economic interest. The work entailed petrographic examination of the rock samples followed by scanning electron microscope study to confirm identification and produce semi-quantitative data on the approximately 30 mineral species present in the rock, subsequently electron microprobe study was employed to produce quantitative data on REEs, niobium, and tantalum and finally laser-ablation ICP-MS study

further refined REE and trace element profiles of carbonate minerals. The results of the study will be used to inform further metallurgical studies leading to refined and optimized processing development for exploiting minerals of economic interest. Previous metallurgical studies have demonstrated the potential to significantly upgrade the phosphate, neodymium, and other REE grades in concentrate. All of this work is now being used to prepare a maiden mineral resource estimate under NI 43-101 and subsequent economic evaluation of Prairie Lake.

**Table 1. LREE in Apatite from Global Carbonatites & Related Rocks:**

Carbonatite complex & rock-type	ΣLREE (ppm)	Nd (ppm)
Oka, Canada, sövite, #OK17	31508	5120
<b>Prairie Lake, ijolite, #0709@15.8m, (n=9): HGZ</b>	<b>24955</b>	<b>4887</b>
<b>Prairie Lake, sövite, #P4@9.45m, (n=3): JSZ</b>	<b>20425</b>	<b>4544</b>
Oka, Canada, sövite, #OK13	30295	4340
<b>Prairie Lake, sövite, #0713@92m, (n=12): P10</b>	<b>17183</b>	<b>3944</b>
Tundulu Hill, Malawi, #M28	n/a	3086
<b>Prairie Lake, #1003@493m, (n=9): HGZ</b>	<b>9759</b>	<b>2657</b>
Palabora, South Africa, sövite, #PA1	6856	1840
Kaiserstuhl, Germany, sövite, #KA3	10397	1450
Oka, Canada, sövite, #OK7	10975	1350
Sokli, Finland, sövite, #SO1	5301	1340
Palabora, South Africa, phoscorite, #PA3	5207	1290
Fen, Norway, sövite, #FE5	4994	1120
Kaiserstuhl, Germany, sövite, #KA2	7021	992
Fen, Norway, sövite, #FE4	4409	990
Siilinjarvi, Finland, sövite, #SI2	3670	962
Sokli, Finland, phoscorite, #SO2	3940	897
Fen, Norway, sövite, #FE2	3552	768
Siilinjarvi, Finland, glimmerite, #SI1	2858	759
Sallanlatva, Russia	4013	686
Sukulu, Uganda, sövite, #U63	n/a	685
Jacupiranga, Brazil, beforite, #JA2	2471	610
Tapira, Brazil, #Tag15-4	3545	458
Jacupiring, Brazil, sövite, #JA1	1596	398
Tapira, Brazil, #Tas27-2B	787	125

Abbreviations: ΣLREE = total light rare-earth elements or La+Ce+Pr+Nd+Sm; ppm = parts per million; HGZ = High Grade Zone; JSZ = Jim's Showing Zone; P10 = P10 Zone; n/a = not available. Sources of data: Hornig-Kjarsgaard (1998) Journal of Petrology, Volume 39; Hogarth (1989), In Carbonatite (K. Bell, editor), Allen & Unwin; Dawson et al. (1996), Mineralogical Magazine, Volume 60; Brigatti et al. (2004) European Journal of Mineralogy, Volume 16.

**Prairie Lake ET:**

	SW	Jim's Showing	East	NE	Total
<b>REEs</b>					
La (ppm) Lanthanum	275 - 340	295 - 360	305 - 370	200 - 250	280 - 340
Ce (ppm) Cerium	650 - 790	670 - 820	670 - 820	450 - 550	650 - 790
Sm (ppm) Samarium	55 - 70	55 - 70	55 - 70	50 - 60	55 - 70
Nd (ppm) Neodymium	295 - 360	290 - 360	320 - 390	235 - 290	300 - 360
Y (ppm) Yttrium	85 - 100	90 - 110	80 - 100	135 - 170	85 - 100
La+Ce+Sm+Nd+Y (ppm)	1360 - 1660	1400 - 1720	1430 - 1750	1070 - 1320	1370 - 1660
<b>Additional Elements (as oxides)</b>					
P <sub>2</sub> O <sub>5</sub> (%) Phosphate	3.0 - 4.0	3.5 - 4.5	2.5 - 3.0	2.5 - 3.5	3.0 - 4.0
Nb <sub>2</sub> O <sub>5</sub> (%) Niobium	0.095 - 0.115	0.100 - 0.120	0.040 - 0.050	0.085 - 0.105	0.090 - 0.110
Ta <sub>2</sub> O <sub>5</sub> (ppm) Tantalum	18 - 25	25 - 30	5 - 7	10 - 12	18 - 21
<b>Volume - m<sup>3</sup> (million)</b>	140 - 175	12 - 14	13 - 16	2 - 3	170 - 210
<b>Tonnes (million)</b>	435 - 530	35 - 45	40 - 50	7 - 8	515 - 630

<sup>2</sup> A full description of methodology used to estimate the Prairie Lake Project Exploration Target is contained in the Technical Report dated 30 November 2018 prepared by P&E Mining Consultants Inc. that is filed on SEDAR. The potential quantity and grade of the ET is conceptual in nature and there has been insufficient exploration to define a mineral resource. It is uncertain if further exploration will result in the discovery

of a mineral resource. There is no National Instrument 43-101 – Standards of Disclosure for Mineral Projects preliminary economic assessment in respect of the Prairie Lake ET.

Laura Giroux, P.Geo, Chief Geologist, acts as Nuinsco's Qualified Person under National Instrument 43-101. Ms. Giroux has reviewed and approved the technical contents of this news release.

### **About Nuinsco Resources Limited**

Nuinsco Resources has over 50 years of exploration success and is a growth-oriented, multi-commodity mineral exploration and development company focused on prospective opportunities in Canada and internationally. Currently the Company has four properties in Ontario – the high-grade Sunbeam gold property near Atikokan, the Dash Lake gold property near Terrace Bay, the large multi-commodity (rare-earths, niobium, tantalum, phosphate) Prairie Lake project near Terrace Bay, and the Zig Zag Lake property (lithium, tantalum) near Armstrong. In addition, Nuinsco has an agreement for gold exploitation at the El Sid project in the Eastern Desert of Egypt.

### **Forward-Looking Statements**

*This news release contains certain "forward-looking statements." All statements, other than statements of historic fact, that address activities, events or developments that Nuinsco believes, expects or anticipates will or may occur in the future are forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek," "anticipate," "believe," "plan," "estimate," "expect," and "intend" and statements that an event or result "may," "will," "can," "should," "could," or "might" occur or be achieved and other similar expressions. These forward-looking statements reflect the current expectations or beliefs of Nuinsco based on information currently available to Nuinsco. Forward-looking statements are subject to a number of risks and uncertainties that may cause the actual results of Nuinsco to differ materially from those discussed in the forward-looking statements, and even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on Nuinsco. Factors that could cause actual results or events to differ materially from current expectations include, among other things, failure to successfully complete financings, capital and other costs varying significantly from estimates, production rates varying from estimates, changes in world copper and/or gold markets, changes in equity markets, uncertainties relating to the availability and costs of financing needed in the future, equipment failure, unexpected geological conditions, imprecision in resource estimates, success of future development initiatives, competition, operating performance of facilities, environmental and safety risks, delays in obtaining or failure to obtain tenure to properties and/or necessary permits and approvals, and other development and operating risks. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, Nuinsco disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Although Nuinsco believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.*

To learn more, please visit [www.nuinsco.ca](http://www.nuinsco.ca) or contact:

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