



## **Nuinsco Successfully Upgrades Phosphorus Concentrate from Prairie Lake Project** *Potential markets include fertilizer and a variety of widely-used industrial products*

**Toronto, October 24, 2013** – Nuinsco Resources Limited (“Nuinsco” or the “Company”)(TSX:NWI, [www.nuinsco.ca](http://www.nuinsco.ca)) today reported that it has identified a simplified metallurgical extraction process resulting in a concentrate with improved phosphorus recoveries and very low levels of impurities from mineralization at its Prairie Lake phosphorus/rare metals/niobium project in northwestern Ontario. The project hosts a suite of elements of economic significance which range in application from leading-edge technologies to such fundamentally important products as fertilizer grade phosphorus concentrate.

“We are undertaking a comprehensive evaluation of the economic potential of this exceptional property in light of continuing evaluation concerning the processing and commercial marketability of concentrates produced from mineralization in Prairie Lake rock,” said CEO Paul Jones. “These phosphorus results are only one step in this process, but are indicative of the potential value of this asset to Nuinsco as a provider of products to the fertilizer, detergent and industrial minerals sectors and beyond.”

This most recent round of testing indicates that an apatite concentrate grading in excess of 29% phosphorus (“P<sub>2</sub>O<sub>5</sub>”) can be produced at a 71% P<sub>2</sub>O<sub>5</sub> recovery. It is very significant that this recovery is a substantial improvement over that reported in previous testing (see press release dated March 26, 2013) and has important implications with regard to the commercial viability of concentrate production. Apatite is the phosphorus-bearing mineral in a rock that also contains calcite, dolomite, biotite, magnetite and rutile.

A significant step in the laboratory test work was the development of a process flowsheet that is vastly simpler than processes used in previous tests, yet still capable of producing the above-listed grade and recovery of P<sub>2</sub>O<sub>5</sub>. This could have a favourable impact on the economics and marketability of any future production of P<sub>2</sub>O<sub>5</sub> concentrate at Prairie Lake, as should the presence of only very low levels of impurities (0.43 to 0.76% fluorine, 0.01% chlorine and 2.85 to 6.63% carbon).

The phosphorus process test work reported here was conducted under the leadership of Dr. Huang Liming by Corem in Quebec City, the same laboratory which, to date, has completed other phases of metallurgical testing on the Prairie Lake mineralization. Tests were conducted on rock collected as part of a 1,000kg sample grading 3.18% P<sub>2</sub>O<sub>5</sub> (and 0.13% niobium (“Nb<sub>2</sub>O<sub>5</sub>”) with a specific gravity of 2.99 g/cc and a bulk density of 1.59 g/cc (after crushing to -1.7mm). The apatite contains on average 43.1% P<sub>2</sub>O<sub>5</sub> and occurs in the form of clear, well-formed crystals up to 250 µm in size. The primary use of apatite is in the manufacture of fertilizer but it also has important industrial applications, including industrial cleaners, pharmaceuticals, dyes and ceramic glazes.

### **About Prairie Lake**

Located about 45 kilometres northwest of Marathon, Ontario, Nuinsco's 100%-owned Prairie Lake property covers the entire 2.8 km<sup>2</sup> (at surface) Prairie Lake carbonatite complex and is easily accessible from the TransCanada Highway. In January, 2012, Nuinsco bought back a 2% production royalty making the property royalty-free.

The NI-43-101-compliant Exploration Target Mineralization Inventory (“ETMI”)(see news release issued October 26, 2011) is 515 – 630 million tonnes grading between 0.09-0.11% Nb<sub>2</sub>O<sub>5</sub> (0.9 to 1.1 kg/tonne) and 3.0-4.0% P<sub>2</sub>O<sub>5</sub> – making Prairie Lake one of the world's ten largest carbonatite-hosted niobium deposits (and in North America second only to the Iron Hill Project in Colorado, USA, in contained tonnes - the grade at Prairie Lake is however greater). The current metallurgical work establishes the project as a substantial, recoverable, phosphorus inventory. The suite of minerals of potentially economic significance also includes tantalum (Ta), uranium (U) and REEs (including lanthanum (La), cerium (Ce), samarium (Sm), neodymium (Nd) and yttrium (Y)). The ETMI was undertaken by Eugene Puritch, P.Eng. and Antoine Yassa, P.Geo of P&E Mining Consultants Inc. of Brampton, Ontario.

All exploration work at Prairie Lake is supervised by Laura Giroux, P.Geo, Senior Geologist, who acts as Nuinsco's Qualified Person under National Instrument 43-101. Ms. Giroux has reviewed and approved the technical contents of this news release. The potential quantity and grade of the ETMI 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.

### **About Nuinsco Resources Limited**

Nuinsco is a growth-oriented, multi-commodity mineral exploration company that is focused on world-class mineralized belts in Canada and internationally. In addition to its property holdings in Ontario, Saskatchewan and Turkey, Nuinsco owns common shares in Victory Nickel Inc. (TSX:NI), Coventry Resources Limited (TSX-V:CYY), and a 50% interest in CBay Minerals Inc. (50% Nuinsco, 50% Ocean Partners Investments Limited), a private company that is a dominant player in Quebec's Chibougamau mining camp with assets including a permitted mill and tailings facility, eight past-producing copper/gold mines, three potential near-term copper producers and a 96,000 acre land position. Shares of Nuinsco trade on the Toronto Stock Exchange under the symbol NWI.

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