

CZN-TSX CZICF-OTCQB FOR IMMEDIATE RELEASE December 2, 2015

# RESEARCH FUNDING AWARDED TO CANADIAN ZINC TO INVESTIGATE CENTRAL MILLING FACILITY IN NEWFOUNDLAND

- Canadian Zinc and Buchans Minerals Collaboration
- Key Metallurgical Studies to Determine Viability of a Central Milling Concept

**Vancouver, British Columbia, December 2, 2015 - Canadian Zinc Corporation** (TSX: CZN; OTCQB: CZICF) ("the Company" or "Canadian Zinc") is pleased to announce that Canadian Zinc and Buchans Minerals Corporation ("Buchans Minerals"), a wholly owned subsidiary of Minco Plc (AIM: MIO), have entered into a collaboration agreement to jointly undertake a research program and whereby the two Companies will share research data on their respective central Newfoundland Cu-Pb-Zn-Ag-Au deposits.

The Company has been awarded research and development (R&D) funding by the Research & Development Corporation of Newfoundland and Labrador ("RDC") to undertake a research program to complete physical and metallurgical bench scale studies on seven volcanogenic massive sulphide ("VMS") deposits located in central Newfoundland. RDC is providing funding of \$535,000 for the project through the GeoEXPLORE Industry-led R&D Technology Development and Demonstration Program. The total cost of the research project is estimated at \$735,000 with Buchans Minerals and Canadian Zinc each contributing up to \$100,000.

The intent and objective of the research is to determine the technical and economic viability of developing the companies' key deposits into producing operations by utilizing a central milling facility. The concept is based on the potential that collectively, the satellite deposits can be economically mined, pre-concentrated, trucked and then milled simultaneously or sequentially through a central mill.

The collaboration agreement between Canadian Zinc and Buchans Minerals is focused on seven VMS deposits located in central Newfoundland. Four of the deposits are held by Canadian Zinc (Lemarchant, Boomerang-Domino, Tulks East, and Long Lake) and three of the deposits are held by Buchans Minerals (Bobbys Pond, Daniels Pond and Tulks Hill).

The seven deposits have all demonstrated resources of various sizes and quality and all are located near the communities of Millertown and Buchans, NL and all within trucking distance (30-90 km) of the recently closed Duck Pond Cu-Zn Mine. Individually at this time, the various deposits are not large enough to support stand-alone operations, but could potentially be developed with improving economic factors and by utilizing a central mill facility.

Outcomes of the research project will provide key information on which to further evaluate the economic viability of developing the central Newfoundland deposits through a central milling facility. Positive results would lead to continued development work on the known deposits,

renewed exploration interest leading to new discoveries, and ultimately, ongoing mining operations in central Newfoundland.

Thibault & Associates Inc., an applied process chemical engineering firm located in Fredericton, NB, has been awarded the contract to complete bench scale physical/metallurgical studies and the process simulation and cost modelling.

As a part of the collaboration agreement, both Companies have undertaken to complete physical and metallurgical bench scale studies on the deposits in order to:

- a) assess the amenability of mineralized samples from the deposits to physical upgrading (pre-concentration) at site by Dense Media Separation as a potential means of reducing transportation costs of the mineralized material from site to the milling facility and to maximize head grade for reduction in downstream processing cost;
- b) assess the amenability of mineralized samples from 4 of the 7 deposits to a common flotation flowsheet for the production of selective copper, lead, and zinc concentrate products of marketable grade at acceptable metallurgical recoveries. This will serve as a preliminary evaluation of whether or not a single flowsheet and reagent scheme could be used for processing multiple resources at a central mill. The deposits to be included are Boomerang-Domino, Bobbys Pond, Daniels Pond and Lemarchant; and
- c) determine the levels of deleterious elements present in the four deposits and in the flotation concentrates produced, as well as determining the acid generating potential of the four deposits and from the flotation tailings generated.

The bench scale testing program will be followed-up by the development of a process simulation and cost assessment model to evaluate and identify the key factors controlling the earning potential of a centralized milling concept for processing of the satellite base metal deposits. Results from the modelling will be used to help optimize the exploration and development budgets, by focusing on the key factors that are critical to realizing the economic potential of the base metal deposits in central Newfoundland.

The Buchans area of central Newfoundland is one of Canada's richest, historic base metal mining camps. Between 1928 and 1984 Asarco mined 16.2 million tonnes averaging 14.51% Zn, 1.33% Cu, 7.56% Pb, 126 g/t Ag & 1.37 g/t Au from a series of in situ massive sulphide and transported breccia sulphide deposits. Between 2007 and 2015 Teck Resources milled 5.0 million tonnes averaging 4.4% Zn, 2.7% Cu, 53 g/t Ag & 0.6 g/t Au from its Duck Pond Mine.

About RDC (Research & Development Corporation of Newfoundland and Labrador)

RDC is a provincial Crown corporation responsible for improving Newfoundland and Labrador's research and development performance. RDC works with research and development stakeholders including business, academia and government agencies and departments to make strategic investments in highly qualified people, R&D infrastructure and innovative research. Additional information about RDC can be found at: <u>www.rdc.org</u>.

## About Buchans Minerals and Minco PLC

Buchans Minerals Corporation, a wholly owned subsidiary of Minco Plc, holds interests in four advanced base metal properties in the Buchans area of central Newfoundland, which contain the following deposits:

**Tulks North property** (which contains the Daniels Pond deposit) with an Indicated Mineral Resource of 1.16 million tonnes grading 4.44% zinc, 2.12% lead, 0.31% copper, 87.79 g/t silver and 0.60 g/t gold, as well as an additional Inferred resource totaling 445,000 tonnes grading 3.88% Zn, 1.74% Pb, 0.27% Cu, 81.63 g/t Ag and 0.52 g/t Au.

**Bobbys Pond property** (which contains the Bobbys Pond deposit) with an Indicated Mineral Resource of 1.10 million tonnes grading 4.61% zinc, 0.44% lead, 0.86% copper, 16.6 g/t silver and 0.2 g/t gold plus an additional Inferred Mineral Resource of 1.18 million tonnes grading 3.75% zinc, 0.27% lead, 0.95% copper, 10.95 g/t silver and 0.06 g/t gold (RPA, July 2008)

**Tulks Hill property** (49% Buchans Minerals / 51% Prominex Resources) (which contains the Tulks Hill deposit) with an Indicated Mineral Resource of 431,000 tonnes grading 3.97% zinc, 1.61% lead, 0.89% copper, 35.09 g/t silver and 1.17 g/t gold (RPA, July 2008).

**Buchans property** (which contains the Lundberg deposit). The Lundberg copper-zinc-lead/deposit is the most advanced undeveloped deposit in the district and consists of a large lower grade resource being evaluated for open pit mine development. The Lundberg deposit hosts Indicated resources of 23.4 million tonnes grading 1.41% Zn, 0.60% Pb, 0.35% Cu, 5.31 g/t Ag and 0.07 g/t Au, and Inferred resources of 4.3 million tonnes averaging 1.29% Zn, 0.54% Pb, 0.27% Cu, 4.47 g/t Ag and 0.08 g/t Au. (Peter C. Webster, P. Geo., Mercator Geological Services Limited, 2013).

Minco PLC incorporated in the Republic of Ireland and listed on the AIM Market of the London Stock Exchange ("MIO"), is an exploration and development company currently engaged in zinc-lead exploration in Canada, the United Kingdom and Ireland, and is also evaluating its Woodstock manganese project in New Brunswick, Canada.

Minco also holds an approximate 26% shareholding in Xtierra Inc, (TSXV- "XAG"), which holds mineral properties in Mexico, and a 2% NSR royalty on the Curraghinalt gold property in Northern Ireland, currently being explored by Dalradian Resources Inc. (TSX-"DNA").

### About Canadian Zinc

Canadian Zinc is a TSX-listed exploration and development company trading under the symbol "CZN". The Company's key project is the 100%-owned Prairie Creek Project, a fully permitted, advanced-staged zinc-lead-silver property, located in the Northwest Territories.

Canadian Zinc also owns an extensive land package in central Newfoundland that it is exploring for copper-lead-zinc-silver-gold deposits, including three VMS projects, each with defined deposits, which are being explored by Canadian Zinc. Key deposits on each project are listed below:

**South Tally Pond** Project - Lemarchant deposit; Indicated Mineral Resource of 1.24 million tonnes grading 5.4% zinc, 0.5% copper, 1.2% lead, 1.0 g/t gold and 59.27 g/t silver plus an additional Inferred Mineral Resource of 1.34 million tonnes grading 3.7% zinc, 0.4% copper, 0.9% lead, 1.0 g/t gold and 50.4 g/t silver (Giroux Consultants 2012);

**Tulks South** Project - Boomerang-Domino deposit: Indicated Mineral Resource of 1.36 million tonnes grading 7.1% zinc, 3.0% lead, 0.5% copper, 110 g/t silver and 1.7 g/t gold plus an additional Inferred Mineral Resource of 0.69 million tonnes grading 6.5% zinc, 2.8% lead, 0.4% copper, 95 g/t silver and 1.0 g/t gold (Snowden 2007); and the Hurricane and Tulks East prospects; and

**Long Lake** Project - Long Lake deposit: Indicated Mineral Resource of 0.48 million tonnes grading 7.8% zinc, 1.6% lead, 0.97% copper, 49 g/t silver and 0.57 g/t gold plus an additional Inferred Mineral Resource of 78,000 tonnes grading 5.7% zinc, 1.2% lead, 0.7% copper, 34 g/t silver and 0.48 g/t gold (SRK, 2012).

The Company's exploration strategy in Newfoundland is to continue to build on its existing polymetallic resource base with the aim of developing either a stand-alone mine, similar to the past-producing mine at Buchans or the Duck Pond mine, or a number of smaller deposits that could be developed simultaneously and processed in a central milling facility.

### For further information contact:

| Alan B. Taylor                 | Michael J. Vande Guchte       | Steve Dawson           |
|--------------------------------|-------------------------------|------------------------|
| Chief Operating Officer & Vice | Vice President                | Vice President         |
| President Exploration          | Exploration NL                | Corporate Development  |
| (604) 688-2001                 | (604) 688-2001                | (416) 203-1418         |
| Suite 1710 – 650 West Georgia  | Suite 1710 – 650 West Georgia | 220 Bay Street,        |
| Street, Vancouver, BC V6B 4N9  | Street, Vancouver, BC V6B 4N9 | 12 <sup>th</sup> Floor |
| Tollfree:1-866-688-2001        | Tollfree:1-866-688-2001       | Toronto, ON M5J 2W4    |

E-mail: invest@canadianzinc.com

Website: www.canadianzinc.com

#### Cautionary Statement – Forward-Looking Information

This press release contains certain forward-looking information, including, among other things, the expected completion of acquisitions and the advancement of mineral properties. This forward looking information includes, or may be based upon, estimates, forecasts, and statements as to management's expectations with respect to, among other things, the completion of transactions, the issue of permits, the size and quality of mineral resources, future trends for the company, progress in development of mineral properties, future production and sales volumes, capital costs, mine production costs, demand and market outlook for metals, future metal prices and treatment and refining charges, the outcome of legal proceedings, the timing of exploration, development and mining activities, acquisition of shares in other companies and the financial results of the company. There can be no assurances that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that mineral resources will be converted into mineral reserves.

Gerald C. Squires, M.Sc., P.Geo., NL Exploration Manager, Canadian Zinc Corporation, is responsible for Newfoundland exploration programs, and is a Qualified Person as defined by NI 43-101 and has reviewed and has approved the contents of this news release.

#### Cautionary Note to United States Investors

The United States Securities and Exchange Commission ("SEC") permits U.S. mining companies, in their filings with the SEC, to disclose only those mineral deposits that a company can economically and legally extract or produce. We use certain terms in this press release, such as "measured," "indicated," and "inferred" "resources," which the SEC guidelines prohibit U.S. registered companies from including in their filings with the SEC.