



## PRESS RELEASE

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### CANADIAN ZINC INITIATES DEFINITIVE FEASIBILITY STUDY FOR PRAIRIE CREEK MINE

#### Ausenco Engineering to undertake project development planning services

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Vancouver, British Columbia, January 24, 2017 - Canadian Zinc Corporation (TSX: CZN; OTCQB: CZICF) (“the Company” or “Canadian Zinc”) is pleased to announce that it has engaged AMC Mining Consultants (Canada) Ltd. (“AMC”) and Ausenco Engineering Canada Inc. (“Ausenco”) to complete a Definitive Feasibility Study (“DFS”) to support the project debt financing of the Prairie Creek Zn-Pb-Ag Mine in the Northwest Territories, Canada.

Discussions to date with financial institutions have confirmed that the opportunity of raising project debt financing for the Prairie Creek Mine would be enhanced by completing a definitive or bankable feasibility study which would address all the contingences in the required detail and help to manage or reduce the various risk factors.

In addition, the Prairie Creek Prefeasibility Study (“PFS”), completed in 2016 by AMC and Tetra Tech Inc., recommended certain aspects for further detailed study and identified a number of opportunities for optimizing and potentially enhancing the project economics, including a front-end engineering and design phase that would complete engineering to the stage where the design can be used to obtain fixed pricing from construction contractors.

The Company expects that the Definitive Feasibility Study will be completed by mid-2017.

#### Project Development Planning

Canadian Zinc has also engaged Ausenco to undertake project development planning services for the Prairie Creek Mine and deliver a robust optimized project development plan that can be used to advance the project to production and, at the same time, provide a critical link to the project financing plan by providing potential providers of debt or equity with a clear path to profitable production.

Ausenco will complete required engineering utilizing a cost-effective project design methodology to support the development of a high level execution plan which will be focused on making the best possible use of existing infrastructure and construction materials on site so as to provide a lower cost or faster time-frame to production for the project.

Ausenco has been selected as this company, with complete engineering services based in the Vancouver area, has the relevant experience and expertise, including northern design and project execution at brownfield sites, to prepare a Project Execution Plan that will define the approach to constructing the Prairie Creek project. This will include the development of a contracting and procurement strategy for further stages of work, which will align with the project execution schedule and will serve to support the capital cost estimate and make provision for the identified execution risks and opportunities. The plan will be developed with the objective of converting it to an Engineering Procurement and Construction Management (“**EPCM**”) contract at the appropriate time.

### **About AMC**

AMC is an industry leader in mine engineering services and support for large-scale development projects and operating mines and has extensive knowledge of the underground aspects of the Prairie Creek Mine, having prepared various Mineral Resource and Reserve estimates, developed the proposed mine plan and participated in the 2012 PFS and 2016 PFS Update. Since the delivery of the 2016 PFS AMC has undertaken a gap analysis to identify any project aspects that require further detail to be considered at the definitive feasibility level.

### **About Ausenco**

Ausenco is a diversified engineering, construction and project management company providing services to the global resource and energy sectors. Ausenco’s experience in base metal and northern projects ranges from conceptual studies for new project developments to brownfield expansions with EPCM or EPC delivery.

Ausenco has recently provided EPCM services for the expansion and modernization of a copper-molybdenum mine in northern BC while working with the constraints of a cold weather brownfield site and provided detailed design and site construction supervision of ice roads and airstrip at a diamond mine in the NWT.

Ausenco has also delivered a number of projects under Lump Sum Turnkey contracts which provide cost, schedule and performance certainty often required by financiers and investors. Ausenco is currently completing the process plant and other support infrastructure for a gold project in Nova Scotia under a Lump Sum Turnkey contract.

### **About the Prairie Creek Mine**

The Prairie Creek Project was the subject of a Preliminary Feasibility Study and Technical Report completed by AMC Mining Consultants (Canada) Ltd., and Tetra Tech Inc. with input from Canadian Zinc personnel and consultants. The PFS was completed in March 2016 and the Amended Technical Report (the “**Technical Report**”) was filed under the Company’s profile on [www.sedar.com](http://www.sedar.com) in September 2016.

The Prairie Creek Mine hosts proven and probable Mineral Reserves of 7.60 million tonnes averaging 8.93% zinc, 8.33% lead, and 127.58 g/t silver within Measured and Indicated Mineral Resources of 8.70 million tonnes grading 9.5% zinc, 8.9% lead and 136 g/t silver. In addition, the Technical Report confirms a large Inferred Mineral Resource of 7.05 million tonnes grading 11.3% zinc, 7.7% lead and 166 g/t silver and additional exploration potential.

Over the 17 year mine-life, Prairie Creek's projected average annual mine production is expected to be approximately 60,000 tonnes of zinc concentrate and 55,000 tonnes of lead concentrate containing approximately 86 million pounds of zinc, 82 million pounds of lead, and 1.7 million ounces of silver.

There remains good potential for additional project optimization, enhanced economics and further extending the life of the Prairie Creek Mine.

## 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.

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**Qualified Person:** Alan Taylor, P.Geo., Vice President of Exploration, Chief Operating Officer and Director of the Company, who is a Non-Independent Qualified Person as defined in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101"), has prepared, supervised the preparation of or reviewed, the parts of this News Release that are of a scientific or technical nature.

#### Cautionary Statement – Forward-Looking Information

*This press release contains certain forward-looking information, including, among other things, 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.*

#### 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.*