



## PRESS RELEASE

CZN-TSX  
CZICF-OTCQB

FOR IMMEDIATE RELEASE  
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### MINERAL RESOURCES INCREASE AT PRAIRIE CREEK MINE

- **2015 Drill Program Increases Measured & Indicated Resource Tonnage by 32%**
  - **Additional Resources From Newly Defined Stockwork Mineralization**

Vancouver, British Columbia, September 17, 2015 - Canadian Zinc Corporation (TSX: CZN; OTCQB: CZICF) (“the Company” or “Canadian Zinc”) reports that Mineral Resource tonnages at the Prairie Creek lead, zinc, silver mine, located in the Northwest Territories, have been significantly increased following the incorporation of the results from the 2015 exploration drilling program into a revised geological model and resource estimate.

#### New Mineral Resource Highlights

- ❖ Total Measured and Indicated Mineral Resource tonnages for the Prairie Creek Mine increased by 32% to 8.7 million tonnes from 6.6 million tonnes (“Mt”). Highlights of the changes include:
  - A 48% increase in the Main Quartz Vein Indicated Mineral Resource tonnage to 4.2 Mt grading 11.6% Pb, 9.2% Zn, 168 g/t Ag, from 2.8 Mt grading 12.8% Pb, 10.2% Zn and 193 g/t Ag;
  - A 40% increase in Stockwork Indicated Mineral Resource to 2.0 Mt grading 3.5% Pb, 6.6% Zn, 61 g/t Ag, from 1.40 Mt grading 4.0% Pb, 7.1% Zn and 63 g/t Ag;
  - A new Measured Mineral Resource has now been defined in Stockwork mineralization at 169,000 t grading 5.3% Pb, 12.6% Zn, 116 g/t Ag.
- ❖ Total Inferred Resource tonnage remains unchanged with an increase in Stockwork replacing upgraded Main Quartz Vein resources.
  - A 100% increase in Stockwork Inferred Mineral Resource tonnage to 1.6 Mt grading 4.6% Pb, 6.2% Zn, 70 g/t Ag from 790,000 t grading 4.0% Pb, 4.7% Zn, 61 g/t Ag;
  - As Inferred Main Quartz Vein tonnes were converted to the Indicated category through detailed 2015 infill drilling, the Main Quartz Vein Inferred tonnage decreased to 5.3 Mt grading 8.7% Pb, 12.9% Zn, 199 g/t Ag from 6.1 Mt grading 10.4% Pb, 12.6% Zn and 195 g/t Ag.

*“The 2015 exploration drilling program has surpassed the objectives of upgrading the resource classifications and expanding the Measured and Indicated Mineral Resources which, upon conversion to Mineral Reserves, will demonstrate both a longer mine life and, perhaps more importantly, an increase in the higher grade Main Quartz Vein tonnages that can be incorporated into the earlier years of the Prairie Creek mine plan,”* said **Alan Taylor, Chief Operating Officer of Canadian Zinc.**

The mineralization at Prairie Creek Mine occurs within three different styles namely; the Main Quartz Vein (“MQV”), which is a high grade steeply dipping fault structure that hosts the majority of mineralization; the Stockwork Zone (“STK”), which is a series of narrow high grade base metal veins occurring at an oblique angle to the MQV; and the Stratabound Massive Sulphide (“SMS”), which occur as a thick pyrite-rich replacement-type deposit cut by the MQV.

The following table shows the September 2015 Mineral Resource Estimate by classification and mineralization style, and by overall totals, compared to the March 2015 estimate:

<b>MINERAL RESOURCE ESTIMATE BY STYLE AND CLASSIFICATION</b>								
	<b>MARCH 2015</b>				<b>SEPTEMBER 2015</b>			
	<b>TONNES</b>	<b>Pb (%)</b>	<b>Zn (%)</b>	<b>Ag (g/t)</b>	<b>TONNES</b>	<b>Pb (%)</b>	<b>Zn (%)</b>	<b>Ag (g/t)</b>
<b>MQV</b>								
<i>Measured</i>	1,279,000	11.6	13.2	211	1,313,000	11.5	13.2	211
<i>Indicated</i>	2,850,000	12.8	10.2	193	4,227,000	11.6	9.2	168
<i>Inferred</i>	6,132,000	10.4	12.6	194	5,269,000	8.7	12.9	199
<b>STK</b>								
<i>Measured</i>	0	0.0	0.0	0	169,000	5.3	12.6	116
<i>Indicated</i>	1,400,000	4.0	7.1	63	1,953,000	3.5	6.6	61
<i>Inferred</i>	790,000	4.0	4.7	61	1,610,000	4.6	6.2	70
<b>SMS</b>								
<i>Measured</i>	0	0.0	0.0	0	0	0.0	0.0	0
<i>Indicated</i>	1,060,000	5.4	10.8	55	1,042,000	5.2	10.8	54
<i>Inferred</i>	156,000	6.6	11.0	63	170,000	6.3	11.2	60
<b>MINERAL RESOURCE ESTIMATE BY CLASSIFICATION</b>								
<b>MQV+STK+SMS</b>								
<i>MEASURED (M)</i>	1,279,000	13.2	11.6	211	1,482,000	10.8	13.2	200
<i>INDICATED (I)</i>	5,309,000	9.5	9.0	131	7,222,000	8.5	8.7	123
<i>M + I</i>	6,588,000	10.2	9.5	147	8,704,000	8.9	9.5	136
<i>INFERRED</i>	7,078,000	11.7	9.6	177	7,049,000	7.7	11.3	166

Notes: Estimated at a cut-off grade of 8% Zn-Eq based on prices of US\$1.00/lb for both zinc and lead and US\$20/oz for silver, with average processing recovery factors of 78% for Zn, 89% for Pb and 93% for Ag, and average payables of 85% for Zn, 95% for Pb and 81% for Ag, at an exchange rate \$1CD = \$1USD.

As no additional exploration drilling was targeted on the Measured Mineral Resource of the MQV or the SMS mineralization these tonnages and grades remained more or less the same as previously estimated with minor variations resulting from the application of different modelling parameters only.

This Prairie Creek Mineral Resource estimate was completed by Gregory Z. Mosher, P.Geo., Qualified Person (“QP”) as defined by National Instrument 43-101 (“NI 43-101”) of AMC Mining Consultants (Canada) Ltd., (“AMC”). [This Mineral Resource estimate replaces the previous Mineral Resource estimate also undertaken by AMC and announced on March 26, 2015].

## **Key Assumptions, Parameters and Methods of Modelling in 2015 Resource Estimate**

A single block model was revised to encompass the three mineral domains: MQV, STK and SMS. With the enhanced understanding of the geology acquired during the 2015 drill program the differing styles of mineralization between the MQV and STK have now been incorporated within the geological model by adjusting the size, shape and orientation of the search ellipses used for interpolation of resource blocks to better reflect the actual geological distribution of the mineralization.

In addition different compositing criteria were applied to all styles of mineralization. Block values were computed using ordinary kriging. Grades for silver, lead, zinc, copper, arsenic, cadmium, iron, mercury, lead oxide, antimony and zinc oxide were interpolated into the block model in a single pass: resources were subsequently classified on the basis of the number of supporting data and their distance from the block centroid. The mean distance of supporting data for classification of Indicated Resources for the MQV was expanded to 135m from a previous 100m due to a higher confidence level of the larger database. The mean distance of supporting data for the STK and SMS remained at 100m.

## **Prairie Creek Mine 2015 Exploration Drilling Program**

The new Mineral Resource estimate at Prairie Creek incorporates the results from the recently completed underground exploration drilling program last reported August 11, 2015.

The underground drilling from the 870m decline was designed to test for new areas of mineralization near the north end of the existing mine workings and to further detail Inferred Resources, with the objective of converting part of the large Inferred Mineral Resource to the Indicated category for inclusion in mine economics. The drilling campaign, which commenced in late February 2015 and was completed in July 2015, comprised 5,484m of core drilling over 21 holes from three drill stations at the end of the decline from the 870m Level.

## **Summary**

The results of the 2015 program have met the objective of upgrading the Mineral Resource classifications to enable development of a longer life of mine plan. The MQV Indicated Mineral Resource has increased by 48% and a large Inferred Mineral Resource awaits more infill drilling.

Drilling of the STK mineralization has demonstrated areas of higher grades, some of which are incorporated into the new Measured Resource, along with numerous significant individual drill intercepts, such as PCU-15-72 which graded 6.9% Pb, 12.0% Zn, 116 g/t Ag over 24.5m, that require follow up drilling.

The Prairie Creek Preliminary Feasibility Study completed in 2012 was based on a total Measured and Indicated Resource of 5.4 Mt grading 10.2% Pb, 10.8% Zn, 0.31% Cu, and 160 g/t Ag, most of which was converted to a Mineral Reserve of 5.2 Mt averaging 9.5% Pb, 9.4% Zn and 151 g/t Ag. The new September 2015 total Measured and Indicated Resource of 8.7 Mt represents a 60% increase from the M+I resource tonnage in the 2012 Preliminary Feasibility Study.

The new expanded Mineral Resource estimate will now form the basis around which an optimized mine plan will be designed and a new Mineral Reserve calculated.

## About the Prairie Creek Mine

The Prairie Creek Mine contains a partially developed infrastructure including a 1,000 tonne per day flotation mill, workshops, accommodations, and support facilities. The Company holds a Type "A" Water Licence which, along with previously issued permits and licences, permits the operation of a mine at Prairie Creek. A positive Preliminary Feasibility Study was completed in 2012.

Throughout 2014/15 the Company has also been undertaking an Optimization Study as part of which AMC have been engaged to review the underground mine plan and focus on reducing the initial development, shorten the development schedule and optimize the underground mine operation in general. A number of key underground investigations to determine optimal mining methods have been completed and will be integrated into the new mine plan.

The Company also continues the Environmental Assessment process as part of its application to upgrade the access road into the Prairie Creek Mine for use on an all-season basis. An Addendum to the Developers Assessment Report for the all season road was recently submitted to the Mackenzie Valley Review Board.

### Qualified Persons:

This press release has been reviewed and approved by Gregory Z. Mosher P.Geo., of AMC who is recognized as an Independent QP under NI 43-101 and by Alan Taylor P.Geo., COO & VP Exploration of Canadian Zinc and Kerry Cupit P.Geo., Project Geologist for Canadian Zinc, both of whom are Non-Independent QPs under NI 43-101.

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#### 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.*

#### 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.*