



PRESS RELEASE

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Canadian Zinc Reports Positive Metallurgical Test Results for Prairie Creek Mine

Vancouver, British Columbia, June 4, 2009 - Canadian Zinc Corporation (TSX: CZN; OTCBB: CZICF) reports recent positive results from ongoing (Phase 5) metallurgical testing relating to its planned Prairie Creek zinc/lead/silver mine in the Northwest Territories of Canada.

In late 2008 a 530 kg representative rock sample of mineralized vein material was extracted from multiple headings within the underground workings at the Prairie Creek Mine. The sample was composited at SGS Lakefield Research for large scale locked cycle testing with the objective of producing representative concentrates, tailings and process effluents using the actual proposed process flow sheet for the Prairie Creek Mine. This flow sheet has been presented in the Project Description Report, dated May 2008, submitted as part of the applications for operating permits, which are presently the subject of Environmental Assessment being carried out by the Mackenzie Valley Environmental Impact Review Board ("MVEIRB").

In addition, a large volume of representative mine water was also collected at that time and shipped to SGS Lakefield for use in the same locked cycle tests to better simulate actual site operating conditions.

Metallurgical Test Results:

Heavy Liquid Separation:

Previous metallurgical studies incorporated a Heavy Liquid Separation ("HLS") process applied to the Run of Mine (ROM) feed to optimize the existing mill at the Prairie Creek Mine by enhancing the metal grade entering into the flotation process, and thus reducing the amount of waste being needlessly processed. HLS is used in the laboratory to simulate the process of Dense Media Separation ("DMS") which will be undertaken on a commercial scale.

A composite ROM sample was stage crushed to a nominal ½ inch size. The composite was then screened at 14 mesh with the minus ½ inch and plus 14 mesh processed through a HLS plant. This resulted in 41% of the ROM composite being rejected as waste with a loss of only 2.5% total lead and 4.4% total zinc metal values. Waste rejection from the previous DMS studies averaged ~30%. The higher number in this recent case is a significant improvement but may relate to the inherent variability of dilution in the mining of mineralized vein structures to collect the bulk sample. The HLS test result is consistent with the previous studies in that it

demonstrated that a significant increase in mill throughput and grade can be achieved with a minimal loss of economic metals of less than 5%.

The results of the HLS (DMS) test work are presented in the following table:

Product	Weight %	Assays %				g/t Ag	% Distribution				
		Pb _T	Zn _T	Pb _{ox}	Zn _{ox}		Pb _T	Zn _T	Pb _{ox}	Zn _{ox}	Ag
Minus 1/2" +14m HLS Sink	31.9	28.3	26.9	6.44	4.48	453	73.27	57.13	49.95	42.04	59.52
Minus 14m	27.1	11.0	21.3	6.81	5.64	339	24.23	38.49	44.95	45.03	37.90
Minus 1/2" +14m HLS Float	41.0	0.75	1.6	0.51	1.07	15.2	2.50	4.38	5.10	12.93	2.57
ROM comp head (calc)	100	12.31	15.00	4.11	3.40	242	100	100	100	100	100
Mill Feed after HLS	59.0	20.35	24.33	6.61	5.01	401	97.5	95.6	94.9	87.1	97.4

T= total sulphide and oxide

The HLS enhanced plant mill feed was then combined, mixed, and crushed to 10 mesh in preparation for the locked cycle flotation test work.

Locked Cycle Flotation Tests:

After crushing and grinding the HLS enhanced mill feed was delivered into a locked cycle flotation test where concentrates of lead sulphide, zinc sulphide and lead oxide were generated. No separate zinc oxide flotation was completed since previous metallurgical studies indicated low concentrate grades and low recoveries for zinc oxide.

The locked cycle tests were designed to produce concentrates, tailings and effluent for engineering, marketing and environmental studies. The reagent scheme used in the locked cycle tests was developed from previous studies and slightly modified for use with the actual mine water. Small scale batch tests were run prior to the locked cycle tests with the objective of optimizing selectivity between lead and zinc.

Three large-scale locked cycle tests were performed.

The test results indicate that the overall grade of the blended lead sulphide / oxide concentrate assayed 67% lead, with a 82% recovery of total lead in the plant feed, and the zinc sulphide graded 58% Zn with a 74% recovery of the total zinc in the plant feed. An average of 92.7% of the total silver values in the plant feed was recovered within the lead and zinc concentrates.

“The recent metallurgical tests generated very satisfactory simulated results of anticipated actual operations in the production mineral concentrates at the Prairie Creek Mine,” said Alan Taylor, Chief Operating Officer of Canadian Zinc.

“The Phase 5 test results showed concentrate grades and recoveries similar to results of previous locked cycle tests, allowing for variations within the individual bulk samples, and confirmed anticipated concentrate grades and recoveries under simulated actual proposed milling operations and using representative actual mine water.” Mr. Taylor added.

The generated by-products of HLS reject and flotation tailings from the Phase 5 metallurgical tests are currently undergoing further study and characterization by Golder Paste Technology Ltd., of Sudbury, Ontario to assist in developing a new plan for the permanent disposal of paste

tailings underground. Similarly CEMI Labs of Burnaby are further testing various water treatment options on the process effluent generated from this phase of metallurgical testing to ensure a sound treatment scheme during the operation of the Prairie Creek mine. Further study directed towards reducing the amount of certain deleterious elements within the concentrates, (eg. mercury, antimony and arsenic) to enhance payability, is also being examined.

The results of the test work will be used in pursuing marketing and treatment alternatives for the Prairie Creek concentrates and will also be incorporated into the Developers Assessment Report to be submitted to the Mackenzie Valley Environmental Impact Review Board later this year once Final Terms of Reference for the environmental assessment are issued. The MVEIRB issued Draft Terms of Reference for comments to be submitted by June 12, 2009 and finalization shortly thereafter.

Proposed Operations at Prairie Creek Mine:

The proposed new operation at Prairie Creek utilizes the existing infrastructure and facilities that were built in the 1980s and which will be upgraded and enhanced to meet current-day environmental standards.

The Mill, which is already constructed on site but never operated, will process 600-1,000 tonnes per day. Ore will be crushed to a gravel-size and passed through a new DMS plant. The lighter, uneconomic "gangue" minerals will create a waste rock aggregate. The more dense material will be processed further by grinding and flotation to produce concentrates of lead sulphide, zinc sulphide and lead oxide. No hazardous chemicals will be used in the process.

The existing large pond facility, originally intended in 1980 for tailings disposal, will be reconfigured, relined and recertified to form a two-celled Water Storage Pond.

Underground Tailings Disposal:

In recognition of concerns about tailings disposal, and following extensive research, Canadian Zinc has developed a new tailings management plan. The Company proposes to place all mill tailings permanently underground as paste backfill, together with approximately three quarters of the DMS waste rock and a cement binder. The mix will solidify after placement into a form of concrete. In this manner all mill flotation tailings will be backfilled into the voids in the underground mine with the waste rock aggregate. The flotation tailings are expected to be non-acid generating with low sulphide content and excess buffering capacity.

The benefits of this new tailings management plan are that all tailings will be placed underground and there will be no permanent disposal of tailings on surface.

Qualified Person:

Alan Taylor, P.Geo., Chief Operating Officer & Vice President Exploration and a Director of Canadian Zinc Corporation, is the Company's non-independent Qualified Person for the purposes of NI 43-101 and has approved this press release.

The Prairie Creek Mine:

A major underground tunneling and diamond drilling program led to the completion, in October 2007, of a Technical Report (the "Report") to National Instrument ("NI") 43-101 standards, which estimates that the Prairie Creek Property hosts total Measured and Indicated Resources of 5,840,329 tonnes grading 10.71% zinc, 9.90% lead, 161.12 grams silver per tonne and 0.326% copper. In addition, the Report confirms a large Inferred Resource of 5,541,576 tonnes grading 13.53% zinc, 11.43% lead, 215 grams per tonne silver and 0.514% copper and additional exploration potential. The Measured and Indicated Resource is capable of supporting a mine life in excess of ten years at the planned 1,000 tonnes per day mining rate.

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. The Company does not currently hold a permit for the operation of the Prairie Creek Mine. 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.

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