



PRESS RELEASE

CZN-TSX
CZICF-OTCBB

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- **CANADIAN ZINC COMMENCES DIAMOND DRILL EXPLORATION PROGRAM ON TUVATU GOLD PROJECT, FIJI**
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Vancouver, British Columbia, September 2, 2009 - Canadian Zinc Corporation (TSX: CZN; OTCBB: CZICF) announces that it is commencing a diamond drill exploration program on the Tuvatu Gold Project (“Tuvatu”) on the island of Viti Levu, in Fiji.

The diamond drill, contracted from Radial Drilling Fiji Pty Ltd., has been mobilized to the Tuvatu property. Canadian Zinc has a six month option to evaluate the Tuvatu property and to acquire Tuvatu, at any time up to October 31, 2009. This exploration program will assist the company in further assessing the property.

The exploration program has been designed to test for extensions of previously defined gold bearing zones, and to further investigate some recently discovered gold anomalies located elsewhere on the large area of the Tuvatu property. The gold mineralization, in the main zone surrounding the underground workings, appears to be structurally controlled by faults and/or joints. Similar features, which have the potential to be extensions of the known structures, have now been identified in surface trenches exposed through recent excavations, south of the presently defined resource. These features represent potential hosts to gold mineralization and are targeted in the upcoming drill program. A number of gold anomalies have been found within two to three kilometres of the main resource and some of these are also targeted for drill testing.

The historically defined mineral resource on the Tuvatu Property is hosted within a number of separate steeply dipping gold bearing lode structures. Recent trenching, along a southern strike projection of the existing resource, has located similar potential gold hosting structures within the intrusive rock. The current drill program will explore for the near surface southern potential extensions of the adjacent defined lodes. While the majority of the defined resource is geologically hosted within an intrusive complex, there have been numerous prospective zones containing gold mineralization located within the surrounding volcanic rocks, up two kilometres distance from the current defined resource. Some of these prospective zones are also targeted for drill testing.

The Tuvatu Property

The Tuvatu project consists of two adjoining Special Prospecting Licences which comprise a total area of approximately 3,265 hectares. Tuvatu lies near the west coast on the main island of Vitu Levu in Fiji, approximately fifteen kilometres by road from Nadi International Airport, the main international gateway to Fiji. Tuvatu is located approximately 37 kilometres southwest of the Vatukoula Gold Mine.

A reported 51,484 metres of surface diamond drilling, 13,407 metres of underground diamond drilling and 9,265 metres of reverse circulation drilling has previously been completed on the Tuvatu property by Emperor Mines Ltd. In addition, the deposit has been partially accessed by a 600 metre decline to a depth of 240 metres below surface, which provided a further definition of the gold mineralization through crosscuts and underground drilling. This past exploration activity has resulted in the delineation of a historical indicated resource of 827,800 tons at a grade of 7.9 grams per ton gold (containing 208,743 ounces gold) and a historical inferred resource of 812,800 tons at a grade of 9.1 grams per ton gold (containing 237,631 ounces gold) as recorded in an August 2000 Report by Vigar and Associates. This report is referenced in a recent report entitled "Technical Review of Exploration and Resource Estimates of the Tuvatu Gold Deposit" by Mining Associates Pty Limited of Australia dated the March 17, 2009. This report was prepared to Canadian National Instrument 43-101 standards as an independent Technical Report on the Tuvatu Gold Project for American Eagle Resources Inc. ("American Eagle"). It should be noted that insufficient work was conducted during completion of this report to classify the historical estimate as current mineral resources. The historical estimates appear to have been done to a high technical standard but should not be relied upon for purposes of NI43-101.

Option Agreement

The Tuvatu Project is currently owned by American Eagle Resources Inc. through its 100% owned Fijian subsidiary Lion One Limited.

American Eagle was incorporated under the laws of Delaware on January 3, 1978 and was continued under the Business Corporations Act (British Columbia) on February 6, 2008. The Tuvatu Gold Mine property was acquired by American Eagle in September 2008 in exchange for 7,300,000 American Eagle shares at a deemed price of \$4.43 per share.

Canadian Zinc has made an option payment of \$1,811,000 to the majority shareholder of American Eagle and under the Option Agreement has an option for a period of six months ending October 31, 2009, to carry out an evaluation of the Tuvatu property. During the option period, Canadian Zinc has agreed to maintain the property in good standing and continue with the current exploration program at an estimated cost of approximately \$670,000 or about \$100,000 per month.

Canadian Zinc has the option at any time to acquire the Tuvatu Property, via an amalgamation of American Eagle with a wholly owned subsidiary of Canadian Zinc, for consideration of C\$3,250,000 to be satisfied by the issue of 16,250,000 shares of Canadian Zinc to the shareholders of American Eagle.

Vatukoula Gold Mines plc

The Tuvatu Property was formerly part of the Vatukoula (Emperor) Mine. The Vatukoula Mine was acquired by Vatukoula Gold Mines plc, an AIM listed company, in April 2008. Canadian Zinc holds a 20% interest in Vatukoula Gold Mines plc (see Canadian Zinc press release dated June 11, 2009).

About Canadian Zinc

The Company's principal focus is its efforts to advance the Prairie Creek Mine, a zinc/lead/silver property located in the Northwest Territories of Canada, towards production. The Prairie Creek Mine is partially developed with an existing 1,000 tonne per day mill and related infrastructure.

Cautionary Statement - Forward Looking Information

This press release contains certain forward-looking information, including, among other things, the expected 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 a drilling program, 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. U.S. Investors are urged to consider closely the disclosure in our Form 20-F which may be secured from us, or from the SEC's website at <http://www.sec.gov/edgar.shtml>.

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