

website: cameco.com currency: Cdn (unless noted)

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Cameco provides update on the Cigar Lake project

Cameco (TSX: CCO; NYSE: CCJ) provided an update today on the Cigar Lake uranium mining project in northern Saskatchewan.

The Cigar Lake project is owned by Cameco (50.025%), AREVA (37.1%), Idemitsu Canada Resources Ltd. (7.875%) and TEPCO Resources Inc. (5.0%) and is operated by Cameco. Ore from Cigar Lake will be processed at the McClean Lake mill, which is majority owned and operated by AREVA Resources Canada Inc. (AREVA).

Construction of the Cigar Lake mine is 97% complete and commissioning of mining systems is well advanced. During commissioning of the underground ore handling facilities in the mine, Cameco identified additional work that will delay jet boring in ore. Based on current information, Cameco expects to begin ore production during the first quarter of 2014.

In addition, AREVA has advised Cameco that it has determined that further mill modifications are required and that the mill is expected to begin processing Cigar Lake ore by the end of the second quarter of 2014.

As a result of these developments, Cameco will not meet its forecast production of 300,000 pounds U_3O_8 from Cigar Lake during 2013. Cameco plans to revise its five-year production forecast as part of its annual reporting for 2013 when further progress on commissioning of the mine and mill is made.

"Cigar Lake is among the most technically challenging mining projects in the world and we continue to make solid progress," said Tim Gitzel, Cameco's president and CEO. "Cameco and AREVA are fully committed to bring this exceptional orebody into production in a safe and sustainable way."

The capital cost of the Cigar Lake project will not be materially impacted by the additional work required at the mine. Based on preliminary information, the capital cost of the mill modifications is not expected to be material. Cameco will provide updates as further information becomes available.

Background Information

The Cigar Lake deposit occurs at depths ranging between 410 to 450 metres below the surface where water-saturated Athabasca sandstone meets the underlying basement rocks. Due to geological conditions, it is necessary to freeze the deposit and surrounding rock to improve the ground stability and prevent groundwater inflows to the mine. This has proven to be effective.

The jet boring mining method was selected for the Cigar Lake deposit after extensive testing. Operated from tunnels in the basement rock below the orebody, the jet boring mining system (JBS) will use high-pressure water jets to mine out cavities in the orebody. A mixture of ore and water will be piped away from the cavities to underground processing circuits where it will be ground and thickened and pumped to the surface for transportation to the McClean Lake mill for processing to uranium concentrate.

Conference Call

Investors and media are invited to join a conference call to discuss progress on the Cigar Lake project with Cameco's president and CEO Tim Gitzel, Cameco's senior vice-president and chief operating officer Robert Steane, and AREVA Resources Canada Inc.'s vice-president, operations and projects Jim Corman on Monday, September 9, 2013 at 11:00 a.m. Eastern time.

To join the call, please dial (866) 223-7781 (Canada and US) or (416) 340-8018. An operator will put your call through. A live audio feed of the conference call will be available from a link on our website at cameco.com.

A recorded version of the proceedings will be available on our website, shortly after the call, and on post view until midnight, Eastern time, October 9, 2013 by calling (800) 408-3053 (Canada and US) or (905) 694-9451 (passcode 6512390#).

Profile

Cameco is one of the world's largest uranium producers, a significant supplier of conversion services and one of two Candu fuel manufacturers in Canada. Our competitive position is based on our controlling ownership of the world's largest high-grade reserves and low-cost operations. Our uranium products are used to generate clean electricity in nuclear power plants around the world, including Ontario where we are a limited partner in North America's largest nuclear electricity generating facility. We also explore for uranium in the Americas, Australia and Asia. Our shares trade on the Toronto and New York stock exchanges. Our head office is in Saskatoon, Saskatchewan.

As used in this news release, "Cameco" or the "company" means Cameco Corporation, a Canadian corporation and its subsidiaries and affiliates unless stated otherwise.

Caution Regarding Forward-Looking Information and Statements

Certain information contained in this news release constitutes "forward-looking information" or "forward-looking statements" within the meaning of Canadian and U.S. securities laws. These include the statements that: Cameco expects to begin ore production during the first quarter of 2014; AREVA has advised Cameco that it has determined that further mill modifications are required and that the mill is expected to begin processing Cigar Lake ore by the end of the second quarter of 2014; the capital cost of the Cigar Lake project will not be materially impacted by the additional work required at the mine; and based on preliminary information, the capital cost of the mill modifications is not expected to be material. This information is based upon a number of assumptions, that, while considered reasonable by management, are subject to significant uncertainties and contingencies. We have assumed that: there is no material delay or disruption in our plans as a result of ground movements, cave ins, additional water inflows, natural phenomena, delay in acquiring critical equipment, equipment failure, labour disputes,

failure to obtain or maintain regulatory approvals, or other causes; our Cigar Lake mining and production plans succeed, including the success of the jet boring mining system; mill modifications and commissioning of the McClean Lake mill are completed as planned and the mill is able to mill Cigar Lake ore as expected; and that any technical challenges at the Cigar Lake mine and McClean Lake mill will be resolved in a timely manner as they arise. This forward-looking information also involves known and unknown risks, uncertainties and other factors that may cause actual results and developments to differ materially from those expressed or implied. They include the risks that: unexpected geological, hydrological, underground condition, or ground movements and cave ins or an additional water inflow delays or disrupts our plans; natural phenomena, labour disputes, technical challenges, equipment failure, failure to obtain or maintain regulatory approvals, delay in obtaining the required equipment or other reasons cause a material delay or disruption in our plans; estimates of capital cost prove to be inaccurate; our mining or production plans for Cigar Lake are delayed or do not succeed for any reason, including technical difficulties with the jet boring mining system; and the plan to mill Cigar Lake ore at the McClean Lake mill is delayed or does not succeed for any reason, including technical difficulties with mill modifications or commissioning or milling Cigar Lake ore. We are providing this forward-looking information to help you understand management's views regarding Cigar Lake production and it may not be appropriate for other purposes. Cameco does not undertake any obligation to update or revise forward-looking information, whether as a result of new information, future events or otherwise, except to the extent legally required.

Qualified Person

The above scientific and technical information related to the Cigar Lake project was approved by Grant Goddard, vice-president, Saskatchewan mining north, Cameco, who is a qualified person for the purposes of NI 43-101.

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