

TSX: CCO
NYSE: CCJ



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Cameco Announces Operational Changes in Saskatchewan and the United States

Saskatoon, Saskatchewan, Canada, April 21, 2016

Cameco (TSX: CCO; NYSE: CCJ) announced today that it is suspending production at its Rabbit Lake operation in northern Saskatchewan and production is being curtailed at Cameco Resources' US operations by deferring wellfield development. The changes are expected to result in a reduction of about 500 positions at Rabbit Lake and about 85 at the US operations, including employees and long-term contractors.

“We regret the impact these decisions will have on many of the talented and dedicated people working at these operations and on their home communities,” said Cameco president and CEO Tim Gitzel. “Unfortunately, continued depressed market conditions do not support the operating and capital costs needed to sustain production at Rabbit Lake and the US operations. These measures will allow us to continue delivering value to Cameco’s many stakeholders and support the long-term health of our company. We will provide assistance to those affected by these decisions.”

Cameco and its US subsidiaries are working with employees at the affected operations to ensure a safe and orderly implementation of the decisions.

The Rabbit Lake operation will be placed in a safe care and maintenance state allowing Cameco the option to resume production when market conditions significantly improve. Cameco will offer affected employees exit packages. Where possible, the company will consider alternatives such as relocation to other Cameco facilities and job sharing options as part of its effort to minimize the impact on people and surrounding communities. A workforce of about 150 people will be required to maintain the facilities and sustain environmental monitoring and reclamation activities at Rabbit Lake. Work to transition the operation to care and maintenance will begin immediately and is expected to be completed by the end of August 2016. Workforce adjustments will occur over the next four months.

The US operations will continue to employ about 170 people to operate existing facilities and restore depleted wellfields, but new wellfield development will be stopped. The affected US employees will be offered exit packages with the workforce adjustments to be completed by the end of May. The US operations will continue ongoing licensing efforts to maintain the option to resume development when market conditions significantly improve.

As a result of these decisions, final production at Rabbit Lake is expected to be 1.0 million pounds in 2016 (previously 3.6 million pounds). In the US, 2016 production is expected to be 1.1 million pounds (previously 1.4 million pounds). Due to the nature of ISR (in situ recovery) mining and wellfield restoration requirements, production in the US cannot cease immediately and instead will decrease over time as head grades decline. Cameco will also review its corporate

office activities in support of Rabbit Lake and the US operations with the objective of reducing general and administrative expenses.

In addition, given the current state of oversupply in the market, we have decided to reduce our 2016 production target at the McArthur River/Key Lake operation to 18 million pounds from 20 million pounds (100% basis). We will take the opportunity from additional downtime at the mill to further advance work needed to increase the mill's production capacity for when the market signals it is needed. This includes changes to the solvent extraction circuit, bringing some work on the crystallization circuit forward from 2017 and transitioning to the new calciner. There are no workforce impacts related to this change in production.

We continue to ramp up production at Cigar Lake and plan to produce 16 million pounds (100% basis) this year, subject to AREVA's McClean Lake mill receiving the necessary regulatory approvals to increase its licensed annual production capacity from 13 million pounds to 24 million pounds.

Cameco's annual production is now expected to be 25.7 million pounds (previously 30 million pounds).

The carrying value of Rabbit Lake is about \$108 million and of the US operations is approximately \$62 million (US\$48 million) net of provision for reclamation. The cost of placing Rabbit Lake into care and maintenance for 2016 will be about \$35 million. The expected reduction in the 2016 capital expenditures from these operational changes is approximately \$48 million. The estimated severance cost is about \$19 million and will be reflected in our second quarter earnings.

Keeping Rabbit Lake in a state of care and maintenance and deferring wellfield development at our US operations, rather than closing the operations permanently, gives Cameco the flexibility to increase production when market conditions significantly improve. However, with today's oversupplied market and uncertainty as to how long these market conditions will persist, we need to focus our resources on our lowest cost assets and maintain a strong balance sheet.

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. 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.

Caution Regarding Forward-Looking Information and Statements

Certain statements in this press release are "forward-looking information" or "forward-looking statements" within the meaning of Canadian and U.S. securities laws. They include: our ability to ensure a safe and orderly implementation; our ability to resume production when market conditions significantly improve; that these measures will allow us to continue to deliver value and will support the long-term health of the company; the expectation that transition to care and maintenance will begin immediately and be completed by the end of August 2016; the ability of the U.S. operations to continue ongoing licensing efforts to facilitate future resumption of

production; the expected production levels at Rabbit Lake, our U.S. operations and Cigar Lake for 2016, and our overall 2016 expected production level; the impact of additional scheduled downtime for the Key Lake mill on McArthur River/Key Lake's production target; the expected cost of placing Rabbit Lake into care and maintenance for 2016; our expected reduction in capital expenditures for 2016; and the expected severance costs.

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: we will be able to implement the suspension of production at Rabbit Lake and the curtailment of our U.S. operations by deferral of wellfield development in the manner, within the timelines, at the cost levels and with the benefits anticipated; we will be able to resume production at Rabbit Lake and continue wellfield development at our U.S. operations successfully when market conditions warrant; the impact of these decisions on our production levels and capital expenditures will be as expected; our production plans succeed; and that the McClean Lake mill will receive the necessary regulatory approvals, and will not be affected by any labour dispute, so that we will be able to achieve our production target at Cigar Lake.

This 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 difficulties or delays arise in the implementation of the suspension of production at Rabbit Lake or curtailment of production at our U.S. operations; our cost estimates may be inaccurate or we do not receive the benefits expected; the resumption of production and wellfield development in the future is complicated by unexpected impediments; our production plans do not succeed for any reason; and that we will not be able to meet our revised production targets.

Please also see our most recent annual information form and annual MD&A for other risks and assumptions relevant to the forward-looking information in this news release. We are providing this forward-looking information to help you understand management's views regarding these decisions and it may not be appropriate for other purposes. Cameco does not undertake any obligation to update or revise forward-looking information, except to the extent legally required.

Qualified Person

The above scientific and technical information related to the McArthur River/Key Lake operation was approved by Dave Bronkhorst, vice-president, mining & technology, who is a qualified person for the purpose of National Instrument 43-101.

The above scientific and technical information related to the Cigar Lake mining operation was approved by Les Yesnik, general manager, Cigar Lake, who is a qualified person for the purpose of National Instrument 43-101.

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