

Mineral reserves and resources

Our mineral reserves and resources are the foundation of our company and fundamental to our success.

We have interests in a number of uranium properties. The tables in this section show the estimates of the proven and probable mineral reserves, and measured, indicated, and inferred mineral resources at those properties. However, only three of the properties listed in those tables are material uranium properties for us: McArthur River/Key Lake, Cigar Lake and Inkai. Mineral reserves and resources are all reported as of December 31, 2017 except for Inkai which for accounting purposes are reported as of January 1, 2018. Totals reported as of the end of 2017 are identical to those as of January 1, 2018.

We estimate and disclose mineral reserves and resources in five categories, using the definition standards adopted by the Canadian Institute of Mining, Metallurgy and Petroleum Council, and in accordance with *National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101)*, developed by the Canadian Securities Administrators. You can find out more about these categories at www.cim.org.

About mineral resources

Mineral resources do not have to demonstrate economic viability, but have reasonable prospects for eventual economic extraction. They fall into three categories: measured, indicated and inferred. Our reported mineral resources are exclusive of mineral reserves.

- *Measured and indicated mineral resources* can be estimated with sufficient confidence to allow the appropriate application of technical, economic, marketing, legal, environmental, social and governmental factors to support evaluation of the economic viability of the deposit.
 - *measured resources*: we can confirm both geological and grade continuity to support detailed mine planning
 - *indicated resources*: we can reasonably assume geological and grade continuity to support mine planning
- *Inferred mineral resources* are estimated using limited geological evidence and sampling information. We do not have enough confidence to evaluate their economic viability in a meaningful way. You should not assume that all or any part of an inferred mineral resource will be upgraded to an indicated or measured mineral resource, but it is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Our share of uranium in the following mineral resource tables is based on our respective ownership interests. Mineral resources that are not mineral reserves have no demonstrated economic viability.

About mineral reserves

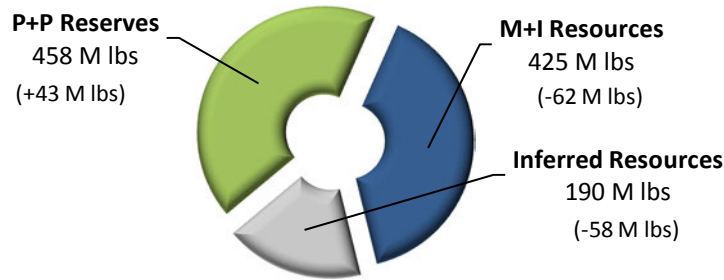
Mineral reserves are the economically mineable part of measured and/or indicated mineral resources demonstrated by at least a preliminary feasibility study. The reference point at which mineral reserves are defined is the point where the ore is delivered to the processing plant, except for ISR operations where the reference point is where the mineralization occurs under the existing or planned wellfield patterns. Mineral reserves fall into two categories:

- *proven reserves*: the economically mineable part of a measured resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a high degree of confidence
- *probable reserves*: the economically mineable part of a measured and/or indicated resource for which at least a preliminary feasibility study demonstrates that, at the time of reporting, economic extraction could be reasonably justified with a degree of confidence lower than that applying to proven reserves

We use current geological models, average uranium prices of \$44 to \$54 (US) per pound U₃O₈, depending on the varying production schedules and the annual forecast realized prices, and current or projected operating costs and mine plans to estimate our mineral reserves, allowing for dilution and mining losses. We apply our standard data verification process for every estimate.

Our share of uranium in the mineral reserves table below is based on our respective ownership interests.

**PROVEN AND PROBABLE (P+P) RESERVES, MEASURED AND INDICATED (M+I) RESOURCES, INFERRED RESOURCES
(SHOWING CHANGE FROM 2016)
at December 31, 2017**



Changes this year

Our share of proven and probable mineral reserves increased from 415 million pounds U₃O₈ at the end of 2016, to 458 million pounds at the end of 2017. The change was primarily the result of:

- JV Inkai's amended Resource Use Contract which extended the mine life, increased the annual production level, changed our percent ownership and changed the boundaries of the mining area. This resulted in increases of 40 million pounds in proven mineral reserves, and 25 million pounds in probable mineral reserves.

partially offset by:

- production, which removed 24.5 million pounds from our mineral inventory

Measured and indicated mineral resources decreased from 487 million pounds U₃O₈ at the end of 2016, to 425 million pounds at the end of 2017. Our share of inferred mineral resources is 190 million pounds U₃O₈, a decrease of 58 million pounds from the end of 2016. The variance in mineral resources was mainly the result of:

- JV Inkai's amended Resource Use Contract, which resulted in decreases of 23 million pounds and 45 million pounds in measured and indicated resources respectively, and a decrease of 56 million pounds in inferred resources

partially offset by:

- surface delineation drilling at Cigar Lake Phase 2 which added 7 million pounds to indicated resources
- transfer of nearly 2 million pounds to resources from reserves for the US ISR operations

Qualified persons

The technical and scientific information discussed in this MD&A for our material properties (McArthur River/Key Lake, Cigar Lake and Inkai) was approved by the following individuals who are qualified persons for the purposes of NI 43-101:

MCARTHUR RIVER/KEY LAKE

- Alain G. Mainville, director, mineral resources management, Cameco
- Greg Murdock, manager, operations, McArthur River, Cameco
- Baoyao Tang, superintendent, technical, McArthur River, Cameco
- Leslie Yesnik, general manager, McArthur River/Key Lake, Cameco

CIGAR LAKE

- Scott Bishop, manager, technical services, Cameco
- Jeremy Breker, general manager, Rabbit Lake/Cigar Lake, Cameco
- Alain G. Mainville, director, mineral resources management, Cameco
- Leslie Yesnik, general manager, McArthur River/Key Lake, Cameco

INKAI

- Darryl Clark, president, Cameco Kazakhstan LLP
- Alain G. Mainville, director, mineral resources management, Cameco
- Bryan Soliz, principal geologist, Cameco Resources
- Robert Sumner, principal metallurgist, technical services, Cameco

Important information about mineral reserve and resource estimates

Although we have carefully prepared and verified the mineral reserve and resource figures in this document, the figures are estimates, based in part on forward-looking information.

Estimates are based on knowledge, mining experience, analysis of drilling results, the quality of available data and management's best judgment. They are, however, imprecise by nature, may change over time, and include many variables and assumptions, including:

- geological interpretation
- extraction plans
- commodity prices and currency exchange rates
- recovery rates
- operating and capital costs

There is no assurance that the indicated levels of uranium will be produced, and we may have to re-estimate our mineral reserves based on actual production experience. Changes in the price of uranium, production costs or recovery rates could make it unprofitable for us to operate or develop a particular site or sites for a period of time. See page 2 for information about forward-looking information.

Please see our mineral reserves and resources section of our annual information form for the specific assumptions, parameters and methods used for McArthur River, Inkai and Cigar Lake mineral reserve and resource estimates.

Important information for US investors

While the terms measured, indicated and inferred mineral resources are recognized and required by Canadian securities regulatory authorities, the US Securities and Exchange Commission (SEC) does not recognize them. Under US standards, mineralization may not be classified as a 'reserve' unless it has been determined at the time of reporting that the mineralization could be economically and legally produced or extracted. US investors should not assume that:

- any or all of a measured or indicated mineral resource will ever be converted into proven or probable mineral reserves
- any or all of an inferred mineral resource exists or is economically or legally mineable, or will ever be upgraded to a higher category. Under Canadian securities regulations, estimates of inferred resources may not form the basis of feasibility or pre-feasibility studies. Inferred resources have a great amount of uncertainty as to their existence and economic and legal feasibility.

The requirements of Canadian securities regulators for identification of 'reserves' are also not the same as those of the SEC, and mineral reserves reported by us in accordance with Canadian requirements may not qualify as reserves under SEC standards.

Other information concerning descriptions of mineralization, mineral reserves and resources may not be comparable to information made public by companies that comply with the SEC's reporting and disclosure requirements for US domestic mining companies, including Industry Guide 7.

Mineral reserves

As at December 31, 2017, except for Inkai which are as at January 1, 2018 (100% – only the shaded column shows our share)

PROVEN AND PROBABLE

(tonnes in thousands; pounds in millions)

PROPERTY	MINING METHOD	PROVEN		PROBABLE			TOTAL MINERAL RESERVES			OUR SHARE RESERVES	METALLURGICAL RECOVERY (%)	
		TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)	TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)	TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)		CONTENT (LBS U ₃ O ₈)
Cigar Lake	UG	215.6	16.88	80.2	386.6	13.81	117.7	602.1	14.91	197.9	99.0	99
Key Lake	OP	61.1	0.52	0.7	-	-	-	61.1	0.52	0.7	0.6	92
McArthur River	UG	1,097.5	9.90	239.5	593.3	9.15	119.6	1,690.7	9.63	359.1	250.7	92
Inkai	ISR	214,104.1	0.04	167.5	166,913.0	0.03	102.1	381,017.2	0.03	269.7	107.8	85
Total		215,478.3	-	487.9	167,892.9	-	339.5	383,371.2	-	827.4	458.2	-

(UG – underground, OP – open pit, ISR – in situ recovery), totals may not add up due to rounding.

Note that the estimates in the above table:

- use constant dollar average uranium prices, varying per property, from \$44 to \$54 (US) per pound U₃O₈
- are based on exchange rates of \$1.00 US=\$1.25 Cdn and 265 Kazakhstan Tenge to \$1.00 Cdn

Our estimate of mineral reserves and mineral resources may be positively or negatively affected by the occurrence of one or more of the material risks discussed under the heading *Caution about forward-looking information* beginning on page 2, as well as certain property-specific risks. See *Uranium - operations* starting on page 56.

Metallurgical recovery

We report mineral reserves as the quantity of contained ore supporting our mining plans, and provide an estimate of the metallurgical recovery for each uranium property. The estimate of the amount of valuable product that can be physically recovered by the metallurgical extraction process is obtained by multiplying the quantity of contained metal (content) by the planned metallurgical recovery percentage. The content and our share of uranium in the table above are before accounting for estimated metallurgical recovery.

Mineral resources

As at December 31, 2017, except for Inkai which are as at January 1, 2018 (100% – only the shaded columns show our share)

MEASURED, INDICATED AND INFERRED

(tonnes in thousands; pounds in millions)

PROPERTY	MEASURED RESOURCES (M)			INDICATED RESOURCES (I)			TOTAL M+I CONTENT (LBS U ₃ O ₈)	OUR SHARE TOTAL M+I CONTENT (LBS U ₃ O ₈)	INFERRED RESOURCES			OUR SHARE INFERRED CONTENT (LBS U ₃ O ₈)
	TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)	TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)			TONNES	GRADE % U ₃ O ₈	CONTENT (LBS U ₃ O ₈)	
Cigar Lake	8.7	7.35	1.4	298.8	14.69	96.8	98.2	49.1	180.0	5.97	23.7	11.8
Fox Lake	-	-	-	-	-	-	-	-	386.7	7.99	68.1	53.3
Kintyre	-	-	-	3,897.7	0.62	53.5	53.5	37.5	517.1	0.53	6.0	4.2
McArthur River	89.8	2.71	5.4	15.6	4.70	1.6	7.0	4.9	76.8	5.01	8.5	5.9
Millennium	-	-	-	1,442.6	2.39	75.9	75.9	53.0	412.4	3.19	29.0	20.2
Wheeler River	-	-	-	166.4	19.13	70.2	70.2	18.7	842.5	2.38	44.1	11.8
Rabbit Lake	-	-	-	1,836.5	0.95	38.6	38.6	38.6	2,460.9	0.62	33.7	33.7
Tamarack	-	-	-	183.8	4.42	17.9	17.9	10.3	45.6	1.02	1.0	0.6
Yeelirrie	27,172.9	0.16	95.9	12,178.3	0.12	32.2	128.1	128.1	-	-	-	-
Crow Butte	1,779.4	0.18	6.9	1,354.9	0.29	8.6	15.5	15.5	1,135.2	0.12	2.9	2.9
Gas Hills-Peach	687.2	0.11	1.7	3,626.1	0.15	11.6	13.3	13.3	3,307.5	0.08	6.0	6.0
Inkai	36,680.9	0.03	21.3	21,132.2	0.02	10.7	32.0	12.8	116,394.6	0.03	75.0	30.0
North Butte-Brown Ranch	910.1	0.08	1.7	5,530.3	0.07	8.4	10.0	10.0	294.5	0.07	0.4	0.4
Ruby Ranch	-	-	-	2,215.3	0.08	4.1	4.1	4.1	56.2	0.14	0.2	0.2
Shirley Basin	89.2	0.16	0.3	1,638.2	0.11	4.1	4.4	4.4	508.0	0.10	1.1	1.1
Smith Ranch-Highland	3,721.3	0.10	7.9	14,372.3	0.05	17.0	24.9	24.9	6,861.0	0.05	7.7	7.7
Total	71,139.6	-	142.5	69,889.1	-	451.2	593.7	425.3	133,479.0	-	307.5	189.9

Totals may not add up due to rounding.

Note that mineral resources:

- do not include amounts that have been identified as mineral reserves
- do not have demonstrated economic viability