



Uranium in Saskatchewan

Facts on the Industry for 2014

Attached are fact sheets containing information about the uranium industry in Saskatchewan, prepared by the Saskatchewan Mining Association.

These fact sheets identify the companies, operations and projects involved in the uranium industry, as well as the industry's historical economic impact within the province.

If you have any questions, please contact the appropriate person listed under Industry Contacts. If it is not clear whom you should contact, please call the media and public relations people listed.

All photos were supplied by AREVA Resources and Cameco Corporation



Uranium in Saskatchewan

Introduction

“Uranium in Saskatchewan” is a series of fact sheets produced annually by Saskatchewan’s uranium mining industry. The information contained has been gathered from corporations producing uranium in the province. The fact sheets represent the combined total of all efforts of the companies and their employees and contractors who produce this valuable source of energy used worldwide to generate electricity.

Saskatchewan is a world leader in uranium production. The uranium industry provides many jobs and promotes investment and economic development in the province. The industry provides all of these benefits in an environmentally and socially responsible manner and is held accountable for its performance. Regular internal and external audits on the environment and safety of operations are ongoing and thousands of air, water and vegetation samples are taken annually. These samples demonstrate, and the government regulatory agencies agree, that the industry is protecting the environment.

These fact sheets illustrate the magnitude of this industry and the benefits that accrue to the people of Saskatchewan.

Cameco Corporation and AREVA Resources Canada are the two uranium producers in Saskatchewan, producing all of Canada’s uranium. For additional information on the Saskatchewan uranium mining industry, please visit the following websites:

www.cameco.com

www.avevaresources.ca

www.saskmining.ca



Uranium in Saskatchewan

Contents

Uranium Reserves

Expenditures for Uranium Mining: 1980 – 2014

Economic Impact

Production

Industry Employment Statistics

Environmental Protection

Radiation Protection and Worker Safety

Public Support of the Uranium Mining Industry

Saskatchewan Uranium Exploration Activity

Mine Sites and Projects:

Cigar Lake

Cluff Lake

Key Lake

McArthur River

McClellan Lake

Midwest

Millennium Project

Rabbit Lake

Cameco Corporation

AREVA Resources

Industry Contacts

Map



Uranium in Saskatchewan

Uranium Reserves (as of December 31, 2014)

DEPOSIT	MINING METHOD	MILLIONS OF POUNDS U ₃ O ₈	AVERAGE GRADE (% U ₃ O ₈)
Cigar Lake	underground	234.9	17.84
Key Lake	open pit	0.7	0.5
McArthur River	underground	345.2	14.87
McClellan Lake	open pit or underground	15.3	2.2
Midwest	open pit	nil**	nil**
Millennium Project*	underground	nil*	nil*
Rabbit Lake	underground	15.2	0.61
Cluff Lake	decommissioned	nil	nil
TOTAL URANIUM RESERVES		611.3	

Numbers may not reflect total due to rounding.

* The Millennium Project contains only resources (see definition below) of 75.9 million pounds of U₃O₈ with an average grade of 2.39%.

** The Midwest Project mineral resources are 5.8 million pounds of U₃O₈ with an average grade of 1.7%.

Reserves: the economically mineable part of a measured resource for which a preliminary feasibility study demonstrates that economic extraction is justified.

Resources: do not have demonstrated economic viability but have reasonable prospects for economic extraction.

- Clean electricity generated worldwide from uranium avoids 2.5 billion tonnes CO₂ emissions annually. *(source: Canadian Nuclear Association)*
- Currently approximately 12% of the world's electricity mix is obtained from nuclear power. *(Source: Canadian Nuclear Association)*
- It is estimated that if coal and natural gas power plants were replaced with nuclear power plants global CO₂ emissions would drop by 22.2% from 2014 levels. *(source: Canadian Nuclear Association)*



Uranium in Saskatchewan

Expenditures for Uranium Mining: 1980 – 2014

(includes capital, exploration, reclamation and pre-development expenditures;
does not include operating expenditures)

YEAR	MILLIONS OF DOLLARS
1980	186.8
1981	168.7
1982	301.6
1983	382.9
1984	181.2
1985	98.0
1986	90.3
1987	86.5
1988	102.6
1989	60.8
1990	75.1
1991	95.5
1992	52.7
1993	65.5
1994	66.2
1995	158.9
1996	234.2

YEAR	MILLIONS OF DOLLARS
1997	253.8
1998	210.2
1999	232.1
2000	74.7
2001	47.1
2002	54.4
2003	49.4
2004	101.5
2005	215.6
2006	343.2
2007	347.2
2008	403.6
2009	288.3
2010	383.5
2011	752.8
2012	615.0
2013	635.9
2014	651.8

1980-2014 TOTAL EXPENDITURES - \$8,067,733,403

Since 1980, the uranium mining industry has spent more than \$8.07 billion on uranium mining projects in Saskatchewan in addition to operating expenditures.



Uranium in Saskatchewan

Economic Impact 2014

- The uranium mining industry spent more than \$382 million on salaries, wages and benefits for its direct employees. Of this almost \$119 million was paid to residents of Saskatchewan's north.
- The industry's contractors paid out an additional \$197 million to their employees.
- Income tax remitted on behalf of mining industry direct employees was \$95.9 million. Canada Pension Plan contributions were an additional \$13.7 million and Canada Employment Insurance payments were another \$5.8 million.
- The value of goods and services purchased by the industry was approximately \$1.12 billion. Approximately 76% (\$847 million) of this amount went to businesses based in Saskatchewan and approximately 39% (\$439 million) went to businesses based in northern Saskatchewan.
- Capital expenditures were approximately \$610.6 million, while exploration expenditures were \$33.1 million. Reclamation expenditures were \$8 million. Total capital, exploration and reclamation expenditures, excluding salaries, were approximately \$651.8 million.
- Taxes and royalties of \$83.2 million were paid to the province of Saskatchewan.
- Approximately \$6.3 million was spent on licensing fees and \$2.6 million was paid in surface lease fees.
- Almost \$4.0 million was donated to community and charitable organizations and another \$284,808 was given as scholarships and other forms of support to contribute to the education of Saskatchewan's youth.



Uranium in Saskatchewan

Production in 2014

OPERATIONS	PRODUCTION	
	TONNES OF URANIUM	MILLION POUNDS OF U ₃ O ₈
Key Lake/McArthur River*	7,347	19.10
Rabbit Lake	1,616	4.20
McClellan Lake/Cigar Lake**	130	0.34
TOTAL	9,093	23.64

Source: Saskatchewan uranium producers

To convert tonnes of uranium to pounds of U₃O₈, multiply tonnes by 2,599.8

Numbers may not reflect total due to rounding. The numbers represent uranium production in drums after milling.

* Ore from McArthur River mine is trucked to Key Lake where it is then fed into the Key Lake mill and processed into yellowcake.

** Ore from Cigar Lake mine is trucked to McClellan Lake Operation where it is then fed into the McClellan Lake mill and processed into yellowcake. The production data reflects the amount in drums after milling.

- Canada's uranium is used exclusively for the generation of electricity at nuclear power plants. The end use is strictly enforced by international non-proliferation agreements and Canadian export restrictions.
- Nuclear power supplies about 16% of Canada's electricity needs. *(source: Canadian Nuclear Association)* This makes uranium one of Canada's largest, non-carbon emitting sources of energy in use today.
- Canada remains a leading uranium producer, accounting for approximately 16% of the world's production. All of the uranium production in Canada comes from Saskatchewan mines. *(source: Canadian Nuclear Association)*
- Uranium exports add approximately \$1.2 billion to the Canadian economy. *(source: Canadian Nuclear Association)*



Uranium in Saskatchewan

Industry Employment Statistics 2014

- Total employment by the uranium industry, including contractors, is approximately 4,138 people. The uranium industry directly employs approximately 2,753 people in Saskatchewan and industry contractors employ an additional 1,385 people.
- Employment at mine sites, including contractors, is approximately 3,200.
- Approximately 52% of mine site employees, including contractors, are residents of Saskatchewan's north.
- Approximately 48% of mine site employees, including contractors, are of aboriginal ancestry.
- Head office employment accounts for approximately 815 direct employees.
- The uranium industry is responsible for approximately 10,350 jobs in the province (approximately 4,138 direct jobs and an additional 6,210* spin-off jobs).

*Spin-off jobs calculation based on information from Saskatchewan Industry and Resources



Uranium in Saskatchewan

Environmental Protection 2014

The Saskatchewan uranium mining industry is committed to responsible environmental stewardship. The industry directly employs 71 people whose full-time responsibility is to ensure that all operations meet strict environmental standards set out by both the federal and provincial governments. Twenty-four hours a day, 365 days a year, comprehensive sampling, monitoring and assessment programs are in operation to ensure that the physical environment is protected. All sites are subject to compliance-based monitoring; water and air emissions from the mine and mills are tested on a regular basis to ensure that contaminants, if any, remain within regulatory limits. The industry also performs environmental monitoring to ensure that plants, animals and fish in the surrounding area are not adversely affected.

The industry's long-term goal is to return all operations, as closely as possible, to a natural state suitable for future uses. All uranium mine site operators must issue a letter of credit with the province of Saskatchewan to ensure adequate funds are available for proper decommissioning of each site after the reserves have been mined out.

The uranium mining companies are already working towards this long-term goal. In 2014, approximately \$8 million was spent on reclamation.

ISO 14001 Certification

ISO 14001 is a voluntary international set of standards that is recognized in more than 90 countries for maintaining an effective environmental management system where a company can demonstrate its commitment to environmental performance, pollution prevention and continual improvement. It establishes a permanent framework to assist companies in reaching their environmental protection goals. The ISO framework calls for regular independent audits and for re-certification every three years.

Five Saskatchewan uranium operations are currently ISO 14001 certified: McClean Lake (2001), Key Lake (2003), McArthur River (2003), Cluff Lake (2004) and Rabbit Lake (2010). In addition, AREVA Resources' Saskatchewan uranium exploration activities were certified for ISO 14001 in 2004. This certification further demonstrates the commitment of Saskatchewan uranium mining companies in protecting the environment.



Uranium in Saskatchewan

Radiation Protection and Worker Safety 2014

The safety of workers is a top priority. The uranium industry directly employs 131 people working full time to ensure safe working environments (including radiation protection) exist for employees. All mine sites are monitored regularly to spot any potential hazards that may develop.

Employees at uranium operations are monitored continuously for radiation exposure by the use of individual radiation dosimeters carried by each employee. These devices record the cumulative radiation dose received. The dosimeters are submitted regularly to independent radiation monitoring agencies. Health Canada maintains a central registry of the results, which are provided to the employer companies, the Canadian Nuclear Safety Commission (CNSC) and to all individual employees. In addition to cumulative exposure monitoring, special personal dosimeters are used that provide immediate feedback of radiation exposure levels. Certain areas in the workplace are also equipped with devices that record and display continuous ambient radiation levels.

The Saskatchewan uranium industry consistently demonstrates that it meets the standards set out by CNSC for radiation exposure. In 2014, the average total effective dose to workers in the industry, including contractors, was approximately 3.6% of the annual average allowable limit (20 millisieverts) set by regulators. All employees in the industry were below this limit. The highest exposure recorded to any single employee in 2014 was approximately 17.28% of the annual maximum limit (50 millisieverts).

Statistics collected by government agencies show that Saskatchewan's uranium mines are among the safest workplaces in the province, even at times surpassing office jobs.

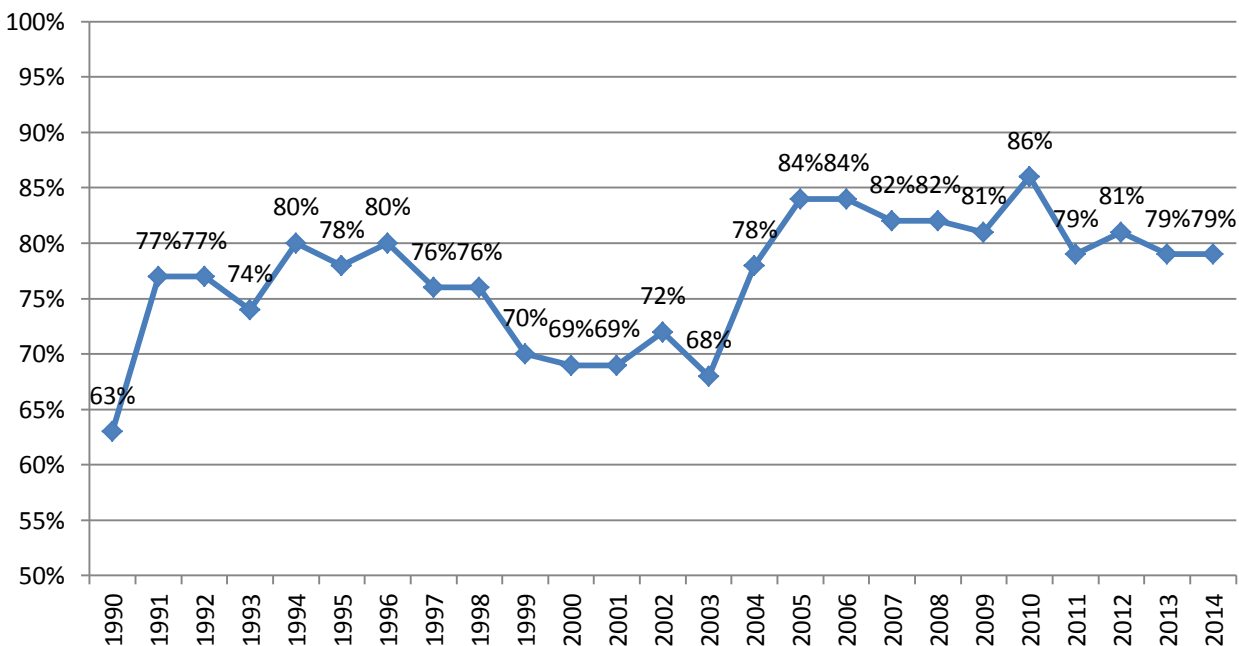


Uranium in Saskatchewan

Public Support for the Uranium Mining Industry 2014

Information on this page is taken from a public opinion poll conducted by Fast Consulting in 2014.

Public Support 1990 – 2014



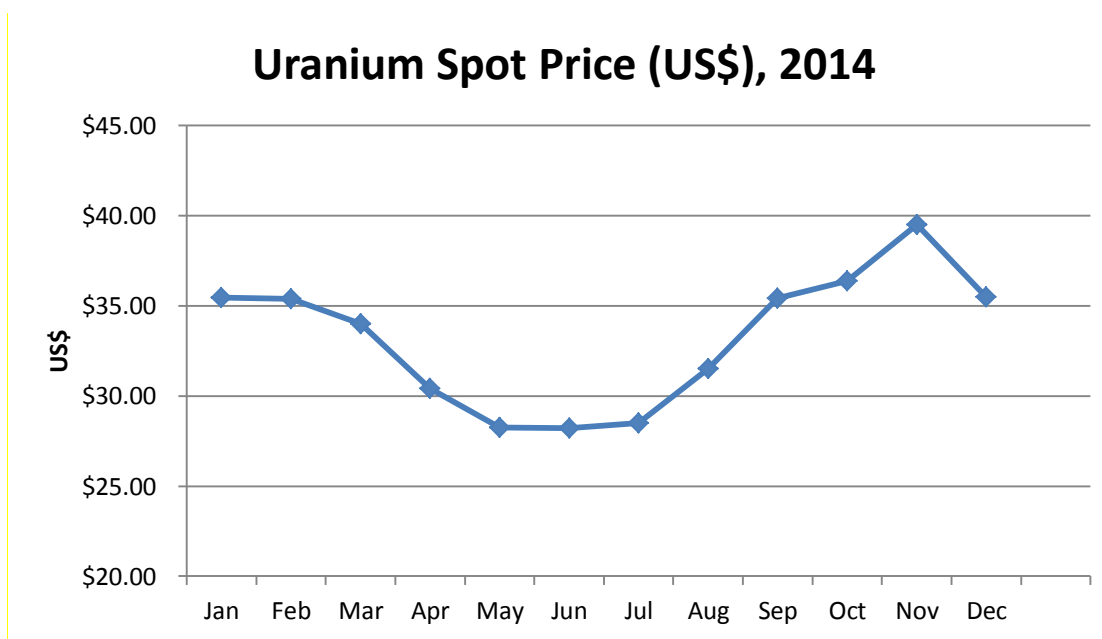
- Public support for the uranium mining industry is generally consistent across all age groups and all regions of the province (poll is taken in May or June of each year).



Uranium in Saskatchewan

Saskatchewan Uranium Exploration Activity 2014

According to the Saskatchewan Ministry of Economy, total 2014 uranium exploration expenditures in the Athabasca Basin are estimated to have reached \$131.9 million. This is less than the 2013 actual expenditures of \$143.9 million.



The spot market price of uranium fluctuated between January 2014 and December 2014 (US\$28.23 per pound and US\$39.50 per pound). The 2014 average spot price (US\$33.21 per pound) is lower than the 2013 average spot price (US\$38.17 per pound).

Many companies are currently exploring for uranium in the Basin. The majority of these companies are publicly traded and are operating in joint ventures with one or more other companies. Most of the activity is in the eastern part of the Basin where the major known deposits are located. However, following new exploration successes, activity is increasing in the western portion of the Basin.



Uranium in Saskatchewan

Cigar Lake Operation 2014

OWNERSHIP: Cameco Corporation (50%)
AREVA Resources (37%)
Idemitsu Uranium Exploration Canada Limited (8%)
TEPCO Resources Inc. (5%)

OPERATOR: Cameco Corporation

DISCOVERED: 1981 by AREVA Resources

OPERATION: Cigar Lake is the world's second-largest known high-grade uranium orebody

When in production, the uranium ore slurry will be trucked about 80 kilometres to AREVA's McClean Lake mill for processing

PRODUCTION: Ore production began in 2014 producing 400,000 lbs of U_3O_8

Of the 400,000 lbs of U_3O_8 produced, 340,000 lbs of U_3O_8 was milled and in drums by the end of 2014

Full production is expected by 2017 based on current information

Planned annual production of 18 million lbs U_3O_8 after ramp-up

RESERVES: Proven and probable reserves of 234.9 million lbs U_3O_8 with an average grade of 17.84% U_3O_8

PLANS FOR 2015:

- ❖ Cameco expects to have three jet boring machines operating underground
- ❖ With these new boring machines in operation Cigar Lake is set to produce between 6 and 8 million packaged pounds of U_3O_8



Uranium in Saskatchewan

Cluff Lake Decommissioned Operation 2014

- OWNERSHIP:** AREVA Resources (100%)
- OPERATOR:** AREVA Resources
- DISCOVERED:** 1971
- OPERATION:** 1980 – 2002; 22 years of successful operation; Cluff Lake received ISO 14001 environmental management certification in 2004
- CAPACITY:** The mill had a rated capacity of 5.2 million lbs. U_3O_8 (2,000 tonnes uranium). The mill has been demolished and the site is being returned to a natural state
- PRODUCTION:** Total production since the beginning of operation in 1980 to the end of 2002 was 62.5 million lbs. U_3O_8 . The reserves are now depleted and the major decommissioning work is complete
- NOTES:**
- ❖ Cluff Lake ceased uranium production at the end of 2002 after 22 years of operation
 - ❖ Active decommissioning work began in 2004 and is now completed. Decommissioning included backfilling the Claude pit, dismantling the mill and covering the area with soil, covering the tailings management area, and re-sloping and covering the waste rock piles
 - ❖ AREVA will continue its environmental monitoring program through four visits per year, called campaign monitoring
 - ❖ Approximately 800,000 trees and shrubs have been planted on the mine site since Cluff Lake was decommissioned. These trees and shrubs will ensure that the site will gradually return to the natural landscape from which it came



Uranium in Saskatchewan

Key Lake Operation 2014

OWNERSHIP: Cameco Corporation (83%)
AREVA Resources (17%)

OPERATOR: Cameco Corporation

DISCOVERED: 1975 by Uranerz Exploration and Mining Limited

OPERATION: In operation since 1983, Key Lake is the largest uranium milling operation in the world

Key Lake currently processes uranium ore mined at McArthur River.

PRODUCTION: Key Lake and McArthur River are currently licensed to produce up to 18.7 million lbs of uranium concentrate (U_3O_8) annually on average, not to exceed 21 million lbs U_3O_8 in any given year

Key Lake and McArthur River jointly produced 19.1 million lbs U_3O_8 in 2014

RESERVES: 0.7 million lbs. U_3O_8 with an average grade of 0.5% U_3O_8

Mining no longer occurs at Key Lake

PLANS FOR 2015:

- ❖ Installation and commissioning of a new calciner in the mill



Uranium in Saskatchewan

McArthur River Operation 2014

OWNERSHIP: Cameco Corporation (70%)
AREVA Resources (30%)

OPERATOR: Cameco Corporation

DISCOVERED: 1988 by Cameco Corporation

OPERATION: The McArthur River operation is the world's largest, high-grade uranium mine

The mine began operations in December 1999

McArthur River uranium ore is processed at the Key Lake operation

PRODUCTION: McArthur River and Key Lake are currently licensed to produce up to 18.7 million lbs of uranium concentrate (U_3O_8) annually on average, not to exceed 21 million lbs U_3O_8 in any given year

McArthur River and Key Lake jointly produced 19.1 million lbs U_3O_8 in 2014

RESERVES: Proven and probable reserves of 345.2 million lbs U_3O_8 with an average grade of 14.87% U_3O_8

PLANS FOR 2015:

- ❖ Plan to produce 19.6 million pounds of U_3O_8
- ❖ Continue advancing the underground drifts to the southeast and northeast
- ❖ Additional drilling is planned to identify additional mineral resources



Uranium in Saskatchewan

McClellan Lake Operation 2014

OWNERSHIP: AREVA Resources (70%)
Denison Mines Inc. (22.5%)
OURD Canada Co. Limited (7.5%)

OPERATOR: AREVA Resources

DISCOVERED: 1979 by the Canadian Oxy – INCO Joint Venture

OPERATION: McClellan Lake has the only mill in the world able to process high-grade uranium ore without dilution

Although approximately 15 million pounds U_3O_8 of reserves remain in various deposits on site, mining at the Sue area stopped in 2010

The McClellan Lake mill processes 100% of the Cigar Lake mine ore

CAPACITY: McClellan Lake mill is undergoing an expansion to double the mill's capacity to allow the processing of up to 24 million pounds U_3O_8

PRODUCTION: McClellan Lake mill produced 340,000 lbs of U_3O_8 in 2014.
McClellan Lake mill reached a total production milestone of 50 million pounds U_3O_8 in the fall of 2014

RESERVES: 15.3 million lbs U_3O_8 stockpiled with an average grade of 2.2% U_3O_8

PLANS FOR 2015:

- ❖ Continue facilities upgrade and expansion (expected completion – 2016)
- ❖ Proposed expansion of the JEB tailings management facility (currently in the regulatory approval phase)



Uranium in Saskatchewan

Midwest Project 2014

OWNERSHIP: AREVA Resources (69.16%)
Denison Mines (25.17%)
OURD Canada Co. Limited (5.67%)

OPERATOR: AREVA Resources

DISCOVERED: 1978 by Esso Minerals Limited

OPERATION: The Midwest Project, located 17 kilometres from the McClean Lake mill, received environmental assessment approval in 2012

RESOURCES: 5.8 million lbs U_3O_8 with an average grade of 1.7% U_3O_8

PLANS FOR 2015:

- ❖ AREVA and its joint venture partners have deferred the development decision for the Midwest Project until market conditions improve



Uranium in Saskatchewan

Millennium Project 2014

- OWNERSHIP:** Cameco Corporation (70%)
JCU Exploration (Canada) Co. Ltd. (30%)
- OPERATOR:** Cameco Corporation
- DISCOVERED:** In 2000 by Cameco and joint-venture partners of the Cree Extension Project
- OPERATION:** A proposed underground uranium mine development project
Located 36 kilometres north of the Key Lake operation
- Once in operation, uranium ore mined at Millennium would be processed offsite at a licensed milling facility
- RESOURCES:** 75.9 million lbs U_3O_8 of indicated uranium resources with an average grade of 2.39% U_3O_8
- PLANS FOR 2015:**
- ❖ The licensing process with the CNSC has been deferred due to the weak uranium market



Uranium in Saskatchewan

Rabbit Lake Operation 2014

OWNERSHIP: Cameco Corporation (100%)

OPERATOR: Cameco Corporation

DISCOVERED: 1968 by Gulf Mineral Resources

OPERATION: Rabbit Lake began operations in 1975 and is the longest-operating uranium production facility in North America

The operation consists of the Rabbit Lake mill and the Eagle Point underground mine, located 16 kilometres north of the mill

More than 190 million pounds of uranium concentrate (U_3O_8) have been produced from five different orebodies at the site

CAPACITY: The mill has an annual licensed capacity of 16.9 million lbs U_3O_8

PRODUCTION: 4.2 million lbs U_3O_8 was produced in 2014

RESERVES: Provable and probable reserves of 15.2 million lbs U_3O_8 with an average grade of 0.61% U_3O_8

PLANS FOR 2015:

- ❖ Production is expected to be 3.9 million pounds of U_3O_8
- ❖ Plans exist to expand underground drilling with a reserve replacement program. The areas of interest are east and northeast of the existing mine



Uranium in Saskatchewan

Cameco Corporation

Cameco Corporation, with its head office in Saskatoon, Saskatchewan, is one of the world's largest uranium producers, a significant supplier of conversion services and one of two Candu fuel manufacturers in Canada. The company's competitive position is based on controlling ownership of the world's largest high-grade reserves and low-cost operations. Cameco's uranium products are used to generate clean electricity in nuclear power plants around the world. The company also explores for uranium in the Americas, Australia and Asia. Cameco's shares trade on the Toronto and New York stock exchanges.

Cameco Corporation owns and operates the Rabbit Lake mill and is operator and majority owner of the Key Lake mill and McArthur River mine. The company is also majority owner and operator of the Cigar Lake uranium operation.

Head Office: 2121 11th Street West
Saskatoon SK S7M 1J3

Telephone: (306) 956-6200

Facsimile: (306) 956-6201

Website: www.cameco.com



Uranium in Saskatchewan

AREVA Resources

AREVA Resources Canada Inc. with its headquarters in Saskatoon, has been active in Canada for over 50 years. Its parent company, the AREVA group is one of the world's largest producers of uranium.

AREVA Resources is the operator and majority owner of the McClean Lake operation and Midwest uranium project and owns and operates the decommissioned Cluff Lake mine. The company is also part owner of the Cigar Lake, McArthur River and Key Lake uranium operations. It conducts uranium exploration in Saskatchewan, Alberta and Nunavut. AREVA Resources' uranium production is sold to electric utilities worldwide.

AREVA Resources Canada is a subsidiary of the AREVA group. AREVA supplies solutions for power generation with less carbon. Its expertise and unwavering insistence on safety, security, transparency and ethics are setting the standard, and its responsible development is anchored in a process of continuous improvement.

The AREVA group is the only company in the world to cover every stage in the nuclear fuel cycle, from mining and building reactors to servicing existing plants and recycling used fuel. The AREVA group is very active in the renewable energy sector, particularly in off-shore wind technology.

With these two major offers, AREVA's 44,000 employees are helping to supply ever safer, cleaner and more economical energy to the greatest number of people.

Head Office:	817 - 45th Street West Saskatoon SK S7L 5X2
Telephone:	(306) 343-4500 1-866-99-AREVA (toll free in SK)
Facsimile:	(306) 653-3883
Websites:	www.aveva.com www.avevaresources.ca



Uranium in Saskatchewan

Industry Contacts

	CAMECO CORPORATION	AREVA RESOURCES
EMPLOYMENT OPPORTUNITIES	www.cameco.com	Bruce Walls VP Human Resources (306) 343-4500
PURCHASING OF GOODS & SERVICES	www.cameco.com	Arden Sobush Director, Materials (306) 343-4500
DONATIONS & SCHOLARSHIPS	www.cameco.com	Veronique Loewen Manager, Communications (306) 343-4500 Glenn Lafleur Manager, Northern Affairs (306) 425-6880
PUBLIC & MEDIA INQUIRIES	Rob Gereghty Manager, External Communications (306) 956-6190	Veronique Loewen Manager, Communications (306) 343-4500

Please note: Inquiries for the purchasing of goods and services or for Cameco donations and sponsorships may be made through the Cameco website.



Uranium in Saskatchewan

