

Exploring For **URANIUM**

AREVA Resources Canada Inc.



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PURE ENERGY



Cover Photo: AREVA Resources engineer and geologist discuss exploration drilling results at the Shea Creek site in the western Athabasca Basin

This Page: Exploration area at Shea Creek



AREVA Resources Canada Inc.

AREVA Resources is the operator and majority owner of the McClean Lake uranium operation located about 700 kilometres northeast of Saskatoon, Saskatchewan. The company also owns and operates the Cluff Lake mine (now being decommissioned), operates the Midwest uranium mine project, and shares ownership in the Cigar Lake, McArthur River, and Key Lake uranium mines. Over half of the workers at McClean Lake are northern Saskatchewan residents.



The Kiggavik Project is located 80 kilometres west of Baker Lake, Nunavut.
(Below) Taking elders and other Inuit community members to see the site is an important part of AREVA's consultation process.





New Deposits to be Found

Five hundred times more common than gold, uranium is found nearly everywhere on Earth, on land and in water. The highest known concentrations – with some ore grades averaging over 20% uranium – are found in Saskatchewan's Athabasca Basin.

These deposits have helped make Canada the world leader in uranium production, and have created significant employment and economic benefits for Canadians.

AREVA's uranium exploration in Canada is currently concentrated in northern Saskatchewan's Athabasca region, in Québec, and in Nunavut.

Airborne geophysical surveys are used to detect magnetism, electrical conductivity, and radioactivity over large areas.

>> Exploration Techniques

AREVA's exploration team uses various techniques to discover new deposits.

Exploration by air

The physical properties of many minerals and rocks can be measured by using geophysical instruments carried in a helicopter or airplane. The information provides hints about what is below the surface and indicates areas that should be further explored on the ground.



Exploration on the ground

There are many ground survey techniques available. Geologists may take readings with different instruments or gather small samples of rock. Geophysicists measure seismic waves or rock characteristics. Geochemical survey methods may range from digging trenches to taking tiny samples of leaf debris.







Line cutting

Lines are cut to provide grid references for surveys. Cutline width must be 1.5 metres or less. When possible, branches are removed rather than cutting down the entire tree. All trees are hand cut to minimize the environmental impact.

Diamond drilling

Drilling is the most conclusive exploration method to determine if an economical deposit exists in the area.

In order to study the rock formations underground, a drill rig makes a small hole through bedrock.

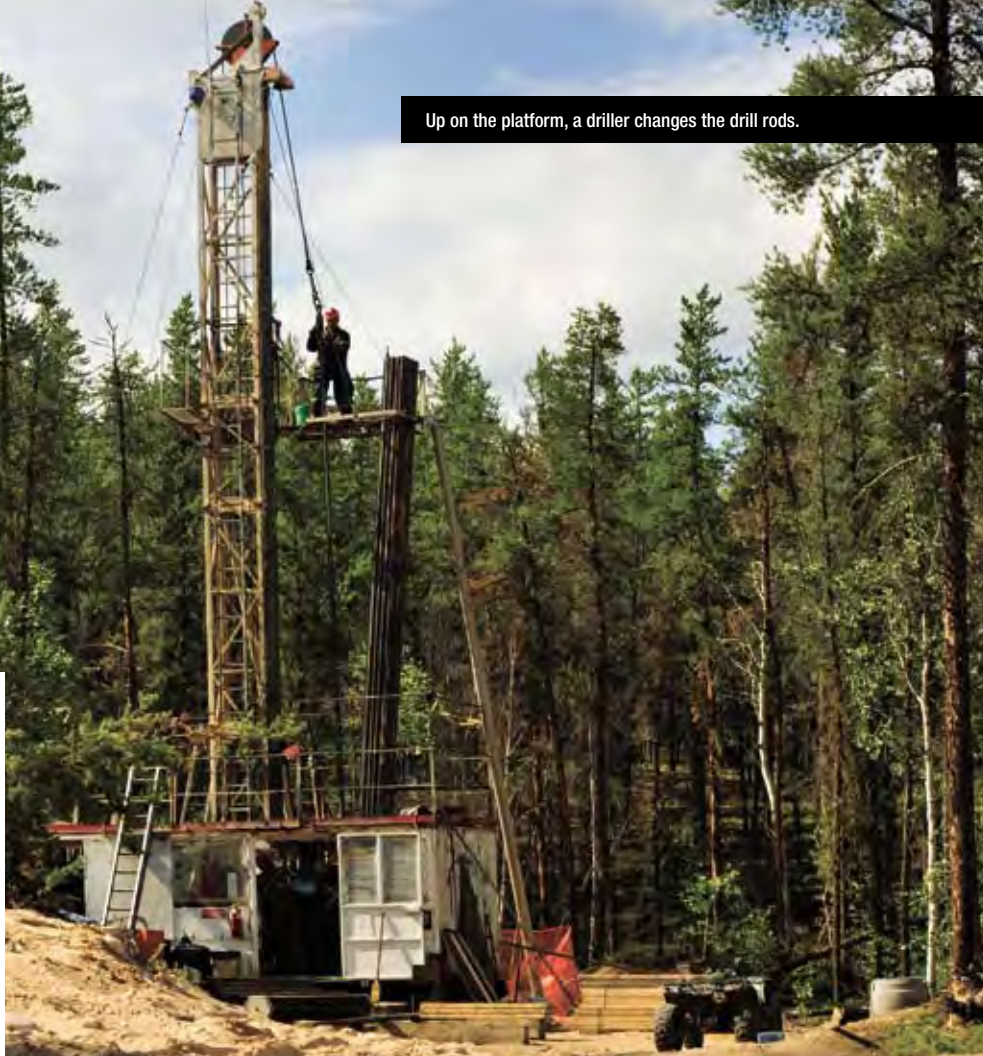
The drill bit, covered with industrial diamonds, rotates at the end of the rod or pipe. While the bit rotates using gentle pressure, it is cooled by water to prevent overheating. The drill bit cuts a solid column of core out of the rock, which is brought to the surface for further examination.



Inside the drill rig, the rock core is removed from drill rods. The core is later studied to assess the rock formations deep below the surface.



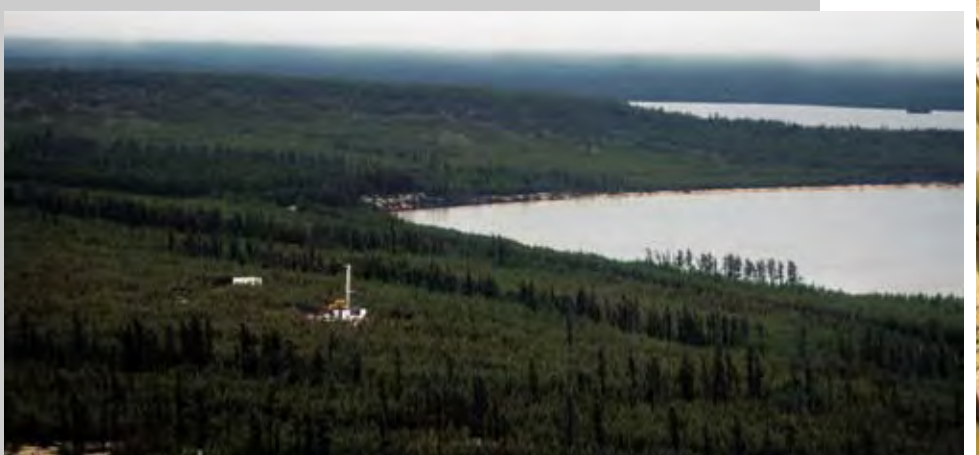
Up on the platform, a driller changes the drill rods.



Directional drilling

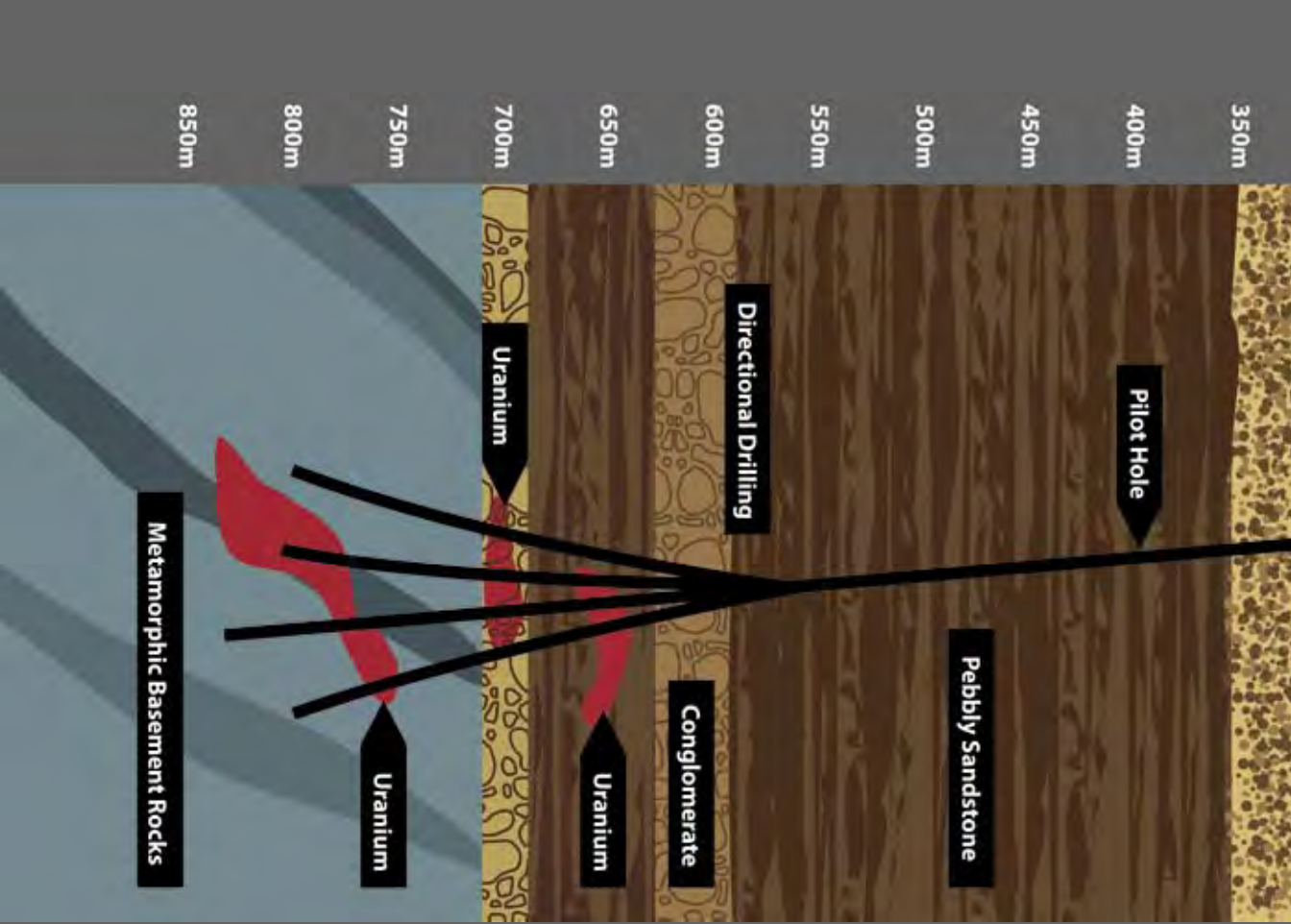
AREVA uses advanced drilling methods, such as directional drilling. This technique's advantage is that multiple holes can be drilled from one setup, thus minimizing surface disturbance and reducing water consumption.

Directional drilling provides a better understanding of the ore and bedrock orientation below ground level. From a single pilot hole, operators are able to drill in many new directions, hundreds of metres below the surface.



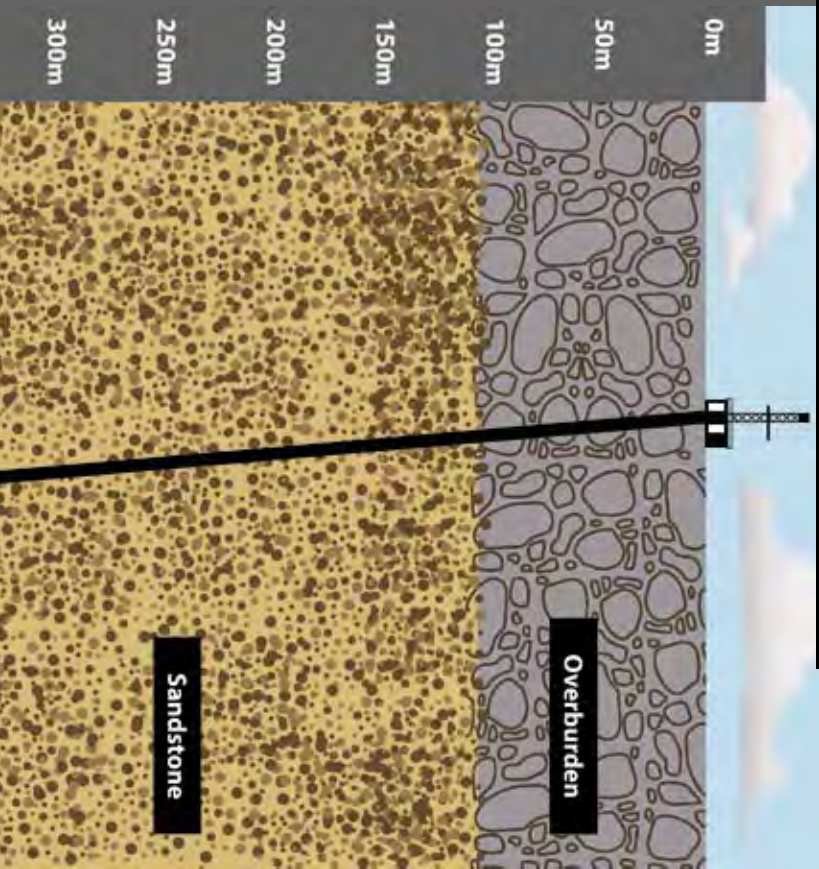


Drill core is first logged at the main camp to record the types of rock formations encountered, then the core is sent to the lab to determine the mineral composition. Core samples are kept in storage for 25 years or more and may be re-sampled when needed.



>> Over 700 Metres Down

This cross section shows an example of the geology that might be found in the Athabasca Basin and how directional drilling can be used.





Exploration and the Environment

In exploration and mining, AREVA must comply with strict environmental regulations. AREVA's Environmental Management System (EMS) is structured around the ISO 14001 Environmental Management international standard. Under this standard, AREVA must define and follow its environmental policy; achieve objectives and targets; measure, monitor, and evaluate environmental performance; and make continual improvements.

In 2004, AREVA became the first uranium company in Saskatchewan to be ISO 14001 certified for exploration activities. Annual audits by an external independent registrar continue to confirm that AREVA adheres to or exceeds ISO 14001 requirements.

Additionally, contractors must follow and adhere to AREVA's explicit and demanding environmental policy, code of practice, emergency response plan, and other requirements contained in permits, licences, and authorizations.

>> Long Term Commitment

Exploration, like mining, is a lengthy process. The Midwest deposit in northern Saskatchewan, for example, was discovered in 1978 following ten years of exploration.

Locating new deposits today will enable AREVA to supply future fuel for clean energy around the world.

When the first exploration geologists arrived in the Cluff Lake area of the western Athabasca Basin almost 40 years ago, local trapper Alex Flett shared his knowledge of the area, cut lines through the bush for them, and saw the discovery of three deposits. Alex and four of his eight children later worked at the Cluff Lake mine.

When the mine was closed and decommissioned to a safe, natural state, mine employees built a new cabin for Alex on the shore of Cluff Lake. Today, AREVA plans all projects in respectful consultation with northern residents.







Temporary Work Camps

Temporary work camps are established in previously cleared areas or natural openings. They are not allowed on or near heritage property sites, in areas of scientific concern, or environmentally sensitive areas, such as nesting sites for endangered species.

These low-impact camp sites are planned with careful consideration to water sources, sewage, and waste management and disposal. Camp sites are monitored to ensure environmental protection. Employees are encouraged to minimize waste, conserve fuel, recycle and reuse materials, and minimize disturbance to the land and wildlife.

AREVA's temporary work camps are reclaimed according to jurisdictional restoration requirements. All temporary structures must be removed from the site. The site is subject to independent inspection by government regulatory agencies.



Existing seasonal trails are used and built upon whenever possible.





Winter Exploration

Exploration occurs year-round, but winter provides the best ground access, as lakes and muskeg areas are frozen over. In the winter, the team uses snowshoes to travel to cutlines. When not on foot, travel is by low-impact vehicles, such as snowmobiles.



Drilling may occur on land or ice. On ice, the drill's weight is distributed over untreated timbers. The ice may be flooded at the rig location to increase thickness.



>> Communication

AREVA works proactively to engage and communicate with northern people.

AREVA representatives visit communities to keep them informed of activities in the north by making presentations and providing other information such as stakeholder notification letters.

Residents become acquainted with local projects, AREVA's environmental protection policy, and possible job and contracting opportunities.



It is important to AREVA to build strong relationships with northern residents.



>> Working With Us

Exploration camps rely on a large team of contractors and suppliers to keep the sites running smoothly. AREVA strives to employ as many northern contractors as possible. Support jobs through contractors may include:

- Camp cooking and maintenance
- Fuel supply and delivery
- Geophysical operator
- Line cutters
- Skidder operator/driver
- Driller & driller's helper
- Geological assistant/technician
- Ice flooding
- Mechanic
- Trail development, snow removal



If you are a resident of northern Saskatchewan or Nunavut and are interested in employment at AREVA's projects, please contact the La Ronge or Baker Lake offices.

La Ronge

AREVA Resources Canada Inc.
507 La Ronge Avenue
PO Box 900
La Ronge SK S0J 1L0
Telephone: 306-425-6880

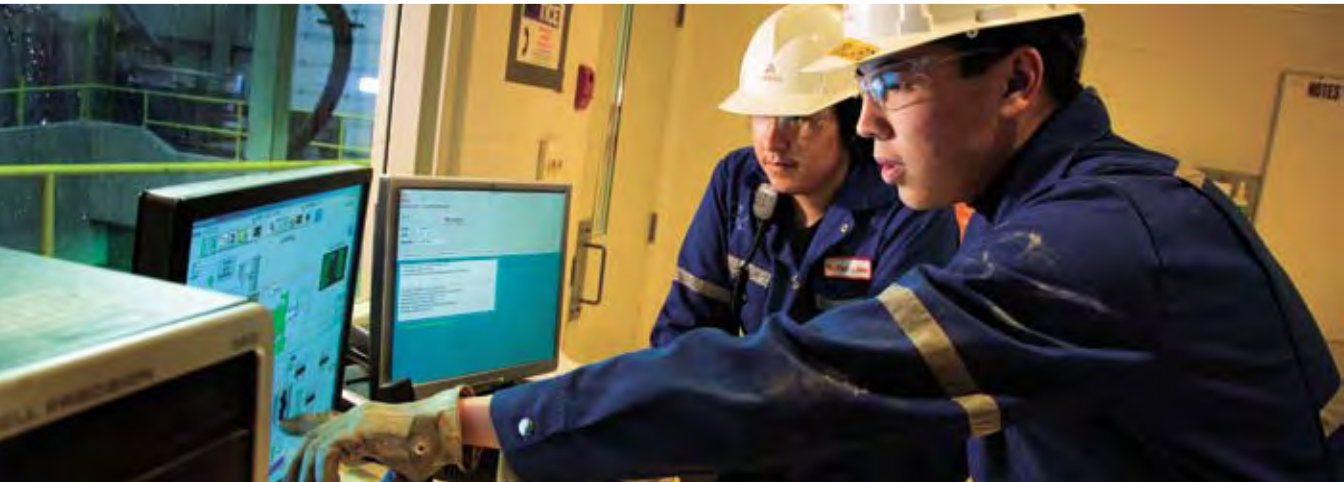
Baker Lake

AREVA Resources Canada Inc.
General Delivery
Baker Lake NU X0C 0A0
Telephone: 867-793-2000

"I believe that AREVA is nurturing the growth and development of northern Saskatchewan to the benefit of all of Saskatchewan. I am proud to work for AREVA and to be an active partner in the development of the north."



"Having worked for two summers as a summer student with the exploration department, I knew that this was the place to be! I have been able to learn so much... the people that I work with are amazing and are never too busy to answer a question or teach me something new."



Come Here... Go Far

AREVA's policy of excellence extends to hiring and employee integration. The growing list of professions at northern sites and at head office includes:

- Geologist
- Environmental scientist
- Administration professional
- Mill operator
- Engineer
- Trades professional
- Mine worker
- Environmental, Health and Safety specialist

AREVA is committed to employment equity and encourages applications from all qualified men and women.

For more information, to view current opportunities, or to learn more about a career with AREVA Resources, visit www.ArevaResources.ca – or contact the head office in Saskatoon at (306) 343-4500.

With manufacturing facilities in 43 countries and a sales network in more than 100, AREVA offers customers reliable technological solutions for CO₂-free power generation and electricity transmission and distribution. We are the world leader in nuclear power and the only company to cover all industrial activities in this field.

Our 71,000 employees are committed to continuous improvement on a daily basis, making sustainable development the focal point of the group's industrial strategy.

AREVA's businesses help meet the 21st century's greatest challenges: making energy available to all, protecting the planet, and acting responsibly towards future generations.

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