

VIA COURIER

October 9, 2008

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Ph (867)360-6338 ext. 26
Fax (867)360-6369
licensing@nunavutwaterboard.org

Andrew Keim
Qimugjuk Bldg., 2nd Floor
P.O. Box: 2200
Iqaluit, NU X0A 0H0
Ph (867) 975-4289
Fax (867) 979-4560
keima@ainc-inac.gc.ca

Dear Ms. Beaulieu

**RE: AMENDMENT REQUEST FOR DRILLING AT END GRID WITHIN 30 METERS OF A HIGH
WATER MARK
THE KIGGAVIK PROJECT – AREVA RESOURCES CANADA INC.
NWB WATER LICENCE #2BE-KIG0812**

Please accept the enclosed amendment request to Water Licence #2BE-KIG0812, condition Part F-section 3, to allow for the exploration of uranium via delineation and in-fill drilling at the End Grid lease site within the currently permitted 30 meters of a high water mark of any water body. Also enclosed is a cheque for the application fee and a Project Summary both in English and Inuktitut.

Water Licence #2BE-KIG0812 was issued April 25th, 2008 and expires December 31, 2012. The current licence approves the exploration of uranium including geophysics, soil sampling, mapping, diamond drilling and environmental baseline field program; all activities are conducted from the camp

based at the Kiggavik site. The 2009 field program is a continuation of the 2008 field program, with planned drilling of up to 6,000 meters at End Grid.

Additional delineation, in-filling and geotechnical drilling is required to characterize the End Grid deposit, which is located on the Sissons property of the Kiggavik Project. Intentions to drill these locations during the 2008 field season were delayed due to water conditions at the site. When these locations were originally spotted they were beyond the 30 meters of a high water mark of a water body requirement, however changing conditions have increased water levels, placing a number of the planned holes within this 30 meter buffer zone. It is anticipated that a number of these holes will remain within 30 meters of a high water mark during the 2009 season. Please see attached report ,Kiggavik Project End Grid Amendment Request, technical support; and associated figures.

AREVA is requesting an exemption of this condition in order to assess these drill locations for future mining potential. AREVA has successfully implemented an Uranium Exploration Plan, Spill Contingency Plan, additional Environmental Management Plans and various mitigation measures to prevent the release and spread of drilling fluids to surrounding lands and water bodies. These Plans are currently undergoing a review to implement lessons learnt during the 2008 field season. These updates will not adversely affect this proposal and will be submitted with the 2008 Annual Report prior to January 31, 2009.

If you have any further questions or require any additional information, please do not hesitate to contact myself at (306) 343-4043. Thank you in advance.

Sincerely,



Mark Warbanski
Environmental Health and Safety, Coordinator
AREVA Resources Inc
306-343-4043
Email: mark.warbanski@areva.ca

Enclosed:

- Kiggavik Project – “End Grid” Amendment Request – Technical Support Document

- Application Form
- Application Fees
- Project Summary – English
- Project Summary - Inuktitut

Cc:

Spencer Dewar, INAC
Stephan Hartman, KIA
Brian Aglukark, NPC
Stephanie Autut, NIRB
Frederic Guerin, AREVA



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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE APPLICATION FORM

Application for: (check one)

☐ New ☐ Renewal ☒ Amendment ☐ Assignment ☐ Cancellation

LICENCE NO:

(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE <u>Mark Warbanski</u> <u>Areva Resources Canada Inc.</u> <u>PO Box 9204, 817 - 45th Street West</u> <u>Saskatoon, SK S7K 3X5</u> Phone: <u>(306) 343-4043</u> Fax: <u>(306) 343-4044</u> e-mail: <u>mark.warbanski@areva.ca</u>	2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable) <u>Same Address</u> Phone: <u>(306) 343-4500</u> Fax: _____ e-mail: _____
3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking) <p>Please refer to maps submitted with the application in Dec 07 (resulting in the issuance of Water Licence 2BE-KIG0812 which expires December 31, 2012), indicating the locations planned for conducting the diamond drilling (Granite, Bong, End Grid and Andrew Lake) and the location of the Kiggavik camp which was refurbished in 2008.</p> <p>Environmental baseline program will continue to consist of aquatic, terrestrial and wildlife studies/assessments.</p> <p>Latitude: (64°26'26" N) Longitude: (97°39'36" W) NTS Map Sheet No. <u>64A/05</u> Scale: _____</p>	
4. DESCRIPTION OF UNDERTAKING (attach plans and drawings) <p>There are no changes to the field program described in the December 2007 application; which as indicated in this application will include geological mapping; geochemical and geophysical surveys; approximately 14,000-metres of diamond drilling is planned to occur at three locations (Kiggavik leases known as Granite North, East and West (3232, 3234 & 3246); and Sissons (Bong, 3246, End Grid 3302 & Andrew Lake 3301); drill core logging and sampling. Environmental baseline work will be conducted to updated existing information and to address data gaps in surface hydrology; hydrogeology; permafrost depth; aquatic and terrestrial study programs; climate; meteorology; air quality and heritage resources.</p> <p>This amendment request is related to condition Part F-section 3 of Water Licence #2BE-KIG0812 which states the following:</p>	

"The Licensee shall not conduct any land based drilling within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board in writing."

The attached report, The Kiggavik Project End Grid Amendment Report 2009; gives more details on the End Grid deposit, water bodies in the End Grid area and proposed drilling activities and associated mitigation measures.

To summarize:

Additional delineation, in-filling and geotechnical drilling is required to characterize the End Grid deposit, which is located on the Sissons property of the Kiggavik Project. Intentions to drill these locations during the 2008 field season were delayed due to water conditions at the site. When these locations were originally spotted they were within 30 meters of a high water mark of a water body, placing a number of the planned holes within the 30 meter buffer zone. It is anticipated that a number of these holes will remain within 30 meters of a high water mark during the 2009 season.

AREVA is requesting an exemption of this condition in order to assess these locations for future mining potential. AREVA has successfully implemented an Uranium Exploration Plan, Spill Contingency Plan and various mitigation measures to prevent the release and spread of drilling fluids to surrounding lands and water bodies.

5. **TYPE OF PRIMARY UNDERTAKING** (A supplementary questionnaire must be submitted with the application for undertakings listed in "**bold**")

- | | |
|---|--|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input checked="" type="checkbox"/> Mining and Milling (includes exploration/drilling) | <input type="checkbox"/> Conservation |
| <input type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Power | <input checked="" type="checkbox"/> Miscellaneous (describe below): |

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

- | | |
|---|---|
| <input checked="" type="checkbox"/> To obtain water | <input type="checkbox"/> Flood control |
| <input checked="" type="checkbox"/> To cross a watercourse | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To modify the bed or bank of a watercourse | <input type="checkbox"/> To alter the flow of , or store, water |
- ☒ Other (describe): AREVA's is requesting an exemption to drill with 30 meters of a high water today mark at the End Grid deposit site.

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source)

- Water use** ☐ 100m³/day or less
☒ Greater than 100m³/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

The currently approved water usage granted in Amendment No.1 to licence No. 2BE-KIG0812 on August 5, 2008 is not to exceed 300 cubic meters per day. With a maximum camp use of 5 cubic meters per day and 295 cubic meters per day for drilling activities.

Water returned to source
As much as possible m³/day

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Sewage | <input checked="" type="checkbox"/> Waste oil |
| <input checked="" type="checkbox"/> Solid Waste | <input checked="" type="checkbox"/> Greywater |
| <input checked="" type="checkbox"/> Hazardous | <input type="checkbox"/> Sludges |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal | <input checked="" type="checkbox"/> Other describe): |

DRILL WATER - to be recirculated if possible and discharged into low-lying area.

DRILL CUTTINGS - will be collected in a low lying area and backfilled upon completion of the hole. Drill cuttings in ore which are >1microservert per hour at 1 meter will be collected and stored in designated areas on site; for possible future handling.

SOLID SEWAGE will be collected and incinerated daily (~ 0.8m3/day).

LIQUID SEWAGE (URINE) from urinals is mixed with greywater (~6 m3/day) for disposal into a designated low lying area.

SOLID WASTE - Combustibles (paper, non-treated wood and food waste) is incinerated

HAZARDOUS WASTE - properly sorted and stored for future transport to an approved facility

BULKY ITEMS/SCRAP METAL - sorted and stored for future transport to an approved facility

WASTE OIL - sorted and stored for future transport to an approved handling facility

Please reference Waste Management Plan for more details.

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

INAC Land Use Permit N2006C0037 Expires April 9th, 2009
 Jeff Holwell
 Land Adminstrator Specialist - Nunavut Region
 INAC
 PO Box 100
 IQALUIT, NU X0A 0H0

KIA Land Use Licence KVL306C02 Expires January 2nd, 2009

Stephan Hartma
PO Box 340
Rankin Inlet, Nunavut X0C0G0

Land Use Permit

DIAND ☒ Yes ☐ No If no, date expected _____

Regional Inuit Association ☒ Yes ☐ No If no, date expected _____

Commissioner ☐ Yes ☒ No If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

The predicted environmental effects/impacts continue to be negligible through the application of AREVA's Environmental Code of Practice, Safety Code of Practice & Environmental Emergency Response Plan.

Mitigative measures related to drilling activities include the following:

- A collection pan/casing box is placed around the casing under the drill.
- A poly barrier is placed within the cribbing of the drill. This barrier acts as a secondary containment for the collection pan and casing box which caught any overflow of returns. The drill waste on the matting is then pumped away.
- The return water is collected in the pan and pumped rather than being allowed to flow directly from the casing,
- A manifold system is used to manage the water supply, with the objective of routing the excess supply water (fresh water) back to the lake and reducing the amount of fresh water pooling around the drill site.
- Non-radioactive cuttings are pumped to designated low-lying area according to Licence No.2BE-KIG0708, Part F-section 4,
- A separator set-up is used to collect radioactive cuttings when drilling within the mineralized zones. This set-up will be located as far as practical from the stream system to prevent contact in case of a spill.
- Secondary containment is used for all fuels, oils and any other petroleum products.

In addition, a number of documents have been specifically developed and submitted for this program:

- Spill Contingency Plan
- Radiation Protection Plan
- Abandonment and Restoration Plan
- Wildlife Mitigation and Monitoring Plan
- Waste Management Plan
- Noise Abatement Plan
- Environmental Code of Practice

NIRB Screening conducted April, 2007.

NIRB Screening ☒ Yes ☐ No If no, date expected _____

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

Yes, there are predicted effects to the quality, quantity or flow of water flowing through Inuit Owned Lands. All preventative measures will be endorsed to ensure minimal impact on the environment and receiving water bodies.

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

Peter's Expediting LTD - Materials Management
Baker Lake, NU
Peter Tapetai
867-793-2703

Gebauer and Associates Ltd. - Wildlife Studies
6387 Larch Street
Vancouver, BC V6M 4E8
604-261-2716
Martin Gebauer

Golder Associates Ltd - Hydrological and Aquatic Studies
Saskatoon, SK
306 667-1182
Rick Schryer

All other contractors and subcontractors have yet to be determined for 2009.

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

-

Please refer to last years applications (2007) for a complete list.

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☐ Yes ☒ No If no, date expected _____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☐ Yes ☒ No If no, date expected _____

Application fee of \$30.00 (Payee Receiver General for Canada) ☒ Yes ☐ No If no, date expected _____

Water Use fee of \$30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations*; Payee Receiver General for Canada)

☐ Yes ☒ No If no, date expected _____

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWT will consider the application for a five (5) year term)

☐ one year or less (or) ☐ Multi Year

Start Date: May 1, 2008 Completion Date: December 31, 2012

Effective June 16, 2006

Tina Searcy Regulatory Coordinator T Searcy March 23/2006
Name (Print) Title (Print) Signature Date

For Nunavut Water Board office use only

APPLICATION FEE Amount: \$ _____ Pay ID No.: _____

WATER USE DEPOSIT Amount: \$ _____ Pay ID No.: _____

KIGGAVIK PROJECT SUMMARY

The Kiggavik Project is a uranium surface exploration project located approximately 80 kilometers west of Baker Lake. The project consists of the Kiggavik site to the north and Sissons to the south. This uranium exploration project was initially started in 1975 by the previous operator, Urgangesellschaft Canada Ltd., and several mineral deposits were discovered between 1977 and 1988. AREVA Resources Inc (formerly COGEMA Resources Inc.) became the project operator in 1993, conducting exploration activities from 1993 to 1997. The project had been under care and maintenance from 1997 until 2007 when licenses and permits were granted for the project by INAC, NWB and KIA to conduct further exploration activities and environmental baseline studies. Current INAC and KIA permits and licenses will expire in January 2009 and April 2009, respectively; therefore applications are being submitted for new approvals.

The 2009 field program is relatively similar to the activities conducting during the 2007 and 2008 programs; consisting of diamond drilling and environmental baseline studies to improve the understanding of the project site and the known mineral deposits. The intent of the project is to gather information required to determine whether these deposits can be safely and economically extracted and processed, while protecting the environment. A program of prospecting, geological mapping and geophysical surveys will also be carried out throughout the lease areas to identify potential for additional mineral deposits and to further evaluate known potential areas.

In 2009, diamond drilling will continue at the Kiggavik site, however drilling will largely focus on the Sissons site at reduced grid spacing. Environmental baseline studies will continue to be carried out in the areas of aquatics, terrestrial, wildlife assessment, hydrological and hydrogeological assessments to update the current database and address data gaps.

The 2009 program is tentatively scheduled to begin in April or May. At this time the fuel storage tank systems that are to be installed during the winter months will be inspected by qualified personnel and be prepared for use. It is expected that the drill and environment crews will be mobilized to the site during May and June. The program is expected to be shut down and prepared for the winter season by the end of September or beginning of October. All operations and personnel will be conducted out of the Kiggavik camp and will be supported by helicopter services.

AREVA is committed to carrying out its field programs in an environmentally responsible and sustainable manner.

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KIGGAVIK PROJECT

“END GRID” AMENDMENT REQUEST - TECHNICAL SUPPORT

1 INTRODUCTION

The End Grid uranium deposit is part of the Sissons property and is located approximately 80 km west of Baker Lake. Additional delineation, in-filling and geotechnical drilling is required to characterize the End Grid deposit for mining purposes. Most of the holes that were planned to be drilled at End Grid during the summer of 2008 were not drilled due to the water situation on this site. The drill hole collars were found to be located within thirty (30) metres of streams flowing, permanently or temporarily, into End Grid Lake. It is anticipated that the holes planned to be drilled during the 2009 summer season will face the same difficulty.

To address this issue and in accordance with Nunavut Water Board (NWB) Licence No.2BE-KIG0708, Part F-section 3, AREVA Resources Canada Inc. (AREVA) is submitting the present application for an amendment to this condition allowing land based drilling to be conducted, between May and September 2009, within thirty (30) metres of the high water mark of streams flowing into End Grid Lake.

This amendment request is also being submitted to INAC and KIA for review, although neither permit or licence contain specific conditions related to drilling within 30 metres from high water marks.

Details regarding the End Grid deposit, the water bodies in the End Grid area, the proposed drilling activities and associated mitigation measures are included in the following sections.

2 THE END GRID DEPOSIT

The End Grid deposit is part of the Sissons property and is located approximately 80 km west of Baker Lake, Nunavut, at 64°00' N and 97°50' W and is covered by NTS reference maps 66/A-5, B-1 and B-8 (Figure 1). The project is operated by AREVA Resources Canada Inc. in joint venture with JCU Exploration (Canada) Co. Ltd. and DAEWOO Corporation.

Uranium mineralization at End Grid was discovered in 1987. Delineation drilling of this deposit was conducted up to 1993. Drilling resumed at End Grid during the 2007 field season.

The End Grid deposit is subdivided into a North and South pod (Figure 2). The North Pod can be further subdivided into an Upper and Lower Lens. Mineralization occurs at a depth ranging from approximately 200 m and 500 m at the transition from hematitic alteration to chloritic, resulting in a large zone of low grade mineralization within the latter zone.

3 END GRID AREA WATER SITUATION

End Grid Lake is a tundra plain lake located in the Lower Lake sub basin, in the Sissons lease area just south of Mushroom Lake. End Grid Lake drains into Shack Lake to the south and subsequently into Judge Sissons Lake (Figure 1). Habitat mapping and other data collection activities were carried out for the first time in 2007. Arctic grayling was the only fish species captured in End Grid Lake. Given the estimated size and depth, End Grid Lake is unlikely to provide overwintering habitat for fish. It is also unlikely to provide habitat for fish species that prefer deep waters.

Historical data and additional investigations conducted by Golder Associates in 2007 and 2008 indicate that the surface area of End Grid Lake is on the order of 13.4 ha and the shoreline perimeter is estimated at approximately 1,600 m. The maximum water depth recorded at the sampling stations in 2007 was 1.0 m. Substrate consists primarily of sand and organics, with cobble and boulder also present. The shoreline slope is predominantly shallow. The shoreline vegetation is primarily grasses. Upland habitat surrounding the lake is tundra. Exposed boulder gardens and inundated vegetation are present.

This stream system originating from Mushroom Lake and flowing into End Grid Lake is relatively complex. There are three to four main stream beds with multiple shallow connected anastomoses. The low lying swampy tundra between Mushroom Lake and End Grid Lake seems to be composed of organic banks potentially holding the anastomoses in place. In addition to the main stream system several not regularly occurring streams develop upstream from End Grid Lake as a result of increased precipitation events and subsequent run-off.

Figure 3 shows an aerial view (looking north) of the stream system and its entry into End Grid Lake. Figure 4 shows a ground view of the main stream system looking south towards End Grid Lake.

4 PROPOSED 2009 DRILLING PROGRAM

The proposed 2009 diamond drilling program at End Grid focuses on the North Pod of the deposit. The proposed program (Figure 5) includes the drilling of approximately 12

holes (average depth 450 m). The total meterage is expected to range between 4000 and 6000m. The drill hole size will be NQ. Holes may be inclined (from vertical to 60°).

Some holes below the permafrost will be used to evaluate the deep groundwater regime via packer-testing and water sampling.

Figure 5 indicates that proposed drill locations are not within thirty (30) metres of End Grid Lake. However, based on observations made during the 2008 summer season, some of the proposed collar locations are likely to be within thirty (30) metres of permanent or temporary streams flowing into End Grid Lake.

5 PROPOSED MITIGATION MEASURES

A number of mitigation measures were tested during the 2008 drilling season with the objective of preventing the release and the spread of drilling fluid to surrounding lands and water bodies. The following measures were found to be relatively successful:

- A collection pan/casing box is placed around the casing under the drill,
- The return water is collected in the pan and pumped rather than being allowed to flow directly from the casing,
- A manifold system is used to manage the water supply, with the objective of routing the excess supply water (fresh water) back to the lake and reducing the amount of fresh water pooling around the drill site.
- Non-radioactive cuttings are pumped to designated low-lying area according to Licence No.2BE-KIG0708, Part F-section 4,
- A separator set-up is used to collect radioactive cuttings when drilling within the mineralized zones. This set-up is located as far as practical from stream systems to prevent contact in case of a spill.

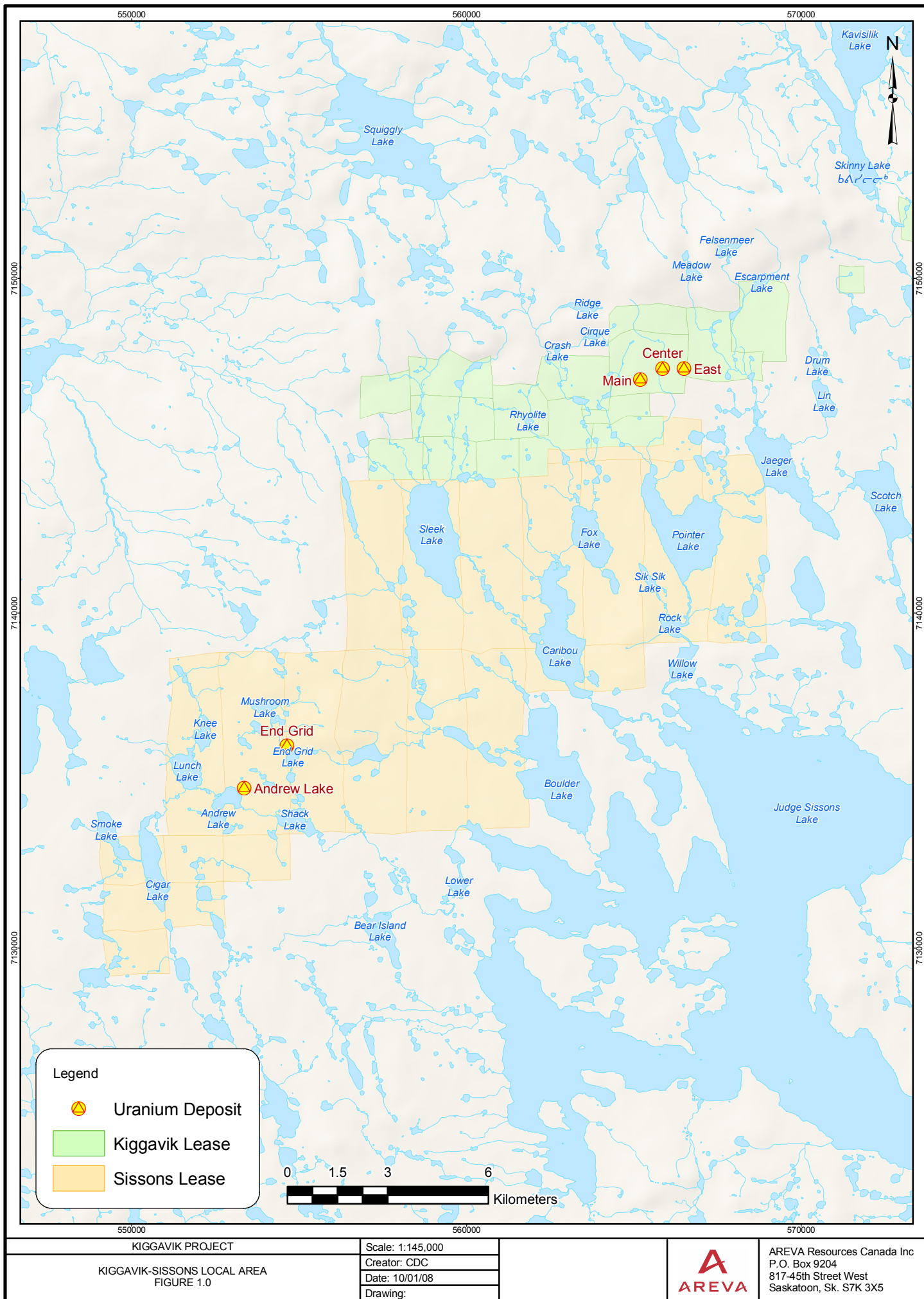
In addition:

- A large piece of heavy poly may be placed within the cribbing of the drill. This acts as a secondary containment for the collection pan and casing box.
- Silt barriers are installed in the Lake (see Figure 3) to reduce the likelihood of suspended particulate matter from drilling fluid from moving into the Lake. The silt barriers consist of approximately 15 m long x 1.5 high laminated polyester fabric with enclosed foam floats along the length of the upper side and anchor chain, which passes through a sleeve along the bottom slide of the barrier. The barrier is impermeable to water and is staked at either end with sections of rebar. A collection pan/casing box is placed around the casing under the drill,
- An arc shaped sandbag barrier (see Figure 3) is installed within the drainage pathway between drill location and the lake. The sandbag barrier is intended to

delay potential flow containing suspended particulates originating from the drill site.

- All fuel storage and fuel tanks are within secondary containment and located as far as practical from the stream system.
- Daily inspections of the drill fluid system are conducted by both the drill crew and AREVA EH&S group.

These mitigation measures are considered to be appropriate to prevent the release and the spread of drilling fluid to End Grid Lake and to the major streams flowing permanently into End Grid Lake. However in case of increased precipitation events resulting in temporary stream systems, it is recognized that the water situation in the End Grid area will result in challenging drilling conditions. Every effort will be made during the 2009 field season to re-route return water potentially flowing towards a water body. The Kiggavik Project Spill Contingency Plan will be implemented in case of contact of drilling fluids with a water body.



KIGGAVIK PROJECT

Scale: 1:145,000

KIGGAVIK-SISSONS LOCAL AREA
FIGURE 1.0

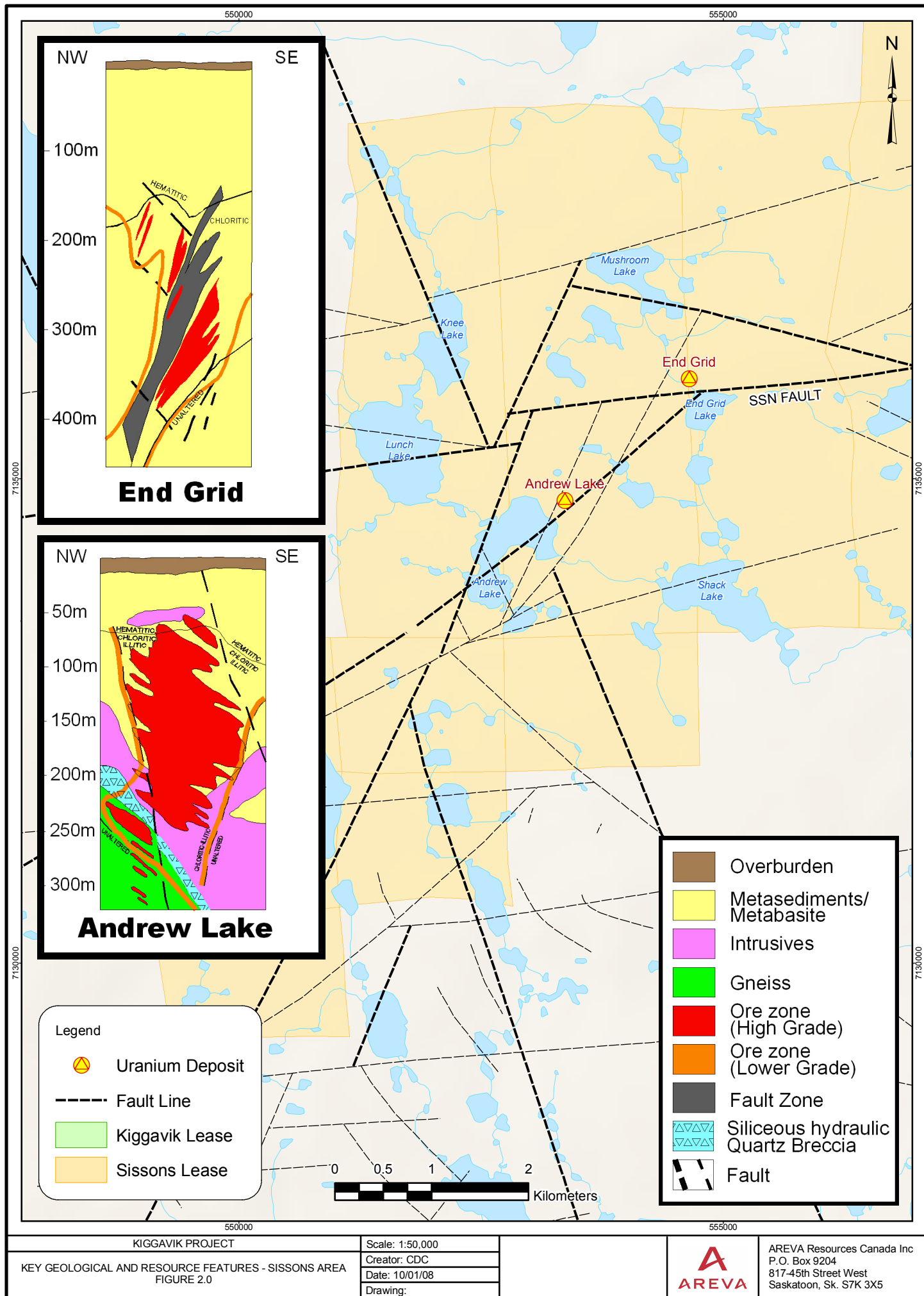
Creator: CDC

Date: 10/01/08

Drawing:



AREVA Resources Canada Inc
P.O. Box 9204
817-45th Street West
Saskatoon, Sk. S7K 3X5





GENERAL AREA OF
PROPOSED DRILLING

LOCATION / DIRECTION
OF GROUND PHOTO

SANDBAG BARRIER

SILT BARRIER

End Grid Lake
(September 9th, 2008)



