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ATHABASCA URANIUM CONFIRMS DRILL TARGETS

Athabasca Uranium Inc. is pleased to report that the Company has confirmed its ten high-value targets for its upcoming diamond drilling program at Keefe Lake, in the southeastern Athabasca Basin. Targets were selected from an in-depth interpretation of seismic data, shot in 2008, which was correlated with Aerotem and Geotem Mag/EM surveys. EM interpretation was completed by Living Sky Geophysics (Saskatoon, SK) and Condor Consulting (Lakewood, CO), with additional modeling and interpretation provided by Irvine Annesley, PhD PGeo, Director of Exploration for JNR Resources. The seismic interpretation, completed by the University of Saskatchewan under the direction of Dr. Zoltan Hajnal, PhD, was successful in identifying subsurface features, such as faults and basement layers. The highest priority drill targets generated by the interpretation show significant faulting which has broken through the unconformity, and is proximal to medium- to low-intensity conductive sandstones, which may indicate regions of alteration.

These targets lie approximately 500 meters north of Keefe Lake proper. In many cases, the target locations show multiple faults and distortions in the sandstone that are interpreted as areas of hydrothermal alteration. As such, the Company intends to drill into these areas of interpreted alteration, through the unconformity and into the faults. Depths to the unconformity are at approximately 200 meters, and it is intended that drilling will test the basement structures for a further 100 meters, for total depths of 300 meters.

Regarding the targets, Athabasca President & CEO Gil Schneider commented "We are extremely excited about the interpretation and the high level of resolution the team was able to provide regarding faults and breaks in the unconformity. This technology is without question a lens into the earth and it is now quite evident why it is deployed by majors such as Cameco and successful juniors like Hathor."

The Company expects to commence drilling within ten days.

About Athabasca Uranium

Athabasca Uranium Inc. is a uranium exploration and development company exploring an aggregate of over 60,000 hectares strategically located in the uranium-rich Athabasca Basin region of northeast Saskatchewan. The Company's stated vision is to explore the region using leading-edge technology to become a world-class uranium mining company. Additional information on Athabasca Uranium and its vision is available on the Company's website at www.athabascauranium.com.

ON BEHALF OF THE BOARD OF DIRECTORS

"Gil Schneider"

Gil Schneider, President & CEO

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