



*Originally covering over 60,000 hectares, the Umfreville Project has been refined, through steady, careful exploration, to the most prospective target area. The project sits on the North-East rim of the Athabasca Basin and lies over a complex series of cross-cutting faults which are typical mineralization settings. Recent airborne surveys have clearly defined the structural targets zone. As well, geophysical and geochemical signatures representative of hydrothermal alteration and uranium have been isolated.*

## WORK TO DATE

Not yet drill tested, the property has undergone a broad array of geophysical and geochemical surveys focused on utilizing the most advanced methods of delineating this high value target zone.

- Initial work in 2005 consisted of a MEGATEM electromagnetic and magnetic survey processed using a layered-earth inversion program and a decay analysis program;
- In 2007 Bell Geospace of Houston Texas, conducted an airborne full tensor gravity gradiometry (Air-FTG) survey over the property which clarified fault systems interpreted from magnetic features not seen in existing geology maps;
- In 2010 a High Resolution Aeromagnetic Gradient and XDS VLF-EM Survey was conducted over the property providing higher detailed fault and lithologic contact interpretations coincident with gravity lows;
- Utilizing CAMIRO techniques (a three year research study utilizing field samples collected from the areas overlying the McClean Lake, Cigar Lake West and Dawn Lake uranium deposits in Saskatchewan's Athabasca Basin), a systematic geochemical survey was conducted across the property during 2011.

## TARGET AREA

Systematic exploration of the original 60,000 hectare Umfreville property has identified the a portion of the north-south trending Fond du Lac Fault as being the priority target area. Favourable indicators of uranium mineralization include:

- A broad aeromagnetic low where the Fond du Lac fault has been resolved into two separate faults may represent an area of structural complexity and/or hydrothermal alteration,
- An airborne gravity low coincides with the splaying of the Fond du Lac Fault and may indicate an area of hydrothermal alteration,
- The source of anomalous uranium concentrations in lake sediments found to the immediate west (down ice) by the Saskatchewan Geological Survey in 1979 may be on the Umfreville property, and
- A 2011 soil geochemical survey returned anomalous uranium, vanadium, molybdenum, zinc, nickel and cobalt concentrations proximal to the Fond du Lac Fault.

## WORK PLAN

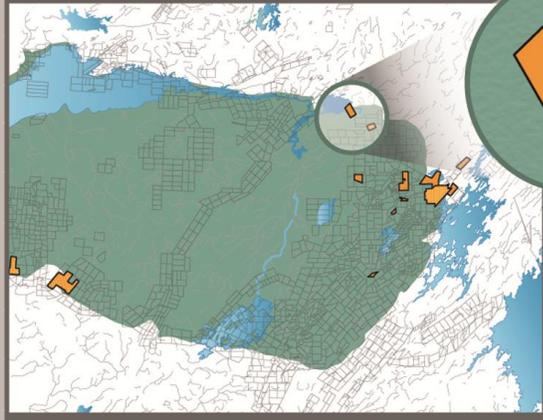
Ground geophysical surveys (e.g. induced polarization and gravity) will be conducted over the southern portion of the Fond du Lac fault before drilling occurs in this prospective area.

# Umfreville Project

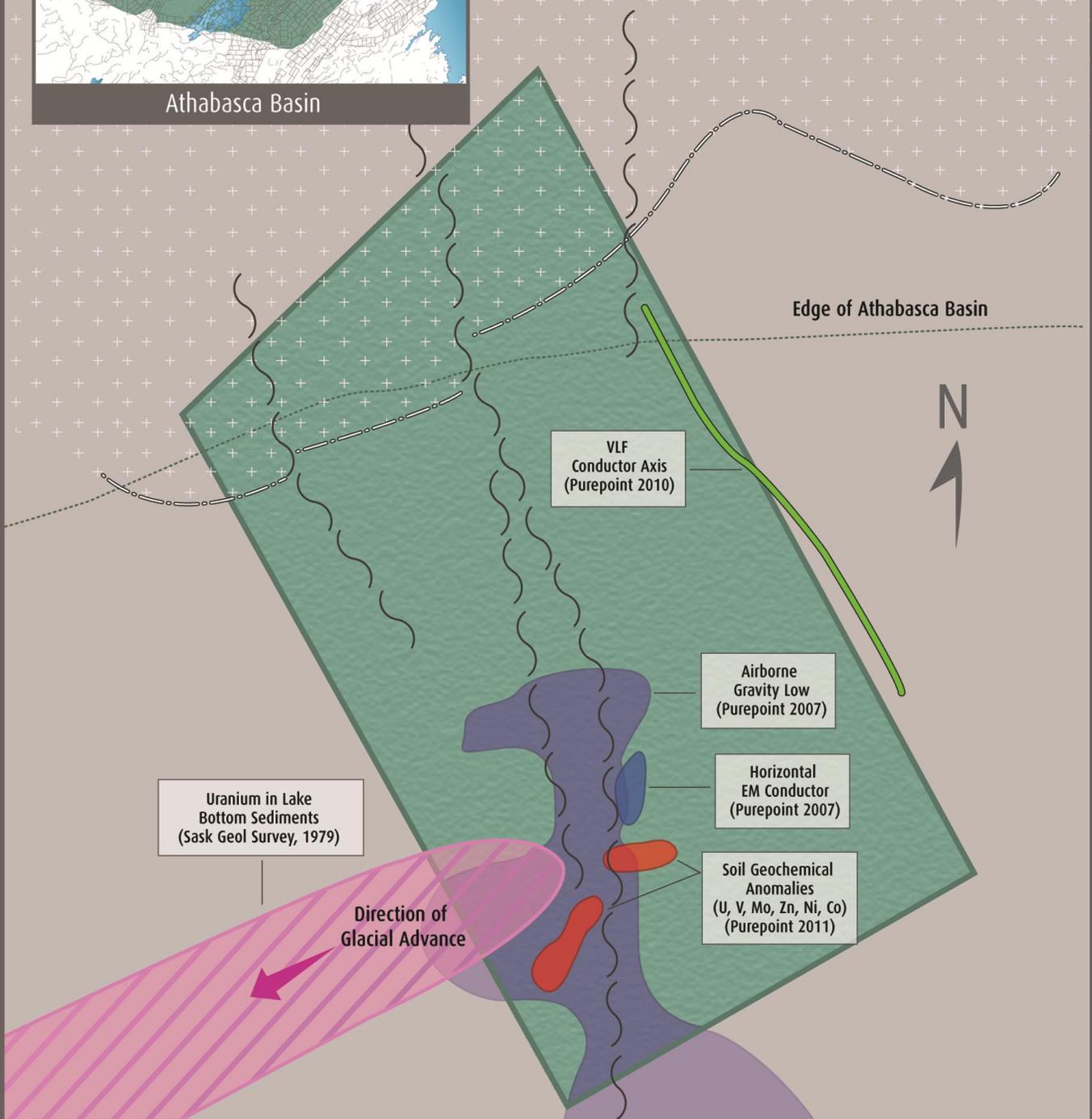
Purepoint Uranium Group Inc.

Location Map  
5,460 Hectares  
NTS 74-P-02

Date Prepared: February 2012



Athabasca Basin



Uranium in Lake Bottom Sediments (Sask Geol Survey, 1979)

VLF Conductor Axis (Purepoint 2010)

Airborne Gravity Low (Purepoint 2007)

Horizontal EM Conductor (Purepoint 2007)

Soil Geochemical Anomalies (U, V, Mo, Zn, Ni, Co) (Purepoint 2011)

Direction of Glacial Advance

**Legend**

- Geologic Contact - Interpreted
- Fault - Interpreted
- Magnetic High (Granite)

0km 1km 2km 3km  
Scale