

Press Release

U3O8 Corp. identifies Athabasca-style alteration in the Roraima Basin

Alteration zoning consistent with unconformity-related uranium identified for the first time in the Roraima – underscores potential of the basin for uranium

Toronto, Ontario – June 4, 2009 – **U3O8 Corp. (TSX Venture: UWE)**, a Canadian uranium exploration company, in its ongoing exploration program within the Roraima Basin of Guyana, South America, has identified alteration zoning that is similar to uranium pathfinder alteration associated with unconformity-related deposits in Canada's Athabasca Basin. Sudoite, a magnesium-rich chlorite mineral that is characteristic of unconformity-related uranium, has been found in archived core from several bore holes that were drilled in the Roraima Basin. The sudoite occurs with illite, kaolinite and hematite, which together comprise the classic alteration suite seen in the Athabasca Basin. The Athabasca Basin is host to approximately one third of the world's uranium resources.

"U3O8 Corp. has identified alteration zoning in the Roraima Basin that is characteristic of unconformity-style uranium deposits in the Athabasca Basin," said Dr. Richard Spencer, U3O8 Corp's President and CEO. "This is the first time that these key alteration minerals have been detected in the Roraima and underscore the potential of the basin for unconformity-related uranium. These alteration results augment a diverse data set that we are using to rank our targets so that the most compelling areas can be drilled when financial markets improve."

The archived core in which the alteration has been found was drilled by a company exploring for gold in the Roraima Basin in the mid-1990's, and provides a cost-effective means of defining the most prospective parts of U3O8 Corp's wider target areas. U3O8 Corp. was granted access to over 10,000 metres of this core from 41 bore holes that were archived by the Guyana Geology and Mines Commission. U3O8 Corp. geologists re-logged the core and identified the characteristic alteration with a TerraSpec® Infrared Spectrometer. An independent alteration mineralogy expert verified the identification of these key minerals.

Exploration Approach

By analogy with unconformity-related uranium deposits in the Athabasca, U3O8 Corp. has defined targets that lie near the floor of the Roraima Basin where regional faults cut potentially graphite-bearing rocks in the underlying basement. Eight targets were initially identified, some of which are supported by radiometric anomalies from U3O8 Corp's 2007 heliborne radiometric survey. Additional targets were identified and covered by an airborne geophysics survey contracted by U3O8 Corp. in late 2008.

Some targets lie within a few kilometres of prior drilling from which archived core is available for study. Alteration zoning identified in this core is being used to evaluate these targets. Targets that are not in close proximity to prior drilling are being assessed with field-based ground radiometric surveys and rock-chip sampling to detect alteration and zoning in chemical pathfinder elements.

To date, five targets have been evaluated and field work is ongoing on a sixth. Results of this preliminary evaluation are discussed below. As the evaluation of each area is completed, it will be prioritized in terms

of its potential to host unconformity-related uranium mineralization. Drilling of the targets with the most potential is expected to commence in due course as financial markets stabilize.

Overview of Target Results To Date

- “**Target 21**” was defined on the basis of intense clay alteration (sudoite grading into illite) identified in archived core from a bore hole that was drilled approximately two kilometres south of a regional fault that is evident in magnetic data from the 2008 geophysics survey. The core also contains hematite that occurs above and below a central zone of iron sulphate.

The extensive sudoite and illite alteration could constitute the outer part of an alteration system that is related to the regional fault, analogous to the alteration systems at the McArthur River (Figure 1) and the Key Lake deposits in the Athabasca. Hematite is an important pathfinder alteration mineral in the Athabasca, while the significance of iron sulphate in the archived core is not clear at this stage. Target 21 lies at a depth of about 200 metres below surface. U3O8 Corp’s interpretation of Target 21, as illustrated in Figure 2, is conceptual in nature, and aims to provide context to the observed clay alteration and iron minerals.

- “**Target 22**” is associated with a cluster of radiometric anomalies that lie adjacent to a regional fault, which can be traced beneath the Roraima Basin in magnetic data. Archived core from a bore hole drilled two kilometres east of the radiometric anomalies contains sudoite, kaolinite and high-aluminum muscovite clay alteration. Hematite occurs with the sudoite, and the core shows extensive silicification. The sudoite-kaolinite zone in the archived core is located some 400 metres vertically above the unconformity, and is reminiscent of alteration zoning that encloses the Athabasca’s McArthur River deposit where chlorite overlies kaolinite about 300 metres above the deposit (Figure 1).

U3O8 Corp’s current interpretation is that the archived core from the bore hole near Target 22 was drilled in the outer parts of an alteration system that is most likely centred on the regional fault. The radiometric anomalies may be due to radioactive leakage along the fault zone from buried mineralization located where the fault intersects the unconformity. The principal target lies at approximately 400 metres depth below surface. U3O8 Corp’s interpretation of Target 22, as illustrated in Figure 3, is conceptual in nature, and aims to provide context to the observed alteration.

- “**Target 11**” is a linear radiometric anomaly identified in the 2007 geophysics survey, which straddles a fault zone that cuts potentially graphitic basement rocks that lie beneath the Roraima Basin. Field radiometric surveys validated the radiometric anomaly, and alteration studies of outcrop confirmed the presence of alteration minerals, illite, kaolinite and chlorite. Rock-chip sampling further identified slightly elevated levels of several pathfinder elements that, like alteration minerals, are commonly associated with uranium mineralization in the Athabasca Basin.
- Field-based follow-up of two targets from the 2007 survey showed that the radiometric anomalies in these specific areas were due to edge effects from the escarpment of the Roraima Basin itself, and did not derive from mineralization. This finding provided a better understanding of the means by which other radiometric anomalies identified in the 2007 survey may be more efficiently screened and evaluated.

It is uncertain if further exploration will result in the identification of significant uranium mineralization within the above target areas.

Mr. Richard Cleath (M.Sc.), Vice President of U3O8 Corp., a Qualified Person within the definition of that term in National Instrument 43-101 of the Canadian Securities Administrators, had overall responsibility for all aspects of target selection and evaluation. Mr. Cleath has supervised the preparation of, and verified, the technical information in this release.

Figure 1 – Alteration Zoning Associated with Unconformity-Related Uranium in the Athabasca Basin

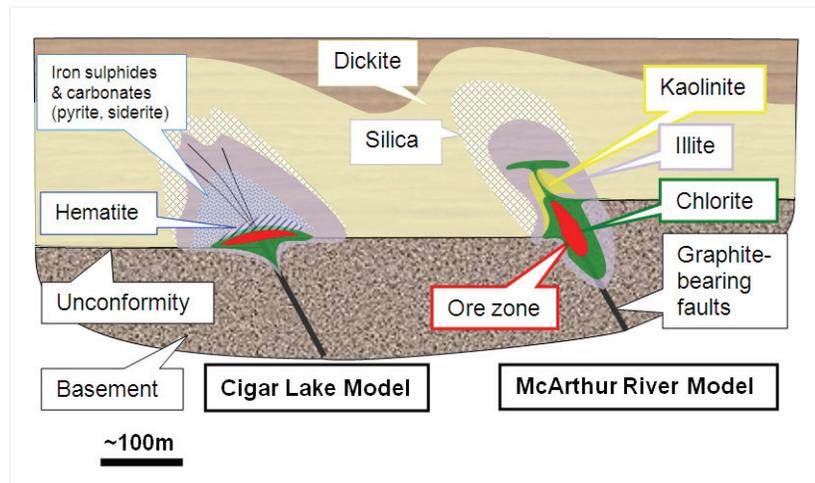
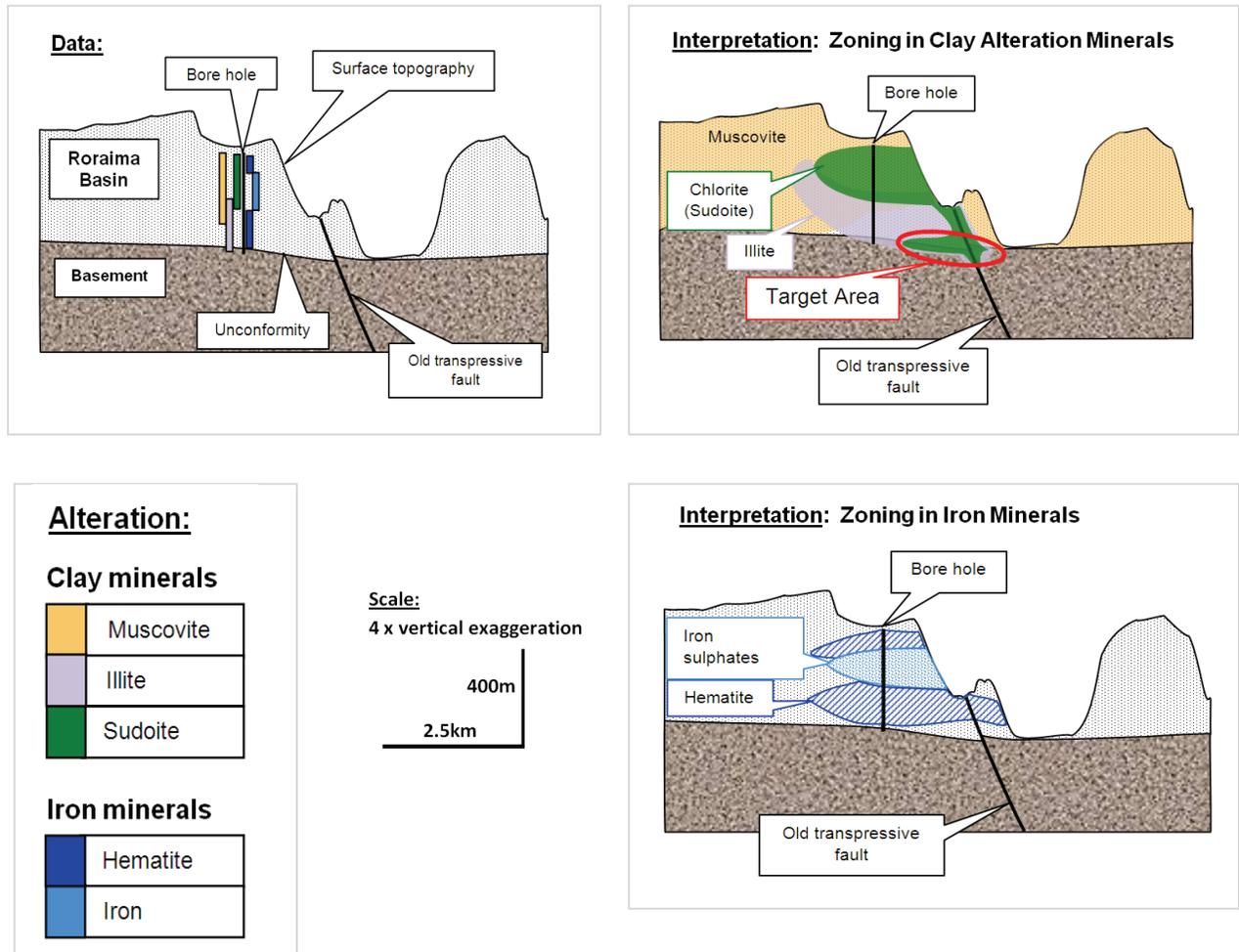


Diagram shows the model of alteration associated with unconformity-related uranium deposits in the Cigar Lake and McArthur River mines in Canada's Athabasca Basin. Alteration zoning – specific clay minerals (eg. illite and chlorite) that occur in roughly concentric zones around uranium deposits – are typically much larger than the deposits themselves and can help narrow exploration to within hundreds of metres of an ore body. U3O8 Corp. is using alteration mapping as a cost-effective primary exploration tool in the evaluation of its unconformity-type targets in the Roraima Basin.

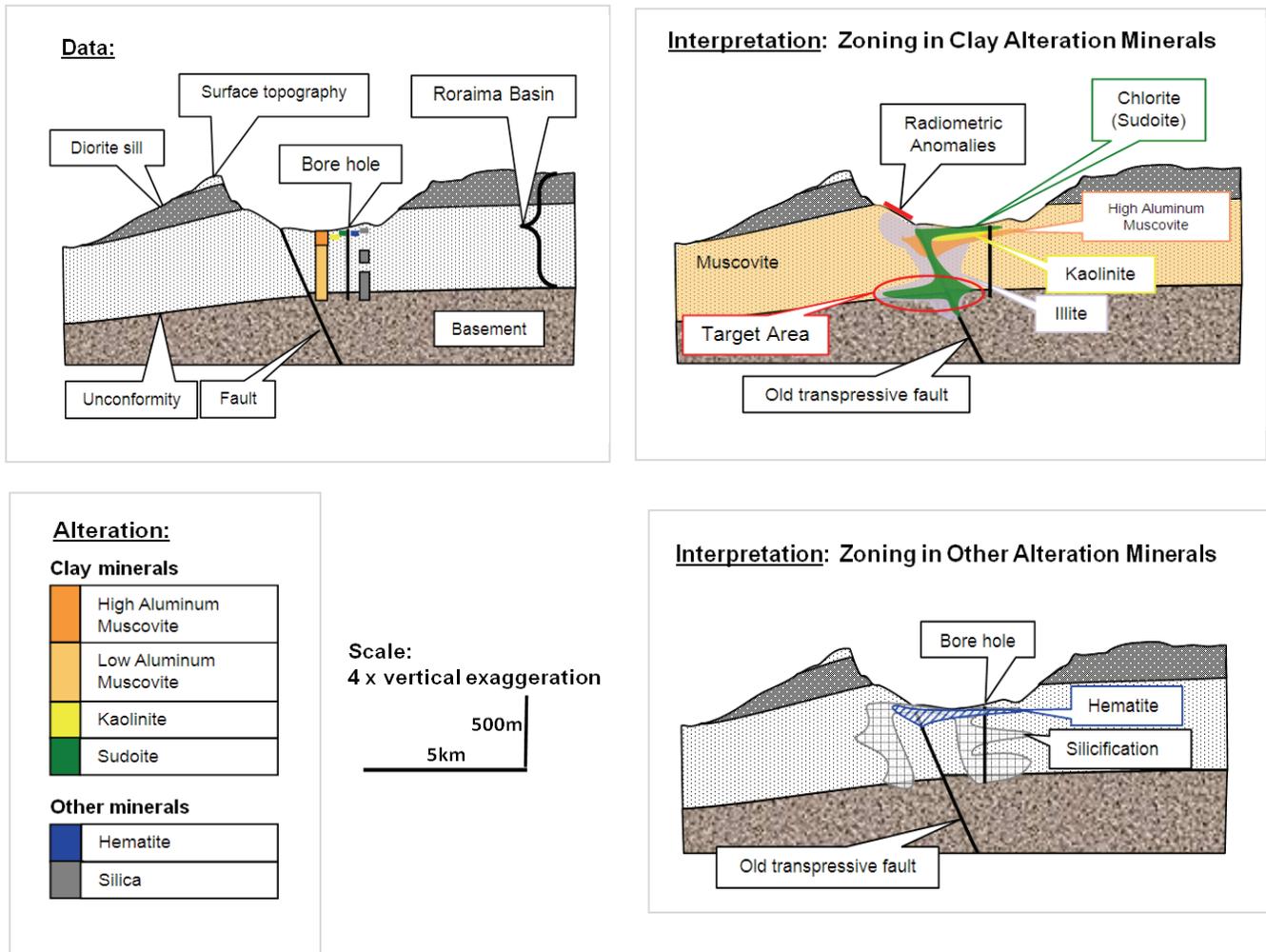
Figure 2 – U3O8 Corp’s Interpretation of Alteration on Target 21



“**Target 21**” was defined on the basis of intense clay and iron alteration zoning identified in archived core from a bore hole that was drilled some two kilometres south of a regional fault in the Roraima Basin. The sudoite and illite alteration may constitute the outer part of an alteration system that is related to the regional fault, analogous to alteration systems associated with unconformity-type uranium in the Athabasca. Hematite is an important pathfinder mineral in the Athabasca, while the significance of iron sulphate in the archived core is not clear at this stage.

Target 21 lies at a depth of about 200 metres below surface. U3O8 Corp’s interpretation of Target 21 is conceptual in nature, and aims to provide context to the observed alteration minerals. It is uncertain whether further exploration will result in the identification of significant uranium mineralization within the target area.

Figure 3 – U3O8 Corp’s Interpretation of Alteration on Target 22



“Target 22” is associated with a cluster of radiometric anomalies that lie adjacent to a regional fault in the Roraima Basin. The radiometric anomalies may derive from radioactive leakage along the fault zone from buried mineralization located where the fault intersects the unconformity. Alteration has been identified in archived core from a bore hole drilled two kilometres east of the radiometric anomalies. The sudoite, kaolinite and high aluminum muscovite alteration zones may constitute the outer part of an alteration system that is most likely centred on the regional fault. Hematite occurs with the sudoite, and the core shows extensive silicification. The alteration is located some 400 metres vertically above the unconformity, and is reminiscent of alteration zoning that encloses the Athabasca’s McArthur River deposit where chlorite overlies kaolinite about 300 metres above the deposit.

The principal target lies at approximately 400 metres depth below surface. U3O8 Corp’s interpretation of Target 22 is conceptual in nature, and aims to provide context to the observed alteration. It is uncertain if further exploration will result in the identification of significant uranium mineralization within the target area.

About U3O8 Corp.

U3O8 Corp. is a Canadian uranium exploration company based in Toronto, Canada. Currently focused on uranium exploration in the Roraima Basin in Guyana, South America, U3O8 Corp's primary business objective is to explore, develop and acquire uranium projects. The company is well funded with over \$7.5 million held solely in cash and Canadian chartered bank-backed Guaranteed Investment Certificates.

U3O8 Corp. has exclusive uranium exploration rights in an area covering approximately 1.3 million hectares that straddles the edge of the Roraima Basin in Guyana. The company is advancing a two-pronged exploration strategy that focuses on:

- Exploration for multiple uranium-bearing structures within structural systems in the basement adjacent to the Roraima Basin with the concept that the individual breccia zones could potentially aggregate to a significant total resource; and
- Exploration for unconformity-related uranium deposits near the base of the Roraima Basin, which are similar to those of the prolific Athabasca Basin in Saskatchewan.

For further information on the company's properties, please refer to the technical reports prepared for the company by Dahrouge Geological Consulting Ltd. and dated September 15, 2006 as amended and restated December 12, 2006; and the NI 43-101 report titled "A Technical Review of the Aricheng North and Aircheng South Uranium Deposits in Western Guyana for U3O8 Corp. and Prometheus Resources (Guyana) Inc." by Watts, Griffis and McOuat dated January 14, 2009, available on SEDAR at www.sedar.com and on the company's website www.u3o8corp.com.

Forward-Looking Statements

Certain information set forth in this news release may contain forward-looking statements that involve substantial known and unknown risks and uncertainties. These forward-looking statements are subject to numerous risks and uncertainties, certain of which are beyond the control of U3O8 Corp., including, but not limited to, the impact of general economic conditions, industry conditions, volatility of commodity prices, risks associated with the uncertainty of exploration results and estimates, currency fluctuations, dependence upon regulatory approvals, the uncertainty of obtaining additional financing and exploration risk. Readers are cautioned that the assumptions used in the preparation of such information, although considered reasonable at the time of preparation, may prove to be imprecise and, as such, undue reliance should not be placed on forward-looking statements.

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U3O8 Corp. (TSX-V: UWE)
Basic shares outstanding: 23,057,700
Fully diluted shares outstanding: 24,887,700