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## **UPDATE - STEWARDSON 2014 EXPLORATION PROGRAM**

Uravan Minerals Inc. (Uravan) recently completed phase one of a three phase exploration program on the Stewardson property. The Stewardson property is located on the Virgin River structural trend within the south-central portion of the Athabasca Basin<sup>1</sup>, Saskatchewan [\[map link\]](#) and is a joint exploration effort between Uravan and Cameco Corporation (Cameco) [\[press release link\]](#). Uravan is the operator with the responsibility to plan and implement the technical program in consultation with and on behalf of Cameco, who is funding the 2014 exploration.

The first phase of exploration consisted of a surface SQUID Fixed Loop TDEM geophysical survey completed under winter conditions by Patterson Geophysics Inc. of La Ronge, SK. The SQUID TDEM system has proven to be effective in detecting conductive sources in deeper terrain. The Fixed Loop survey grid consisted of nine (9) survey lines and three (3) sets of opposing loops, positioned perpendicular to the north trending E-conductor (Target Area “A”) located in the south-central portion of the Stewardson property. Target Area “A” outlines the most conductive portion of the E-conductor previously identified in the airborne ZTEM geophysical survey completed in 2013. The ZTEM survey delineated two (2) prominent basement conductive features that transect the Stewardson property. These conductive features are interpreted to be the northern extension of the C- and E-conductors defined by Cameco on their Virgin River project, which adjoins the Stewardson property to the south [\[map link\]](#).

The preliminary interpretation of the SQUID TDEM data indicates a strong correlation with the ZTEM-defined trace of the E-conductor [\[map link\]](#). Modeling of the SQUID TDEM data is in progress.

The trace of the E-conductor in Target Area “A” is supported by an anomalous surface geochemical corridor made up of radiogenic lead (Pb) isotopic ratios (<sup>207</sup>Pb/<sup>206</sup>Pb) in the clay-size fraction of soil samples and tree-cores, and anomalous uranium values in the clay-size fraction of soil samples [\[map link\]](#). These surface geochemical anomalies were identified from a property-wide multifaceted surface geochemical sampling program completed by Uravan in 2011 [\[map link\]](#). The direct correlation of the E-conductor with an anomalous surface geochemical corridor, as defined above by the unique element and isotopic compositions, are key coincident components required to define potential uranium mineralization at depth versus drilling blind conductors.

In early June 2014, the second phase of exploration will commence over Target Area “A”. This phase will consist of two components: (1) a surface Internal Field Gradient (IFG) geophysical survey; and (2) an infill surface geochemical sampling program [\[map link\]](#). The IFG survey is a ‘natural source’ electromagnetic (EM) system that will be conducted by EMPulse Geophysics Ltd. of Dalmeny, SK [\[information link\]](#). The IFG survey will be positioned concordant with the three (3) central lines of the SQUID TDEM profiles, and is intended to supplement the Fixed Loop SQUID data [\[map link\]](#).

The planned infill surface geochemical sampling program is designed to provide detail to the previous property-wide multifaceted surface program completed in 2011, and will be oriented directly over the E-conductor in Target Area ‘A’. The surface program will consist of 450 survey sites for collecting tree-cores, B- and C- horizon soil samples for analysis of the clay-size fraction, and A2-horizon soil samples for MET<sup>2</sup> analysis. The sampling grid is designed to merge with the 2011 surface geochemical data, collected on a 500 m grid spacing, to give an effective sampling grid density of approximately 200 m [\[map link\]](#). Soil sample preparation and elemental analysis will be completed by Acme Laboratories in Vancouver, B.C. The clay-size fraction of soil samples (<2 µm) will be separated and then analyzed for 53 elements plus all rare earth elements (REEs) and lead (Pb) isotopes, by ICP-MS and ICP-ES. The A2-horizon soil samples will be analyzed by Environmental BioTechnologies Inc. (EBT) in Lodi, California, using their MET analytical method. The infill sampling program will be conducted by Uravan’s technical group.

The proposed third phase of the exploration program will consist of two (2) diamond drill-holes to test the E-conductor in Target Area “A”. Final drill-hole positioning will be based on the combined results and correlation of the surface geophysical and infill geochemical surveys. Mobilization of drilling equipment to the Stewardson property was completed in March 2014 under winter conditions. Drilling operations will commence in August 2014 and be conducted by Major Drilling Group International Inc. from Winnipeg, Manitoba.

Mr. Larry Lahusen, CEO with Uravan states, “I believe the E-conductor at Target Area ‘A’ represents a significant ‘conductive bright spot’ that correlates amazingly well with surface geochemical anomalies, a key requirement in Uravan’s exploration strategy. Since

2008, Uravan and QFIR<sup>3</sup> have pursued innovative surface geochemical techniques that help define prospective exploration targets associated with positive geophysical, structural and geological features. Following two surface geochemical studies over known high-grade uranium deposits at Cigar West<sup>4</sup> and Centennial<sup>5</sup>, and five (5) other surface geochemical programs on Uravan's active projects, we are now starting to understand what a mineralized conductor looks like geochemically versus the many barren conductors that transect the Athabasca Basin. The 'conductive bright spot' at Target Area "A" on the Stewardson property is well correlated with positive anomalous surface geochemical patterns, which has defined a unique drilling opportunity and a potential 'game changer' for uranium exploration."



Dr. Colin Dunn, P. Geo., technical advisor for Uravan, is the Qualified Person for the purposes of NI 43-101 with respect to the technical information in this press release. Dr. Colin Dunn, an independent specialist in biogeochemistry, is working closely with Uravan's technical group and QFIR to advance the interpretation of surface geochemical results.

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<sup>1</sup>The Athabasca Basin is an ancient (Paleoproterozoic) sandstone basin located in northern Saskatchewan, Canada. The Athabasca Sandstone (Manitou Falls (MF) Formation) hosts high-grade uranium deposits at and below the unconformity between the sandstone and the older crystalline basement rocks. These unconformity-type uranium deposits occur in sandstones at the sandstone-basement unconformity contact (sandstone-hosted mineralization) and within the underlying structurally disrupted crystalline basement (basement-hosted mineralization). These unconformity-type uranium deposits account for about 25 percent of the world's primary uranium production. The ore grades are high, typically grading 2% to 20% U<sub>3</sub>O<sub>8</sub>.

<sup>2</sup> The MET (Microbial Exploration Technology) process assumes that gaseous hydrocarbons (methane) migrate from the redox environment at the surface of a uranium deposit at depth to the surface environment. These hydrocarbons serve as a nutrient source that promotes the growth of soil-based micro-organisms that exist in the aerobic zone of the surface environment. The MET process then measures the increased microbial activity from each soil sample collected.



<sup>3</sup>The Queen's Facility for Isotope Research (QFIR) at Queen's University, Ontario is a state-of-the-art research facility, comprising a group of highly experienced research geochemists. The QFIR lab contains some of the most technologically advanced analytical equipment in Canada. Under the direction of Dr. Kurt Kyser, the QFIR research team is working collaboratively with Uravan's technical group to develop new exploration technologies using applied research.

<sup>4</sup>The Cigar West Study was a collaborative applied research program conducted by Uravan and QFIR in 2009 over a known high-grade uranium deposit in the Athabasca Basin. The study was designed to develop new surface geochemical techniques that can better identify bedrock sources of uranium mineralization at depth. This research clearly identified distinctive elements and isotopic compositions that have been mobilized from the deposit (geosphere) to the surface media (plants and soils) from depths >450 meters. The Cigar Lake deposit is on the Waterbury/Cigar uranium property located in the Athabasca Basin, Saskatchewan, and is a joint venture partnership between Cameco Corporation, AREVA, Idemitsu Kosan Co. Ltd., and Tokyo Electric Power Co. [TEPCO]. Uravan thanks both AREVA and Cameco for their collaboration and gracious support for the Cigar West Study, and the support provided by the Cigar Lake facility during our field operations.

<sup>5</sup>Uravan in collaboration with Cameco Corporation (Cameco), QFIR, and Environmental BioTechnologies Inc. (EBT), completed a multi-faceted surface geochemical sampling program over the Centennial uranium deposit (Centennial Survey), located on the Virgin River structural trend within the south-central portion of the Athabasca Basin, Saskatchewan. The Centennial deposit is a high-grade unconformity-type uranium deposit occurring at a depth of approximately 800 m that is currently in the drill-developed stage by Cameco and its joint venture partners, Areva Resources Canada Inc. (AREVA) and Formation Metals Inc. (Coronation Mines). The spatial relationship and surface distribution of certain pathfinder elements, lead (Pb) isotopic ratios (<sup>207</sup>Pb/<sup>206</sup>Pb), and MET microbial values in the surface media analyzed, provide a compelling, coincident surface anomaly that, when displayed with other known geophysical survey data and interpreted structural patterns, clearly defined the surface projection of the Centennial uranium deposit and would certainly vector drilling to a deposit at 800 meters depth in a 'green-fields' exploration setting [[press release link](#)].

Uravan is a Calgary, Alberta-based diversified mineral exploration company that utilizes applied research to develop new innovative exploration technologies to identify buried uranium, rare earth elements (REEs) and nickel-copper-platinum group element (Ni-Cu-PGE) deposits in under-explored areas. Our exploration focus in uranium is for potential high-grade unconformity-type uranium deposits in the Athabasca and Thelon Basins in Canada and other basin environments globally. Uravan is a publicly listed company on the TSX Venture Exchange under the trading symbol UVN. All of the mineral properties Uravan owns are considered in the exploration stage of development.

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