CanAlaska Reports Significant Alteration In First Drill Program At Geikie Uranium Project

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Structurally Controlled Hydrothermal Alteration Associated with Faulted Graphitic Stratigraphy

Project Expanded by Staking 1,187 Hectares; Adding Priority Targets

Vancouver, August 10, 2023 - CanAlaska Uranium Ltd. (TSXV: CVV) (OTCQX: CVVUF) (FSE: DH7N) ("CanAlaska or the "Company") is pleased to announce successful completion of the 2023 drill program at the Geikie project near the Athabasca Basin margin (Figure 1). The program focused on a 15-kilometre-long northeast trending conductor system with high-priority structural targets that were compiled from recent high-resolution airborne radiometric, magnetic, and electromagnetic surveys in combination with prospecting, structural mapping, and historical data review. The Company reports the objectives of the program were exceeded, identifying graphitic host rocks with large reactivated and brecciated fault zones, associated with hydrothermal alteration and elevated radioactivity.

Figure 1 - Geikie Project Location

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https://images.newsfilecorp.com/files/2864/176751_12d2d80524c93aec_002full.jpg

2023 Geikie Summer Drill Program

The Geikie project is located approximately 10 kilometres east of the Athabasca Basin margin and 10 kilometres west of Highway 905. The 2023 summer drill program consisted of 2,217 metres in eight drill holes, representing CanAlaska's first drill holes on it's 60%-owned Geikie project. The program successfully intersected graphitic host rocks, showing evidence of multiple post-Athabasca structural reactivation events, associated with the intersection of north-south and northwest trending faults, hydrothermal alteration, and elevated radioactivity.

Figure 2 - 2023 Geikie Drill Program Results

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The drill program confirmed the presence of hydrothermal alteration systems within a complex structural framework at Geikie, which is important in the formation of basement-hosted high-grade uranium deposits.

Results of this first drill program will allow for refinement of the exploration model on the Geikie project to target the most prospective portions of the multiple structural corridors. Significant early results from the Preston Creek target area indicates the 15-kilometre-long structural corridor represents a high priority target area for further drill testing (Figure 2).

Geochemical assay results for the 2023 program are pending.

2023 Geikie Summer Drill Program Target Area Results Summary

The Preston Creek target area is located at the northeastern end of the 15-kilometre-long conductor trend. Five drill holes (GKI004 - GKI008) were completed within this target area (Table 1). Each drill hole in this target area intersected re-activated basement faults, up to 30 metres in width, consisting of clay gouge and breccias within variably graphitic pelitic host rocks. Hydrothermal alteration enveloping the major fault zones consisted of hematite, chlorite, clay, and structurally-enhanced graphitic clays. Within the fault zones, the alteration intensifies and locally overprints the original host rock through numerous phases of faulting and fluid circulation (Figure 3). At the base of GKI004, an extensive zone of pervasive hematite alteration was intersected at the inferred contact between the Wollaston metasediments and Johnson Lake Granite. The 21-metre-thick interval was characterized by intense brick-red hematite completely overprinting the primary texture of the host rock. Abundant interstitial specular hematite and pyrite nodules were disseminated throughout the rock and as microfractures and fracture fillings. Additionally, in GKI005, elevated radiometry, up to 1,000 cps CT007-M, was intersected from 255.3 to 255.6 metres, associated with a sheared graphitic pelite. The complex structural framework of the Preston Creek target area with the associated hydrothermal alteration is very encouraging for the prospectivity of this portion of the 15-kilometre-long conductor trend and the broader project area.

The Aero Lake target area is located at the southern end of the 15-kilometre-long conductor trend. One drill hole (GKI 002) was completed within this target area (Table 1). GKI002 intersected a large re-activated fault zone from 59 to 88 metres characterized by cohesive breccias and cataclastic faults with dark grey clay gouge. Hydrothermal alteration spatially associated with the fault zone consists primarily of clay alteration and chloritization. At the base of GKI002, elevated radiometry, up to 1,750 cps CT007-M, is associated with semi-massive biotite in a pegmatite unit from 185.0 to 185.6 metres.

The Hourglass Lake target area is located midway along the 15-kilometre-long conductor trend. Two drillholes (GKI001 and GKI003) were completed within this target area (Table 1). Each drill hole intersected intervals of weakly to moderately graphitic pelite with only minor structural reactivation. The inferred offset of the conductor package identified from the VTEM survey has not yet been explained.

All reported depths and intervals are down hole depths and intervals, unless otherwise noted, and do not represent true thicknesses, which have yet to be determined.

CanAlaska CEO, Cory Belyk, comments, "The presence of large fault structures, hydrothermal alteration and elevated radiometric values is a great outcome from this first drilling program by CanAlaska and Basin Energy. The early drill results clearly indicate the right ingredients for basement-hosted uranium deposit formation are present and active on the Geikie project. This first exploration program has tested a very small portion of this very large project and there is very little doubt that further data analysis when assays are returned in conjunction with new geophysical data will yield additional high priority targets for the next phase of exploration."

Figure 3 - Hydrothermal alteration enveloping fault zones in Preston Creek Target Area

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https://images.newsfilecorp.com/files/2864/176751_12d2d80524c93aec_006full.jpg

Geikie Project Expansion

The Geikie uranium project was recently expanded through claim staking to add two additional claims (Figure 2) totalling 1,187 hectares, now bringing the total Geikie project size to 35,084 hectares. The new claims are host to the historical Johnson Lake (Marina) Pb-Zn-Ag showing which consists of mineralization in outcrops, boulders, and drillholes. The mineralization occurs as disseminations, layers, and coarse pod-like segregations in addition to infills along fractures. Historical grab samples returned up to 5.31% Pb, 1.49% Zn, and 1.0 oz/t Ag. The additional claims have been added to the existing earn-in agreement between Basin Energy and CanAlaska.

Table 1 - 2023 Summer Drill Hole Collar Summary

Drill Hole	Target Area	Easting	Northing	Elevation (m A.S.L.)	Azimuth (˚)	Dip (˚)	EOH (m)
GKI001	Hourglass Lake	548157	6369438	463.5	130	-60	249.4
GKI002	Aero Lake	545821	6366173	446.0	128	-50	240.5
GKI003	Hourglass Lake	544743	6368493	461.0	130	-50	152.0
GKI004	Preston Creek	551165	6372430	450.5	110	-50	390.0
GKI005	Preston Creek	551424	6373287	436.7	122	-45	331.0
GKI006	Preston Creek	552146	6375884	462.0	120	-45	310.0
GKI007	Preston Creek	551977	6374956	474.0	120	-45	176.0
GKI008	Preston Creek	551245	6372646	433.6	100	-45	368.0

Notes: Easting and Northing coordinates are reported in UTM Zone 13N (NAD83 datum). EOH = end of hole. m A.S.L. = metres above sea level.

Geikie Project Overview

The Geikie Project is located just outside the eastern margin of the Athabasca Basin within the Wollaston Domain. The Project area has been subject to minimal exploration for uranium, with most significant work targeting base metals between 1967 and 1980. During this regional work, a series of mineralized showings were discovered in the Mud Lake and Johnson Lake South (Marina South) areas. The Mud Lake uranium-molybdenum showing recorded a series of anomalous rock chips with grades of up to 0.225%U, 5.2%Mo, and 1.4%Cu. The Johnson Lake South (Marina South) lead-zinc prospect recorded anomalous mineralization in outcrop of up to 2.03% Pb, 7.2% Zn and 0.93 oz/t Ag. Recent ground prospecting on the project has since confirmed the Mud Lake uranium-molybdenum, showing results with up to 3,250 ppm molybdenum total and 0.21% uranium total in grab samples.

The primary target on the Geikie project is basement-hosted uranium mineralization, where uranium bearing structures intersect favourable metasedimentary host rocks. The Geikie project is located within 10 kilometres of recent discoveries of basement-hosted uranium mineralization at the nearby Gemini Mineralized Zone ("GMZ") and ACKIO. These recent discoveries along with known mineralization at the nearby Agip-S and West Way prospects, all underscore the prospectivity of this portion of the Wollaston Belt.

The Geikie project is currently being sole-funded by Basin Energy Limited (ASX: BSN) under an option earn-in agreement with the Company.

Geochemical Sampling Procedures

All drill core samples from the 2023 program were shipped to the Saskatchewan Research Council Geoanalytical Laboratories (SRC) in Saskatoon, Saskatchewan. The samples were shipped in secure containment for preparation, processing, and multi-element analysis by ICP-MS and ICP-OES using total (HF:NHO3:HClO4) and partial digestion (HNO3:HCl), boron by fusion, and U_3O_8 wt% assay by ICP-OES using higher grade standards. Radiometric assay samples are chosen based on downhole probing radiometric equivalent uranium grades and scintillometer (SPP2 or CT007-M) peaks. Assay samples comprise 0.3 - 0.5 metre continuous split-core samples over the mineralized interval. A 0.1% U_3O_8 cut-off with a maximum internal dilution of 1 metre is used for compositing and reporting the data. The SRC is an ISO/IEC 17025/2005 and Standards Council of Canada certified analytical laboratory. Blanks, standard reference materials, and repeats are inserted into the sample stream at regular intervals by CanAlaska and the SRC in accordance with CanAlaska's quality assurance / quality control (QA/QC) procedures. Geochemical assay data are subject to verification procedures by qualified persons employed by CanAlaska prior to disclosure.

About CanAlaska Uranium

CanAlaska Uranium Ltd. (TSXV: CVV) (OTCQX: CVVUF) (FSE: DH7N) holds interests in approximately 350,000 hectares (865,000 acres), in Canada's Athabasca Basin - the "Saudi Arabia of Uranium." CanAlaska's strategic holdings have attracted major international mining companies. CanAlaska is currently working with Cameco and Denison at two of the Company's properties in the Eastern Athabasca Basin. CanAlaska is a project generator positioned for discovery success in the world's richest uranium district. The Company also holds properties prospective for nickel, copper, gold and diamonds. For further information visit www.canalaska.com.

The qualified technical person for this news release is Nathan Bridge, MSc., P.Geo., CanAlaska's Vice President, Exploration.

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