

CanAlaska Uranium Ltd.

Toronto Stock Exchange (TSX): CVV

FOR IMMEDIATE RELEASE

NEWS RELEASE

ASSAY RESULTS FOR CREE EAST PROJECT SHOW MULTI-ELEMENT ALTERATION HALOS

Vancouver, Canada, May 31st, 2012 - CanAlaska Uranium Ltd. (TSX – CVV) (“CanAlaska” or the “Company”) has now received uranium assay results and trace element geochemistry for the winter drill program on the Cree East project. As expected, the results confirm the anomalous multi-element enrichments in the large alteration zone indentified at Zone B, and additional gold and uranium mineralization in drill hole CRE080, which intersected mineralized iron formation at Zone J (also see [News Release 13 April 2012](#)).

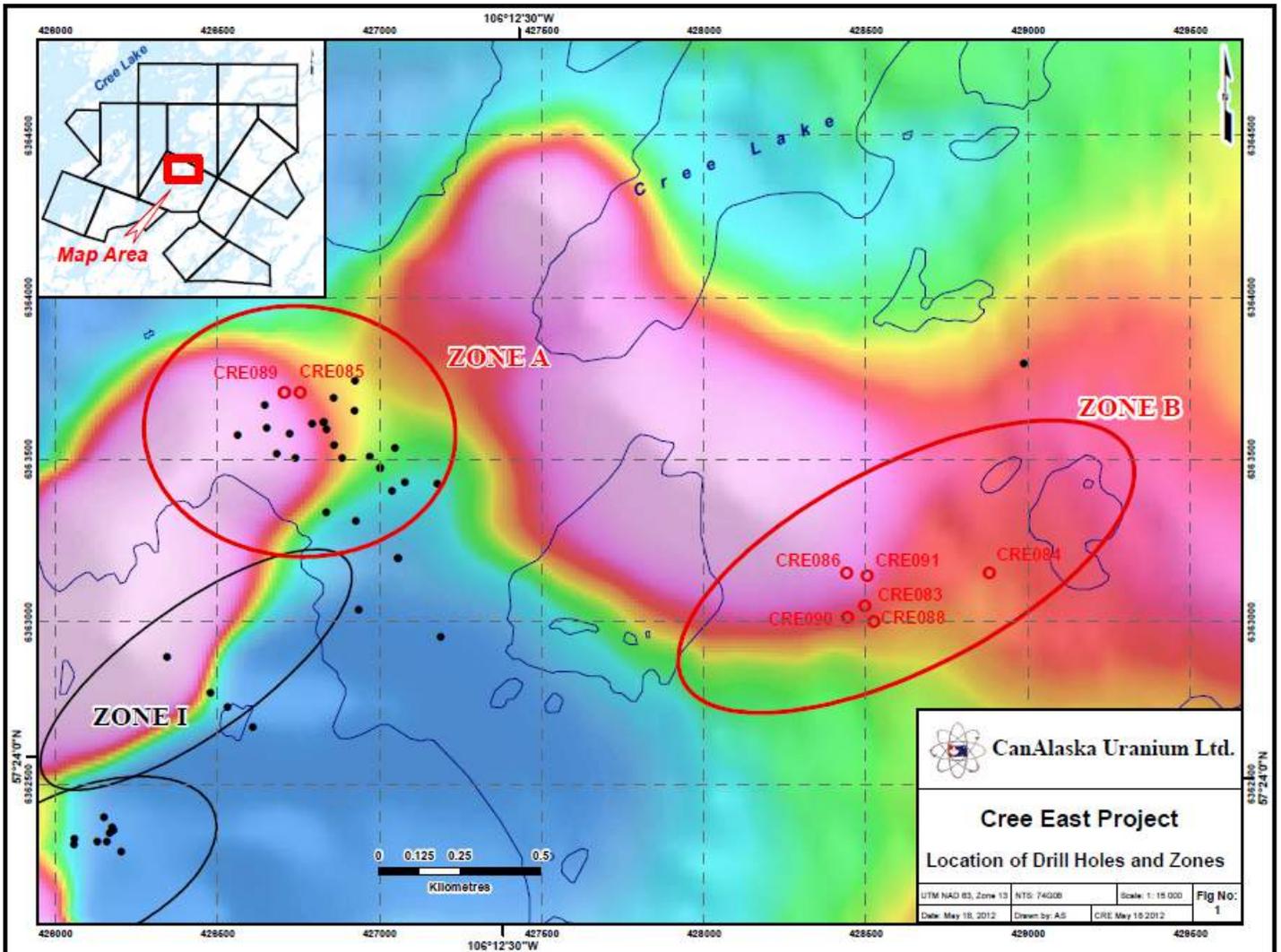
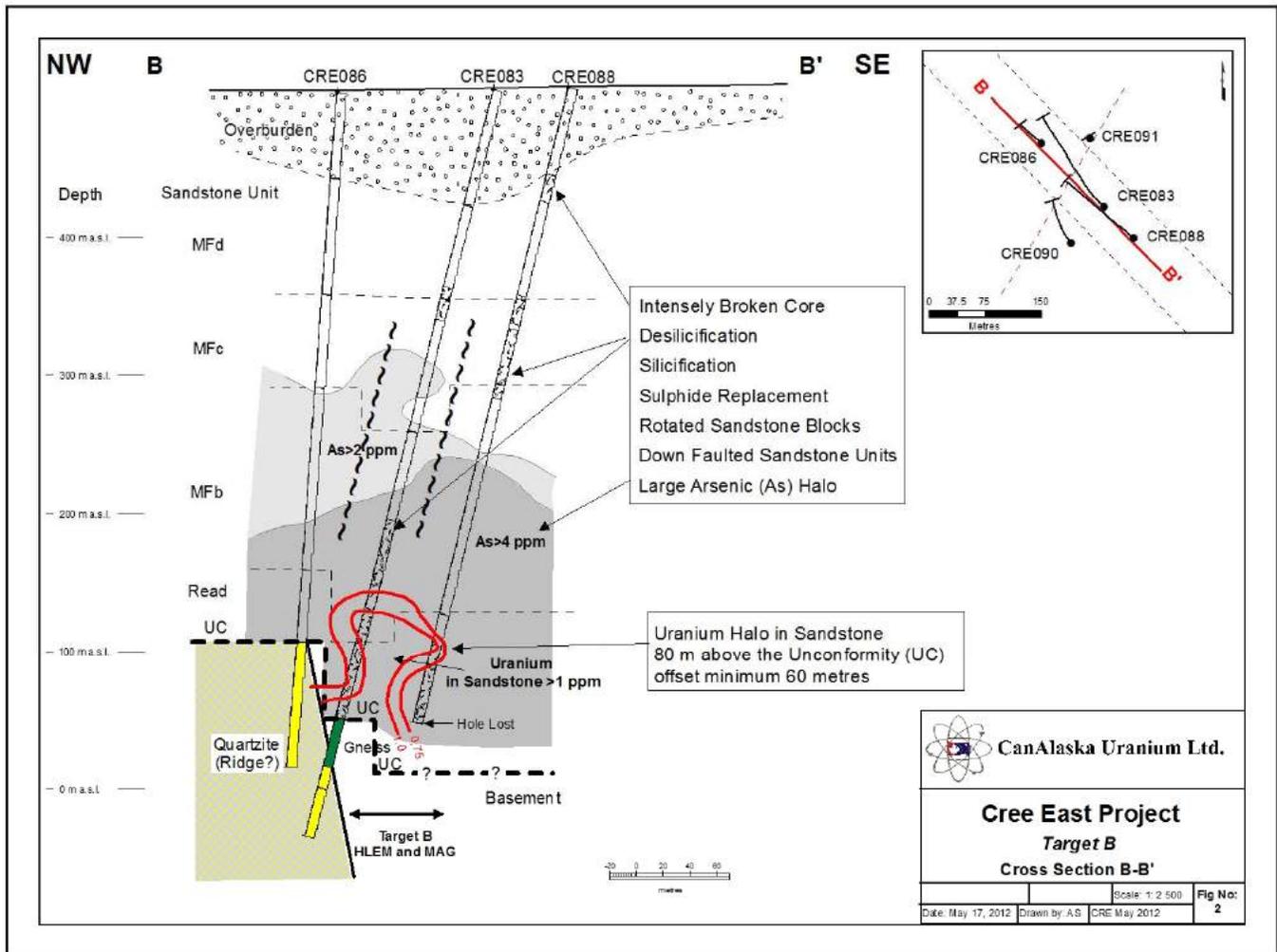


Table 1: Selected Assay results

AREA	DDH	From metres	To metres	Width metres	Sample Source	% U ₃ O ₈	U ₃ O ₈ PPM	ANOMALOUS Geochemistry
Zone J	CRE077	322	328	6.0	Sandstone		Ave 1.7	As, Ni, Pb
Zone J	CRE080	301	302	1.0	Sandstone		Ave 9.6	Au, As, Ni
Zone J	CRE080	302.1	302.5	0.4	Basement	0.011		
Zone J	CRE080	303.2	303.8	0.6	Basement	0.015		
Zone J	CRE080	302	319	17.0	Basement		Ave 42.0	Au, As, Ni, Co, La P
Zone B	CRE083	374	470	96.0	Sandstone		Ave 1.0	As, Ni, Co
Zone B	CRE083	500.1	500.6	0.5	Basement	0.090		
Zone A	CRE085	226	340	114.0	Sandstone		Ave 1.0	As, Ni
Zone B	CRE084	335	431	96.0	Sandstone		Ave 0.4	Ni, B
Zone B	CRE084	464.5	465.0	0.5	Basement	0.014		As, Ni, Co, B
Zone B	CRE084	523	532	1.0	Basement			Au (3g/t)
Zone B	CRE084	598.3	598.8	0.5	Basement	0.010	Ave 45.0	Au
Zone B	CRE084	598.8	599.8	1.0	Basement		Ave 43.4	Au 13.3 g/t,
Zone B	CRE086	260	398	138.0	Sandstone		Ave 0.4	As, Cu, Co, Ni
Zone B	CRE088	281	474.9	193.9	Sandstone		Ave 0.6	As, Ni, B
Zone A	CRE089	215	388.15	173.15	Sandstone		Ave 1.4	As, Ni, B
Zone B	CRE090	212	406	194.0	Sandstone		Hole lost 1ppm	As, Ni
Zone B	CRE091	171	189	18.0	Sandstone		Hole Lost	As, Ni, Au

At Zone A, drill hole CRE085 confirmed the presence of an intense hydrothermally-altered and hematized clay section and anomalous uranium in the overlying sandstone, previously intersected in drill hole CRE073.

The Zone B target became the priority drill target with the discovery of a major hydrothermal system. The entire 400-metre sandstone column is heavily fractured, clay altered and friable. Six holes were attempted in Zone B. However, the last three drill holes failed to reach the basement rocks. The drilling has outlined a zone of extreme alteration of the sandstone with intense faulting, brecciation, and large rotated sandstone blocks, from the unconformity to the top of the sandstone. This zone was defined by drill holes CRE083, 086, 088, 090 and 091, and currently measures 110 by 210 metres in extent. The drill section details with basement offsets, arsenic and uranium extent are shown in Figure 2.



This alteration combines silicification and desilicification with a broad reduction halo, marked by the bleaching of diagenetic hematite, grey alteration, and influx of pyrite disseminated and along fractures. The clay assemblage is dominated by kaolinite and illite, but with abundant sudoite high up in the sandstone. Dickite is essentially absent, except in the top of the sandstone, in nearby hole CRE084.

The geochemistry of the sandstone mirrors the alteration, with a broad and robust 2ppm arsenic halo reaching 250 metres into the sandstone. Arsenic is accompanied by nickel, cobalt and boron, and overlies a uranium halo which reaches 80 metres into the sandstone in the current drilling. In CRE083, a 0.5 metre section of core assays 0.09% U_3O_8 and also contains 0.3 g/t Au. The basement of CRE086 is composed entirely of quartzite, and may represent a quartz ridge parallel to the conductor target.

Drill hole CRE084, located 400 metres to the east of the main alteration zone shows only minor alteration in the sandstone, but has a number of hematized clay alteration zones deep in the basement rocks. This drill hole contains two uranium mineralized sections, 0.5 metre at 0.014 % U_3O_8 (464.5-465.0) and 0.5 metres at 0.010% U_3O_8 (598.3-598.8). The second interval also contains 0.2 g/t gold and is adjacent to a 1.0 metre section grading at 13.3 g/t gold. This mineralization is located in hematized clay altered pegmatite. A further section of pelite, from 523 to 532 metres contains 3 g/t gold and has elevated radioactivity.

Dr. Karl Schimann, CanAlaska's V.P. - Exploration commented: "The drill core in holes CRE083, CRE086, CRE088, CRE090, and CRE091 has by far the most intense zone of sandstone alteration and deformation observed on the Cree East property. This hydrothermal system extends at least 400 metres further east to encompass drill hole CRE084. It is also wide open to the west, where the surface DCIP resistivity response, shows the most intense low within the lower sandstone. The multiple element geochemical halo, the fluid dissolution effects, as well as the sporadic higher uranium responses indicate that the main target in this area is part of an intense chemical and physical hydrothermal event. Gold mineralization has been observed in association with several unconformity deposits, eg Cluff Lake, Cigar Lake, but usually in minor amounts. The high grades observed here may relate to the intensity of the hydrothermal system at Zone B. It is very disappointing that we were not able to complete the current drill holes down into the target."

All of the samples from the Cree East project were submitted to Acme Laboratories Vancouver, an ISO 9001:2000 accredited and qualified Canadian Laboratory, for their Group 4B analysis. The samples were collected by CanAlaska field geologists under the supervision of Dr. Karl Schimann, and were shipped in secure containment to the laboratories noted above. All samples were analyzed for uranium and multi-element geochemistry by tri-acid digestion and ICP-MS.

Peter Dasler, M.Sc., P. Geo. is the qualified technical person responsible for this news release.

About CanAlaska Uranium

CANALASKA URANIUM LTD. (CVV -- TSX, CVVUF -- OTCBB, DH7F -- Frankfurt) is undertaking uranium exploration in twenty one uranium projects in Canada's Athabasca Basin -- the "Saudi Arabia of Uranium". Since September 2004, the Company has aggressively acquired one of the largest land positions in the region, comprising over 2,500,000 acres (10,117 sq. km or 3,906 sq. miles). To-date, CanAlaska has expended over Cdn\$85 million exploring its properties and has delineated multiple uranium targets.

For more information, visit www.canalaska.com

On behalf of the Board of Directors



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