Blue Sky Uranium Reports Positive Metallurgical Testwork Results for its Ivana Uranium-Vanadium Deposit, Argentina

written by Raj Shah | February 7, 2019

February 7, 2019 (Source) – **Blue Sky Uranium Corp. (TSX-V: BSK, FSE: MAL2;OTC: BKUCF), ("Blue Sky" or the "Company")** is pleased to announce a summary of the results of the Company's recent mineralogical, metallurgical and process design testwork program for the Ivana uranium-vanadium deposit, Rio Negro Province, Argentina.

The Company's process design flowsheet is based on simple and low-cost two-stage processing of mineralized material from the Ivana uranium-vanadium deposit.

"These results indicate that Ivana mineralization can be processed using proven, simple and relatively inexpensive methods to achieve superior recoveries for both uranium and vanadium, which will make a significant contribution towards a very positive economic outlook for the project." stated Nikolaos Cacos, Blue Sky President & CEO.

Highlights include:

- Simple two-stage process of concentration/beneficiation

followed by Alkaline Leaching using low environmental impact technology and reagents

- Stage 1 – approximately **fourfold increase in the grades of uranium and vanadium, and recoveries of 89% for both elements** from simple wet scrubbing and screening of raw mineralized material to produce a Leach Feed Concentrate with an approximately 77% mass reduction
- Stage 2 – **recoveries of 95% for uranium** and 60% for vanadium for Alkaline Leaching of Leach Feed Concentrate
- The optimized leaching process requires no added oxidants and no flotation
- Overall process recovery of **85% for uranium** and 53% for vanadium

The Company has engaged independent consultants to complete a Preliminary Economic Assessment ("PEA") for the Ivana deposit, and an accompanying NI 43-101 Technical Report. The results of the study and the report are expected in the first quarter of the year. The metallurgical testwork results reported herein are an important part of the PEA study.

Metallurgical Program Overview:

Under the guidance of the Company's Technical Advisor, Chuck Edwards, P.Eng., several representative composite samples of uranium-vanadium mineralized material from the Ivana deposit were prepared and submitted to The Saskatchewan Research Council (SRC) for mineralogical, metallurgical and process engineering test work. SRC is one of Canada's leading providers of applied research, development & demonstration, and technology commercialization, including specific expertise in uranium. SRC is an ISO 9001:2015 certified company.

The representative composite used for the mineralogy, initial beneficiation and leach testing was selected from multiple reverse circulation (RC) drill holes located throughout the

Ivana uranium-vanadium deposit and had the following parameters:

Name	# Holes	# Samples	Weight kg	U ppm	U_3O_8 ppm	V ppm	V_2O_5 ppm
SRC COMP 1	12	30	39.75	470	554	230	411

The uranium-vanadium ("U-V") mineralization in the representative composites can be classified into two main types

1)	The majority of U-V mineral particles occur as free mineral grains with a maximum particle size of 100 µm and,
2)	The remainder of the U-V mineral particles occur as a coating adhering to larger coarse U-V-free granules in a size range from 100 to 6000 µm. The coating mineral particles have a maximum particle size of 100 µm.

Mineralogy:

Five uranium-bearing minerals were identified in the Ivana deposit samples sent to SRC for QEMSCAN® mineralogical analysis. Three of these are conventional known uranium ore minerals: carnotite (which also contains vanadium), liebigite and tyuyamunite. The other two uranium-bearing species are unconventional and have not been previously reported. One of these superficially resembles coffinite but has a different U/Si ratio and contains uranium in the oxidized +6 valence state. The other resembles a clay mineral containing tightly-bound uranium in the reduced state. To date, carnotite is the sole vanadium mineral identified. More QEMSCAN® mineralogical testing will be done as part of future tests to optimize the process parameters.

Leach Feed Concentrate Preparation Tests:

At SRC, Blue Sky Uranium's leach feed preparation process development tests to date have consisted of 20 separate sets of scrubbing and screening tests. A first screening was done at 100 µm to separate the coarse and fine particles. A second screening was then done at 600 µm to separate the coarse material into

more coarse and less coarse fractions in order to optimize the scrubbing of each coarse fraction. The aim of these tests was to demonstrate that raw mineralized material can be effectively concentrated, retaining as much of the uranium and vanadium as possible and reducing the mass of Leach Feed Concentrate and thereby contributing to lower operating and capital costs for alkaline leaching. These tests have shown that operationally proven and simple wet screening and scrubbing procedures result in an average 89% recovery for each of uranium and vanadium.

The combined free minus 100 µm mineral grains and the minus 100 µm mineral grains scrubbed from the coarse particles in the leach feed preparation process constitute approximately on average 23 weight % of the original raw mineralized material that comprised the representative composite. This concentration ratio was determined by completion of 50 screen tests at Bureau Veritas local Argentine lab Acme Analytical Laboratories SA. This yields a concentrated process plant leach feed ("Leach Feed Concentrate") with uranium and vanadium grades increased approximately fourfold relative to the head grades of the representative composite material. For example, in the projected year 1 operation currently envisaged in the ongoing PEA study, the leach feed preparation process is expected to raise the average uranium leach feed grade to 1757 ppm U_3O_8 from 454 ppm U_3O_8 in mined mineralized material, and to raise the vanadium grade from 294 ppm V_2O_5 to 1138 ppm V_2O_5.

Flotation Test:

Sulphide minerals such as pyrite (FeS_2) in the leach feed will degrade alkaline leach performance. A leach feed flotation test was performed to check for sulphide flotation. The flotation test produced negligible sulphide flotation and therefore it was determined that it will not be required in the process design.

Alkaline Leach Tests:

Six leach tests were performed with sodium carbonate (Na_2CO_3)/bicarbonate ($NaHCO_3$) on Leach Feed Concentrate using a range of conditions to determine optimized parameters. All leach tests used the same feed sample with 1274 ppm U_3O_8 and 910 ppm V_2O_5. First, two preliminary leach tests were performed, with the following results:

Test	Conditions				Leached after 8 hours	
	Temperature	Na_2CO_3	$NaHCO_3$	Oxidant	U	V
	°C	g/L	g/L	O_2 at 300 kPa	%	%
1	80	50	20	no	94.6	57.6
2	80	50	20	yes	93.5	36.3

Second, 4 optimization leach tests, were performed with the following results:

Test	Conditions				Leached after 8 hours	
	Temperature	Na_2CO_3	$NaHCO_3$	Oxidant	U	V
	°C	g/L	g/L	O_2 at 300 kPa	%	%
3	**95**	**60**	**10**	**no**	**94.5**	**60.1**
4	45	60	10	no	80.1	36.7
5	95	40	30	no	94.7	57.0
6	45	40	30	no	79.6	33.4

These tests determined that the optimal leach conditions are: temperature = 95°C, carbonate/bicarbonate ratio = 60/10, and leach duration = 8 hours, with no oxidant (Test 3 parameters). Optimized leach recoveries are 95% for uranium and 60% for vanadium. In addition, reagent consumption is low with

Na_2CO_3 = 3.2 kg/t and $NaHCO_3$ = 6.6 kg/t.

Process design is simplified by the observation that neither the introduction of oxygen or flotation of sulphides are required to improve leach recoveries.

The loaded solution resulting from leaching will be further processed to generate two separate products, a uranium oxide product (either UO_3 or U_3O_8) and a vanadium product V_2O_5. The uranium oxide product will meet ASTM C967-13 Standard Specifications for Uranium Ore Concentrate.

The wet scrubbing and screening Leach Feed Concentration and Alkaline Leaching process design contemplated for the Ivana deposit incorporates proven and low environmental impact technology and reagents, such as sodium carbonate (Na_2CO_3) /bicarbonate ($NaHCO_3$) leaching reagents. It also incorporates the capture and sequestration of radium as part of the process design.

Qualified Persons

The metallurgical program was conducted under the guidance of Chuck Edwards, P. Eng. FCIM, an independent consultant to the Company and a Qualified Person as defined in National Instrument 43-101. The contents of this news release have been reviewed and approved by Mr. Edwards.

Dr. David Terry, Ph.D., P.Geo. is a Director of the Company and a Qualified Person as defined in National Instrument 43-101. The contents of this news release have been reviewed and approved by Dr. Terry.

About the Amarillo Grande Project

The Company’s 100% owned Amarillo Grande Uranium-Vanadium

Project in Rio Negro Province, Argentina is a new uranium district controlled by Blue Sky. The Project includes several major target areas over a regional trend, with uranium and vanadium mineralization in loosely consolidated sandstones and conglomerates, at or near surface. The area is flat-lying, semi-arid and accessible year-round, with nearby rail, power and port access. The Company's strategy includes delineating resources at multiple areas. The Ivana deposit is the cornerstone of the Project and the first area to have a NI 43-101 Inferred Resource estimate, which includes 23.9 million tonnes averaging 0.036% U_3O_8 and 0.019% V_2O_5, containing 19.1 million pounds of U_3O and 10.2 million pounds of V_2O_5, at a 100 ppm uranium cut-off.

Mineralization at Amarillo Grande has characteristics of sandstone-type and surficial-type uranium-vanadium deposits. The sandstone-type mineralization is related to a braided fluvial system and indicates the potential for a district-size system. In the surficial-type deposits, carnotite mineralization coats loosely consolidated pebbles, and is amenable to leaching and simple upgrading.

The near-surface mineralization, ability to locally upgrade and amenability to leaching suggest a potentially low-cost development scenario for future deposits.

For additional details on the project and properties, please see the Company's website: www.blueskyuranium.com.

About Blue Sky Uranium Corp.

Blue Sky Uranium Corp. is a leader in uranium discovery in Argentina. The Company's objective is to deliver exceptional returns to shareholders by rapidly advancing a portfolio of surficial uranium deposits into low-cost producers. Blue Sky holds the exclusive right to over 434,000 hectares (equiv. to 1,072,437 acres) of property in two provinces in Argentina. The

Company’s flagship Amarillo Grande Project was an in-house discovery of a new district that has the potential to be both a leading domestic supplier of uranium to the growing Argentine market and a new international market supplier. The Company is a member of the Grosso Group, a resource management group that has pioneered exploration in Argentina since 1993.

ON BEHALF OF THE BOARD

“Nikolaos Cacos”

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Nikolaos Cacos, President, CEO and Director

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