

# Continuous Surface Mining Scenario to Be Contemplated in Economic Assessment of U3O8 Corp's Laguna Salada Deposit in Argentina for a Potential Low-Cost Project

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## Improved beneficiation results in 15 times increase in uranium grade

TORONTO, ONTARIO--(Marketwired - Sep 26, 2013) - **U3O8 Corp. (TSX:UWE)(OTCQX:UWEFF)**, a Canadian-based company focused on exploration and resource expansion of uranium and associated commodities in South America, outlines the positive beneficiation work and one potential mine concept being considered in the Preliminary Economic Assessment ("PEA") that is underway on the Laguna Salada Deposit in Chubut Province, Argentina.

"Given the project's simplicity and the proposed joint venture with Petrominera Chubut S.E., Chubut's provincial mining company, [U3O8 Corp.](#)'s Laguna Salada Deposit is shaping up to be a potentially near-term, low-cost uranium producer that could help Argentina reduce its 100% reliance on imported nuclear fuel," said Dr. Richard Spencer, [U3O8 Corp.](#)'s President and CEO. "The continuous surface mining option being assessed in the PEA would be by machines very similar to those that cut and lift old asphalt from roads that are being repaved. One could picture the continuous surface mining concept as a long shallow trench that migrates sideways across a gravel plain with gravel being removed from the leading edge of the trench, washed, and replaced on the trailing edge. This mining option would be expected to see 95% of the original gravel returned to the excavated area, reshaped to its original topography and revegetated with shrubs transplanted from the advancing side of the trench. After mining, there would be little evidence that mining had occurred."

### Continuous Surface Mining Scenario

The Laguna Salada Project is a near-surface, free-digging deposit on which an initial uranium-vanadium resource has been defined in accordance with National Instrument 43-101 ("NI 43-101"). Mineralization lies within three metres ("m") of surface in soft, pebbly gravel that requires no blasting before mining and no crushing prior to beneficiation (Figure 1). The soft gravel could be excavated with a continuous surface miner, which is the preferred option being contemplated in the PEA expected for release in Q4 2013, and is expected to work as follows (Figure 2):

1. Vegetation and the thin soil layer would be removed from the area to be mined and temporarily stored to make way for a continuous surface miner, such as a Wirtgen 2500.
2. A continuous surface miner would cut a long, narrow trench that would advance sideways across the flat-topped gravel mesas in one direction while being refilled with washed gravel from the other. The trench would be up to 3m deep, the maximum depth of the NI 43-101 resource, and about 20m-30m wide at any one time.
3. The gravel would be lifted from the continuous miner into 100 tonne truck-trailer units via a conveyor belt. Barren gravel would be immediately returned to the trailing edge of the trench, while the mineralized gravel would be trucked to a mobile screening plant.

4. The mineralized gravel would be washed through progressively finer sieves to a 0.15 millimetre ("mm") grain size. The pebbles and sand that is coarser than 0.15mm (approximately 90% of the original gravel mass) would be transported back and tipped into the excavated area to await final shaping to its original topography.
5. Test work on the Guanaco area, which contains 90% of the Laguna Salada resource, showed that screening concentrates approximately 87% of the uranium into the fine material, which constituted about 10% of the gravel's original weight. These metal-rich fines would be mixed with water and pumped through a pipeline to a central processing facility for further concentration through a system of hydrocyclones. This additional process resulted in the concentration of approximately 80% of the gravel's original uranium content into about 5% of the gravel's original mass. Only water is used in the beneficiation of the gravel in the screening and hydrocyclone steps.
6. The 5% of the fines rejected by the hydrocyclones would be pumped back to the excavated area. As a result, approximately 95% of the original gravel mass (90% from the screening process plus 5% from the hydrocyclones) would be returned to the mined area to be covered with soil and revegetated with the plants removed prior to mining.
7. The uranium-vanadium - bearing material would then undergo alkaline leaching with a solution containing a mixture of baking soda (sodium bicarbonate) and washing soda (sodium carbonate).

### Improved Beneficiation Results with Hydrocyclones

Test work showed that passing the fine material in the Guanaco sector from the screening process through hydrocyclones isolated the mineralization into a small fraction of the original mass, resulting in a very large increase in grade. A hydrocyclone is a cone-shaped device that has no moving parts and is designed to separate light, fine-grained particles from larger, heavier ones. A mixture of water and silty material from the gravel at Laguna Salada was pumped into the cone in a way that ensures that the mixture swirls inside the cone. The heavier and larger particles are thrown against the side of the cone where they slide downward and are removed from an aperture in the bottom of the cone (underflow). The finest-grained, uranium-bearing material concentrates in the centre of the cone where it gradually moves upward under slight pressure and is removed through a pipe in the top of the hydrocyclone (overflow).

A composite sample from three trenches in the Guanaco sector of the Laguna Salada Deposit was specifically selected for test work to ensure that low-grade material had beneficiation characteristics similar to the higher-grade gravel. 42.2 kilograms of gravel was wet-scrubbed in a cement mixer for one hour, then wet screened through successively finer sieves starting with a 15mm aperture followed by screens with 3mm, 0.84mm, 0.5mm and finally 0.15mm or 150µm apertures. The material finer than 150µm was further separated into coarse and fine fractions using a hydrocyclone. Table 1 shows the resulting mass of each grain size fraction with its uranium and vanadium grade, and the proportion of metal contained in each fraction.

This wet screening followed by hydrocyclone beneficiation resulted in the concentration of approximately 80% of the uranium and 18.6% of the vanadium contained in the gravel into 5.3% of its original mass. The grade of the composite sample used in this test, as excavated from site, was 23ppm  $U_3O_8$  and after beneficiation, the uranium grade of the fine material was 358ppm  $U_3O_8$  - an increase of 15 times (Table 1). Vanadium grades increased from 350ppm  $V_2O_5$  in the gravel to 1,250ppm in the fine material - an increase of 3.5 times. These test results lead [U3O8 Corp.](#) to believe that the average uranium grade of 55ppm  $U_3O_8$  in the Guanaco sector of the Laguna Salada Deposit might be beneficiated to a grade of approximately 825ppm (1.8lb/tonne)  $U_3O_8$  and for vanadium, from 530ppm  $V_2O_5$  to about 1,850ppm  $V_2O_5$  if similar results can be achieved.

Previous test results (September 21, 2011 press release) showed that wet-screening of higher-grade gravel from the Guanaco area led to an 8-11 times increase in uranium grade to approximately 620-670ppm<sup>1</sup> in the 150µm fraction, without the use of hydrocyclones. Test work is currently underway to verify that adding the hydrocyclone step in the beneficiation of higher-grade material generates similar results to those achieved in the low-grade sample from Guanaco. Results from this additional test work will be reported shortly.

### Alkaline Leach Test Results

Prior test work (September 21, 2011 press release) on fine material generated from screening the gravel to a 0.15mm grain size showed extraction of approximately 94% of the uranium and 51% of the vanadium contained in the fines. Alkaline leach test work on the finer material resulting from the use of hydrocyclones in the beneficiation process will be reported on shortly.

Table 1 - Summary Results for Screened and Hydrocycloned Laguna Salada Sample

Size fraction (<#956;m)	Mass (g)	% of material retained between successive screen sizes	Uranium (U <sub>3</sub> O <sub>8</sub> )		Vanadium (V <sub>2</sub> O <sub>5</sub> )	
			Assay (ppm)	Distrib <sup>n</sup> (%)	Assay (ppm)	Distrib <sup>n</sup> (%)
Raw gravel	42,247		23		350	
15,000	10,980	26.0%	6.1	7%	256	19%
3,000	20,780	49.2%	2.0	4%	367	50%
840	1,260	3.0%	4.1	1%	272	2%
500	840	2.0%	3.6	0%	114	1%
150	4,260	10.1%	2.8	1%	160	5%
Hydrocyclone overflow (fine material to undergo leaching)	2,247	5.3%	357.8	80%	1,250	18.6%
Hydrocyclone underflow (rejected coarser material)	1,880	4.5%	40.0	7%	409	5%
Total	42,247	100.0%				

The conceptual continuous surface mining method described above was developed by Mr. Pedro Pino Veliz, a Qualified Person ("QP") as defined by NI 43-101. Mr. John Goode, P. Eng. and a QP, has reviewed the beneficiation and metallurgical test work on Laguna Salada. The beneficiation test work was carried out at the University of San Juan in Argentina and assays were conducted by SGS del Peru S.A.C. in Lima, Peru. Dr. Richard Spencer, President & CEO of [U3O8 Corp.](#) and a QP, has supervised the preparation of, and verified the technical information contained in this press release.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. The PEA, once prepared, will be preliminary in nature and will include inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the PEA will be completed at all and if completed, will be realized.

### About U3O8 Corp.

[U3O8 Corp.](#) is an advanced exploration company focused on exploration and resource expansion of uranium and associated commodities in South America. From 2010 to 2012, [U3O8 Corp.](#)'s uranium resources grew 7-fold with three NI 43-101 deposits defined in Colombia, Argentina and Guyana comprising of:

- **Berlin Deposit, Colombia** - a recent PEA shows that Berlin could be a zero cash cost uranium producer thanks to revenue from by-products of phosphate, vanadium, nickel, rare earths (yttrium and neodymium) and other metals occurring in the same deposit;
- **Laguna Salada Deposit, Argentina** - a near surface, free-digging uranium, vanadium deposit that is potentially amenable to low-cost mining and processing methods; and
- **Kurupung Deposit, Guyana** - an initial uranium deposit in a large emerging uranium district.

Additional information on [U3O8 Corp.](#), its mineral resources and technical reports are available at [www.u3o8corp.com](http://www.u3o8corp.com). The May 20, 2011 technical report on the Laguna Salada Deposit entitled "Laguna Salada Project, Chubut Province, Argentina: NI 43-101 Technical Report: Initial Resource Estimate" (the "Technical Report") is also available on SEDAR at [www.sedar.com](http://www.sedar.com). Follow [U3O8 Corp.](#) on Facebook: [www.facebook.com/u3o8corp](https://www.facebook.com/u3o8corp), Twitter: [www.twitter.com/u3o8corp](https://www.twitter.com/u3o8corp) and Youtube: [www.youtube.com/u3o8corp](https://www.youtube.com/u3o8corp). Below is the NI 43-101 resource estimate on Laguna Salada as contained in the Technical Report:

Project	NI 43-101 Resource	Tonnes (million)	Grade U <sub>3</sub> O <sub>8</sub>	Grade V <sub>2</sub> O <sub>5</sub>	U <sub>3</sub> O <sub>8</sub> lbs (million)	V <sub>2</sub> O <sub>5</sub> lbs (million)
Laguna Salada	Indicated	47.3	60ppm	550ppm	6.3	57.1
	Inferred	20.8	85ppm	590ppm	3.8	26.9

(1) Comparable head grades to similar surficial deposits operating elsewhere in the world such as Langer

*Heinrich, which typically have a mill feed grade of 550-600ppm after beneficiation. These deposits have not been independently verified by [U3O8 Corp.](#) and information regarding these deposits is drawn from publicly available information.*

## **Forward-Looking Statements**

*Certain information in this release are forward-looking statements with respect to the proposed joint venture and development plans, economic potential and growth targets of [U3O8 Corp.](#)'s current projects. Forward-looking statements consist of statements that are not purely historical, including statements regarding beliefs, plans, expectations or intentions for the future, and include, but not limited to, statements with respect to: (a) a joint venture with the Chubut Government, (b) the low-cost, near-term production goal of Laguna Salada, (c) compliance with current Chubut mining law, (d) the Laguna Salada and Berlin PEAs, (e) beneficiation test work on Laguna Salada, (f) the market opportunities for uranium from Argentina, and (g) the potential of the Kurupung district in Guyana. Assumptions on which such statements are based include that: (i) discussions with the Chubut Government will be favourable, (ii) actual results of our exploration, resource goals, metallurgical testing, economic studies and development activities will continue to be positive and proceed as planned, (iv) requisite regulatory and governmental approvals will be received on a timely basis on terms acceptable to [U3O8 Corp.](#), and (v) economic, political and industry market conditions will be favourable. However, such statements are subject to risks and uncertainties that may cause actual results, performance or developments to differ materially from those contained in the statements, including, but not limited to: (1) that a joint venture will not be formed with the Chubut Government, (2) timing and outcome of the PEA or that a mine will be achieved on the Laguna Salada Project in compliance with current Chubut mining law, (3) risks that a mine will not be achieved on the Berlin Deposit and other exploration projects, (4) that beneficiation test work will continue to be favourable and results from small scale metallurgical testing can be duplicated on a larger scale, (5) the inherent uncertainties and speculative nature associated with exploration results, resource estimates, potential resource growth, future metallurgical test results, changes in project parameters as plans evolve, (6) volatility of commodity prices, (7) dependence on regulatory approvals and changes in legislation, environmental compliance, community support and the political and economic climate, (8) availability of future financing, and (9) exploration risk and other factors beyond the control of [U3O8 Corp.](#) including those factors set out in the "Risk Factors" in our Annual Information Form available on SEDAR at [www.sedar.com](http://www.sedar.com). 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. [U3O8 Corp.](#) assumes no obligation to update such information, except as may be required by law.*

**To view Figure 1 - Photos of the Soft, Pebbly Nature of the Laguna Salada Deposit, Argentina, please visit the following link: <http://media3.marketwire.com/docs/uwe926-F1.pdf>.**

**To view Figure 2 - Continuous Surface Mining Scenario Being Considered for the Laguna Salada Deposit, Argentina, please visit the following link: <http://media3.marketwire.com/docs/uwe926-F2.pdf>.**

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