

## Press Release

### PEA shows U3O8 Corp's Laguna Salada Deposit in uranium industry's lower quartile of cash costs

*Life-of-mine average of \$21.62/lb; average cash cost of \$16.14/lb during the payback period*

Toronto, Ontario – August 5, 2014 – **U3O8 Corp. (TSX: UWE; OTCQX: UWEFF)**, a Canadian-based company focused on exploration and development of uranium resources and associated commodities in South America, reports a favourable Preliminary Economic Assessment (“PEA”) on its Laguna Salada Deposit in Argentina. The PEA shows that uranium at Laguna Salada would be produced at an average life-of-mine (“LOM”) cash cost of \$21.62 per pound (“lb”) of U<sub>3</sub>O<sub>8</sub>, net of a vanadium by-product credit (Figure 1), and the total capital cost of \$134 million would be paid back in 2.5 years. All figures in this press release are in US\$, unless otherwise noted.

“The PEA achieved our main goal of showing that Laguna Salada’s cash cost would be well within the lower quartile of the uranium industry – an important achievement that bodes well for the deposit’s potential to ride out cyclical lows in the resource sector,” said Dr. Richard Spencer, U3O8 Corp’s President and CEO. “With a life-of-mine cash cost of \$22/lb, Laguna Salada would be competitive with low-cost in-situ recovery uranium projects and with high-grade deposits in the Athabasca Basin. Secondly, the project has a short payback with an average cash cost of \$16/b of uranium over that period. This is because the shallow, flat-lying nature of the Laguna Salada Deposit allows us to start production in the higher grade zones where profit margins are greatest. Thirdly, the project’s economics would be significantly enhanced by increasing the resource size – therefore, our immediate goal is to expand the current resource into our adjoining La Susana area.”

#### **PEA Highlights (Pre-Tax Base Case at \$60/lb U<sub>3</sub>O<sub>8</sub>):**

- **Low cash cost:** average cash cost of \$16.14/lb of uranium over the payback period; LOM cash cost of \$21.62/lb, net of a vanadium credit, and including a 3% net smelter royalty (“NSR”) payable to the State. Therefore, the project would have a healthy operating margin even at current uranium prices and is favourably leveraged to a strengthening uranium price (Figure 2);
- **Value of initial current resource:** net present value (“NPV”), at a 7.5% discount rate, of \$55 million, and a pre-tax internal rate of return (“IRR”) of 24% and post-tax IRR of 18%;
- **Return on capital:** total capital cost of \$134 million (including start-up capital of \$109 million to build the mine and processing plant plus \$3 million in sustaining capital for the life-of-mine and \$22 million for a 20% contingency on the total capital cost estimate). The payback period is 2.5 years; and
- **Initial production:** 1.3 million pounds (“Mlb”) of uranium produced in year 1, while the average annual production would be 0.64Mlb per year over the 10-year mine life from a continuous surface mining operation. Average annual vanadium production would be 0.96Mlb over the life of the mine.

Dr. Spencer added, “The Laguna Salada PEA marks a key milestone towards positioning U3O8 Corp. among the few companies that could be in production heading into a sustained and growing global uranium supply deficit forecast to start in 2019. Furthermore, the study shows that Laguna Salada is well placed as one of the most advanced uranium projects in Argentina that could satisfy the immediate needs of the country’s current nuclear reactors that presently rely on imported uranium for fuel.

Argentina's third reactor has just come on-stream and deals were signed in the last month related to building a fourth reactor, with talks underway on a fifth. And with district-scale uranium potential evident in the Laguna Salada region, we could serve Argentina's growing nuclear fleet as well as export to other utilities, supported by the large number of nuclear co-operation agreements that Argentina has signed."

*The PEA is preliminary in nature as it includes inferred mineral resources that are considered too speculative geologically for economic consideration that would enable them to be classified as mineral reserves. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that the results of the PEA will be realized.*

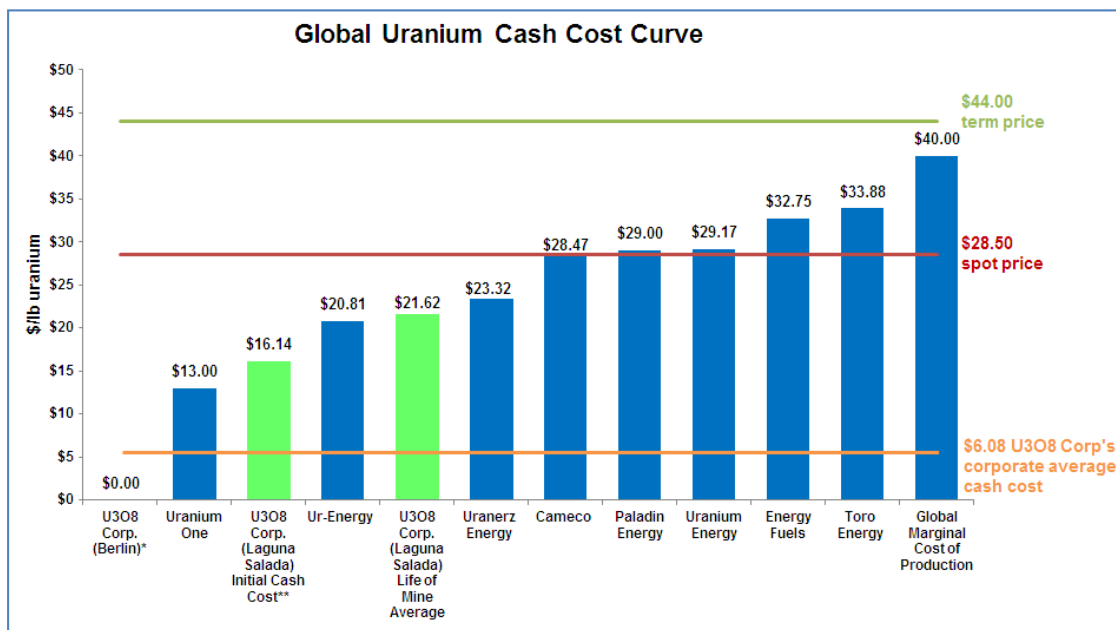
### **Low Cost of Uranium Production**

The PEA estimates a LOM cash cost of \$21.62/lb of uranium, net of a by-product credit from vanadium, and including a 3% NSR to the State. The vanadium contributes an average of 14% of revenues. This would put the Laguna Salada Deposit well within the lower quartile in terms of cash costs in the uranium industry (Figure 1) and competitive with operating costs of uranium mines in the Athabasca Basin and low-cost in-situ recovery ("ISR") operations.

A beneficial feature of Laguna Salada is that the mineralization is contained in an unconsolidated, flat lying sheet just below surface, which allows production to start in the richest part of the deposit where revenue would be maximized so that the capital cost can be paid back in 2.5 years. This attribute of the deposit also provides us with flexibility to maintain positive operating margins by tailoring the mining plan to prevailing uranium prices throughout the life of the mine. By taking this approach, initial uranium cash cost averages at \$16.14/lb during the payback period or \$11.66 in year 1 and \$14.05 in year 2, gradually rising as uranium grades decrease over the 10-year mine life for an average cash cost of \$21.62 (Figure 2).

Analysts estimate the average marginal cost of production for today's uranium producers is approximately \$40/lb, and that some 50% of the world's current production is likely to be uneconomic at the present spot price of \$28.50/lb<sup>1</sup>. The PEAs on U3O8 Corp's Laguna Salada Deposit and its Berlin Deposit in Colombia show that our lead projects have a combined weighted average cash cost of \$6.08/lb – one of the lowest in the industry.

**Figure 1 – Cash Costs of U3O8 Corp’s Projects Compared with Other Uranium Producers<sup>1</sup>**



\***Berlin Deposit:** PEA shows uranium can be produced at zero cash cost due to revenue from by-products of phosphate, vanadium, nickel, rare earths and other metals within the same deposit.

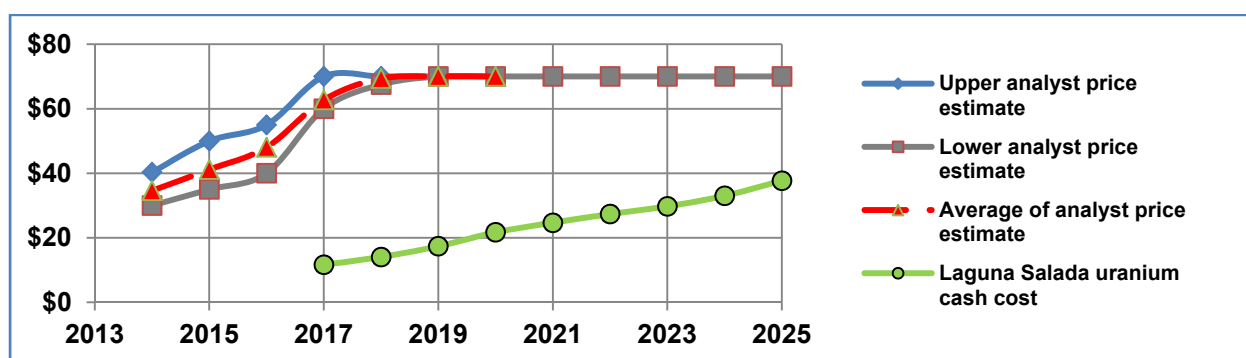
\*\* **Initial Cash Cost:** Average cash cost over the 2.5 year payback period.

**U3O8 Corp’s Corporate Average Cash Cost:** Combined weighted average cash cost of the Berlin Deposit in Colombia and Laguna Salada Deposit in Argentina.

**Project Type:** Uranium One (ISR), Ur-Energy (Lost Creek ISR), Uranerz Energy (Nichols Ranch ISR), Cameco (Athabasca, ISR), Paladin Energy (Langer Heinrich), Uranium Energy (ISR), Toro Energy (Wiluna).

(1) **Sources:** Dundee Capital Markets, Cantor Fitzgerald, Company Reports, UxC Consulting. Cash cost defined as cash operating costs (incl. wellfield expenses in ISR operations). U3O8 Corp’s cash cost includes NSR.

**Figure 2 – Laguna Salada Cash Cost Per Pound Relative to Forecast Uranium Prices<sup>2</sup>**



(2) While the graph assumes Laguna Salada potentially in production in 2017, the timeline is subject to market conditions, available funding, permitting and other associated risk factors. There are no assurances that a mine will be realized on the project. Sources: Analysts’ consensus price forecasts include Raymond James, Cantor Fitzgerald, Dundee Capital Markets, Haywood Securities, Canaccord Genuity, RBC Capital

**Net Present Value (“NPV”) and Internal Rate of Return (“IRR”)**

The PEA demonstrates that the project should generate healthy operating margins relative to analysts’ uranium price forecasts (Figure 2). The economic model was based on a \$60/lb uranium (U<sub>3</sub>O<sub>8</sub>) price and \$5.50/lb for vanadium (V<sub>2</sub>O<sub>5</sub>) to yield a NPV of \$55 million at a 7.5% discount with a pre-tax IRR of 24% and post-tax IRR of 18%. At the consensus uranium price forecast of \$70/lb, the project’s NPV (at a 7.5% discount rate) would increase to \$98 million, the IRR would increase to 35% and the payback period would shorten to 1.9 years (Table 1).

U3O8 Corp. undertook this PEA before the full extent of the deposit is known in order to have independent verification that Laguna Salada's production cost would be comparable with the uranium industry's lowest-cost producers. As both of the IRR and NPV are sensitive to deposit size, our next step is to increase the resource, which would significantly improve both of these economic measures. For example, doubling the size of the Laguna Salada resource from mineralized areas that have a similar grade profile to the current resource and doubling the production rate, would result in the NPV (at a 7.5% discount) increasing to \$180 million and the IRR to 44%. The capital cost of a plant and mining operation that has double the capacity would be approximately \$55 million more than the current plant design (or a total of \$189 million including contingency and sustaining capital) and would produce an average of 1.2Mlb of uranium and approximately 2Mlb of vanadium per year over a 10-year mine life. Therefore, the clear priority is to double the resource – and our immediate target to achieve this is the contiguous La Susana area (December 4, 2013 press release).

Our La Susana exploration area has the potential to increase the current resource to 20-25Mlb<sup>3</sup> of uranium (Figure 3) with an exploration budget of approximately \$1.8 million. La Susana lies adjacent to the current resource and appears to be an extension of the Laguna Salada Deposit. The La Susana footprint is about the same size as the current Laguna Salada resource and exploration indicates that it has a similar grade profile to Laguna Salada.

(3) *Based on the initial resource and exploration of the La Susana mineralized area, there is an initial conceptual uranium target of 150-225 million tonnes at 50ppm to 60ppm U<sub>3</sub>O<sub>8</sub> (~20-25Mlb U<sub>3</sub>O<sub>8</sub>) identified in the Laguna Salada district to date. Potential quantity and grades are conceptual in nature. There has been insufficient exploration to define a mineral resource beyond the current resource, and it is uncertain if further exploration will result in additional mineral resources being delineated in the region.*

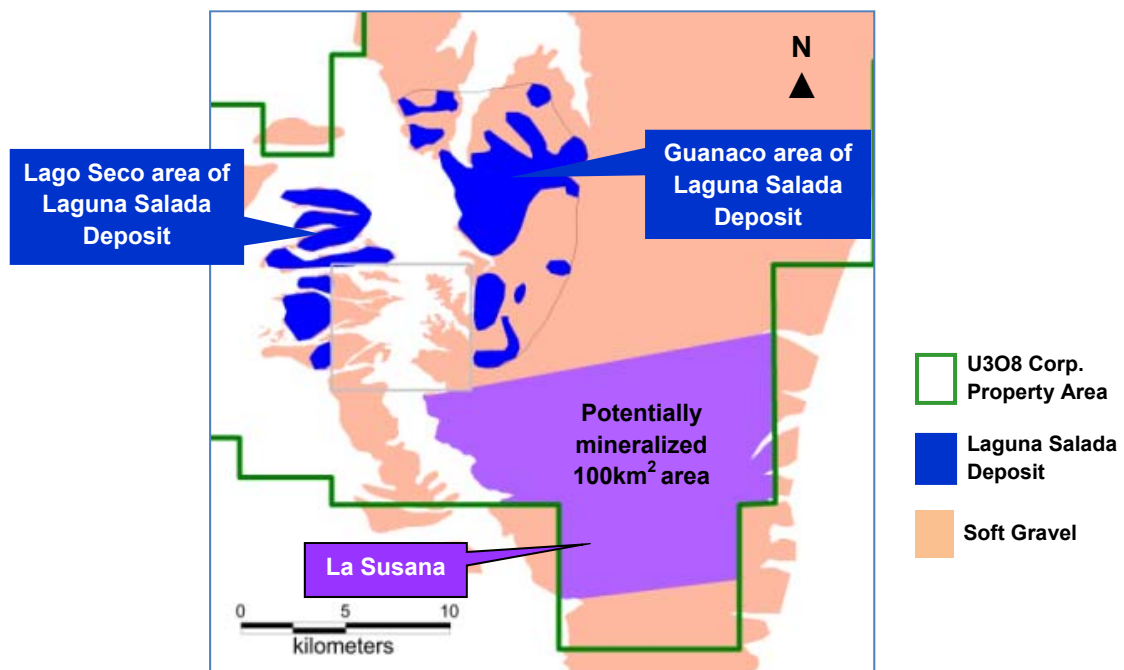
**Table 1 – Discounted Cash Flow Estimates on the Laguna Salada NPV and IRR to Uranium Price**

Uranium Price		\$45	\$50	\$60 (Base Case)	\$70
Discount Rate (in \$ millions)	0%	\$16	\$47	\$109	\$170
	5%	(\$3)	\$22	\$70	\$118
	7.5%	(\$10)	\$12	\$55	\$98
	10%	(\$16)	\$4	\$43	\$82
	15%	(\$25)	(\$10)	\$23	\$55
IRR		4%	11%	24%	35%
Pay-back period (years)		4.7	3.7	2.5	1.9

**Value per Fully Diluted Share of U3O8 Corp.**

U3O8 Corp. has now demonstrated positive economics on its lead projects in Argentina and Colombia with both deposits open for further expansion. Based on an initial NPV of \$55 million (7.5% discount) as estimated in the current PEA, Laguna Salada equates to a value of \$0.23 per fully diluted U3O8 Corp. share. In addition, the company’s flagship Berlin Project in Colombia has an NPV (7.5% discount) of \$338 million based on only one-third of its resource potential for a value of \$1.41 per fully diluted U3O8 Corp. share. These two projects together equate to a value of \$1.64 per fully diluted U3O8 Corp. share.

**Figure 3 – District-Scale Potential in the Laguna Salada Region**



Location of the La Susana area in which exploration results have shown potential to significantly increase the current Laguna Salada resource.

## Mineral Resources<sup>4</sup>

The Laguna Salada\* PEA is based on the below initial resource prepared in accordance with National Instrument 43-101 (“NI 43-101”) by independent consulting company, Coffey Mining Pty Ltd. (“Coffey Mining”), 2011 (Table 2).

**Table 2 – Resource Estimate for the Laguna Salada Deposit**

Summary of Resource for the Laguna Salada Project using recommended cut-off grades for the Guanaco and Lago Seco areas						
Category of Resource	Lower cut-off (ppm U <sub>3</sub> O <sub>8</sub> )	Tonnes (millions)	Average Grade		Contained Metal	
			Average Grade U <sub>3</sub> O <sub>8</sub> (ppm)	V <sub>2</sub> O <sub>5</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (millions of lbs)	V <sub>2</sub> O <sub>5</sub> (millions of lbs)
<b>Indicated Resources</b>						
Guanaco	25	44.6	55	530	5.5	52.0
Lago Seco	100	2.7	145	840	0.9	5.0
<b>Total Indicated</b>		47.3	60	550	6.3	57.1
<b>Inferred Resources</b>						
Guanaco	25	19.4	80	555	3.4	23.7
Lago Seco	100	1.3	130	1,065	0.4	3.1
<b>Total Inferred</b>		20.8	85	590	3.8	26.9

The recommended cut-off grades for the two mineralized areas, taking into account their distinct beneficiation characteristics, are: 25ppm U<sub>3</sub>O<sub>8</sub> for Guanaco and 100ppm U<sub>3</sub>O<sub>8</sub> for Lago Seco.

\* Removal of pebbles and coarse sand by screening results in uranium grades increasing by 11 times over the in situ grade of gravel from the Guanaco area and seven times from the Lago Seco area. Vanadium grades increase 3.8 times through beneficiation of gravels from both areas.

(4) May 2011 technical report: “Laguna Salada Project, Chubut Province, Argentina: NI 43-101 Technical Report: Initial Resource Estimate”, which is available at [www.u3o8corp.com](http://www.u3o8corp.com) and on SEDAR at [www.sedar.com](http://www.sedar.com).

## Mining and Processing Methods

Laguna Salada would produce an average of 0.64Mlb per year over the 10-year mine life. The mining operation contemplates the use of two Wirtgen SM2200 (400 tonne per hour (“tph”) capacity) continuous surface miners that cut a 30-40 centimetre layer of unconsolidated gravel with each pass along a trench. Gravel cut from the leading edge of the trench would be trucked a short distance by 50-tonne (“t”) truck-trailers to one of two mobile beneficiation units (360tph capacity) where the gravel would be washed over screens to separate the pebbles and coarse sand from the fine uranium-bearing material. Approximately 90% of the damp gravel would be returned to the trailing edge of the trench to be levelled to the land’s original topography and replanted with indigenous flora. This reclamation would be continuous throughout the mine life and ensures that no open excavation would be left on completion of mining.

The fine mineralized material derived from the gravel (8% of the original mass from the Guanaco area of the deposit and 11% from the Lago Seco area) would be mixed with water and pumped to a central hydrometallurgical plant. Fine material from Lago Seco would enter a hydrocyclone system for further beneficiation and the fine material in the overflow, containing the majority of the uranium, would then be mixed with fine material from the Guanaco sector for further processing. Residual gypsum in the combined fines would be leached with saline shallow groundwater from the property and the sulphate would be separated from that solution in a membrane system so that the saline water can be recirculated. Extraction of uranium and vanadium would be by alkaline leach at a temperature of 80°C, followed by the precipitation of a uranium-vanadium intermediate product. The PEA contemplates separation of the uranium and vanadium and calcining of the uranium to produce a high-grade uranium oxide as well as recovery of the vanadium as ammonium metavanadate (calcining of which would produce vanadium pentoxide).

The next steps toward development of the Laguna Salada Deposit would be further hydrometallurgical test work and an on-site pilot plant in which beneficiation tests would be undertaken, both of which would be to feasibility standards.

### **Capital Costs**

The PEA estimates a \$134 million capital cost, the main constituents of which are \$14 million for mining and beneficiation equipment, \$79 million for the processing plant, indirect costs of \$11 million and contingency of \$22 million (Table 3).

**Table 3 – Summary of Capital Costs**

<b>Items</b>	<b>(in \$millions)</b>
Working capital	\$2.5
Mining	\$14.3
Sustaining capital	\$3.3
Mine closure*	\$2.0
Process plant and infrastructure	\$79.1
Indirect costs (EPCM, insurance, temporary works, first fills & spares etc.)	\$10.9
Contingency of 20%	\$21.9
<b>TOTAL</b>	<b>\$134.0</b>

*\*Mine site reclamation and closure would be ongoing during the life of the mine and the majority of this cost is captured in operating costs.*

### **Operating Costs**

Revenue of approximately \$10/t of mineralized gravel against operating costs of \$5.56/t would generate operating cash flow of \$4.43/t (Table 4).

**Table 4 – Summary of Operating Costs**

<b>Items</b>	<b>Per tonne of mineralized gravel</b>
Revenue	\$9.99
<b>Operating Costs:</b>	
Revenue-based royalties	\$0.25
Mining	\$0.99
Processing & G&A	\$4.32
<b>Total Operating Costs:</b>	<b>\$5.56</b>
<b>Operating Cash Flow</b>	<b>\$4.43</b>

The Laguna Salada PEA technical report, prepared in accordance with NI 43-101, will be filed on SEDAR within 45 days of this news release.

## **Qualified Persons and Accreditation**

The PEA was conducted under the supervision of Mr. Louis de Klerk, Pr. Eng. (South Africa), at Tenova Mining & Minerals (formerly Bateman Engineering N.V.) ("TMM") in Perth, Australia. TMM is part of the Techint Group, a leading global engineering firm that has been providing process design, development and construction services to the resource sector for over 90 years and has extensive and specific process and engineering experience in the extraction of uranium and vanadium. Projects undertaken by TMM include AREVA's Imouraren, Cameco's Key Lake, by-product uranium from Harmony Gold's mines, Rio Tinto's Rossing mine, Kazatomprom's Honeymoon ISL uranium mine, Sinosteel's Crocker Well uranium project, an alkaline leach facility at UCIL's Gogi uranium project, a feasibility study on Bannerman's Etango uranium project and most recently, a feasibility study on Toro Energy's Wiluna project, which has many similarities with the Laguna Salada Deposit. For more information, see [www.tenovagroup.com](http://www.tenovagroup.com).

Mr. Pedro Pino Veliz, Director of PEK Teknep Overseas Engenharia Ltda ("PEK"), was responsible for the mine design and financial model. Mr. Veliz is a Civil Mining Engineer (P.E.) (Brazil), Eng. Dr. (IT) SME with over 35 years of mining operations experience. PEK has extensive experience serving its Brazilian and international clients with rock mechanics, rock characterization, underground stability and hydrological studies, feasibility studies and designing and planning of surface mining, open pit mines and underground mines. This has included detailed design of tunnels and stations, methods of excavation and specifications for support methods in the expansion of the Rio de Janeiro subway system for the 2014 World Cup and 2016 Olympic Games. Numerous projects for Rio Tinto included the Salobo Copper open pit mine, the Fortaleza de Minas open pit/underground nickel project, Rossing Uranium expansion project and study of surface Voest Alpine Continuous Miners for the Morro do Ouro gold mine.

Mine and tailing facility design was by PEK, with associated operating and capital cost estimates, as well as related general and administrative costs. TMM was responsible for the PEA design of the hydrometallurgical plant from receipt of the beneficiated slurry from the scrub-screen units, as well as for the associated operational and capital expenditure and general and administrative cost estimates. Pricing of reagents was done by TMM and U3O8 Corp. Product price assumptions were made by U3O8 Corp. The economic model was constructed by PEK using capital and operating cost estimates from TMM for the hydrometallurgical plant and from PEK for the mine plan and beneficiation units.

Mr. John Goode, P.Eng (Ontario) is an independent consultant with 50 years of experience in metallurgy and related test work. He oversaw the metallurgical test work carried out on the Laguna Salada Project. Mr. Goode is a Fellow of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) and a Fellow of the Australasian Institute of Mining & Metallurgy (AusIMM).

Mr. Johann van der Westhuysen (PrEng (Chem)), Managing Director of Synexus (Pty) Ltd. ("Synexus"), was responsible for the membrane separation developments and their integration in the overall process for the Laguna Salada Project. Mr. van der Westhuysen is a Professional Engineer with the Engineering Council of South Africa and a Chartered Chemical Engineer with the Engineering Council of the United Kingdom. Synexus is a process engineering company specializing in the application of membrane systems in hydrometallurgical and related processes.

Each of the individuals named above is a qualified person as defined in NI 43-101 of the Canadian Securities Administrators ("QP"), is independent of U3O8 Corp. and has verified his related technical disclosure presented in this press release.

The PEA has relied on the NI 43-101 resource estimate prepared by Mr. Neil Inwood, a Fellow of The Australian Institute of Mining and Metallurgy and a QP, who was employed by Coffey Mining at the time of the writing of the report. Mr. Inwood is independent of U3O8 Corp. As Mr. Inwood is no longer with Coffey Mining, Coffey Mining has reviewed the information related to the mineral resources as derived from the original report and consents to its inclusion, form and context in this press release.

Dr. Richard Spencer, Ph.D., BSc(Hons), P.Geo. (Ontario), C.Geo. (UK), is President & CEO of U3O8 Corp. and a QP, and has supervised the preparation of, and verified the technical information contained in this press release relating to the Laguna Salada Project.



## **About U3O8 Corp.**

U3O8 Corp. is focused on exploration and development of uranium resources and associated commodities in South America. The company's uranium resources comprise three deposits defined in accordance with NI 43-101 located in Colombia, Argentina and Guyana:

- **Berlin Deposit, Colombia** – a 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). Follow U3O8 Corp. on Facebook: [www.facebook.com/u3o8corp](http://www.facebook.com/u3o8corp), Twitter: [www.twitter.com/u3o8corp](http://www.twitter.com/u3o8corp) and Youtube: [www.youtube.com/u3o8corp](http://www.youtube.com/u3o8corp).

### **Forward-Looking Statements**

*Certain information in this release are forward-looking statements with respect to the 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) the low-cost, near-term production goal of Laguna Salada, (b) the Laguna Salada and Berlin PEAs, (c) the market opportunities for uranium in Argentina and internationally, and (d) the potential of the Kurupung district in Guyana. Basis for such assumptions include that: (i) actual results of our exploration, resource goals, metallurgical testing, economic studies and development activities will continue to be positive and proceed as planned, and assumptions in the Laguna Salada and Berlin PEAs prove to be accurate, (ii) requisite regulatory and governmental approvals will be received on a timely basis on terms acceptable to U3O8 Corp., and (iii) 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 mine will be achieved on the Laguna Salada Project in compliance with current Chubut mining law, (2) that a mine will be achieved on the Berlin Deposit and other exploration projects, (3) that beneficiation test work will continue to be favourable and results from small scale metallurgical testing can be duplicated on a larger scale, (4) 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, (5) volatility of commodity prices; (6) dependence on regulatory approvals and changes in legislation, environmental compliance, community support and the political and economic climate, (7) availability of future financing, and (8) 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.*

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