

## Press Release

### **U3O8 Corp. files patent application for metallurgical process that efficiently extracts uranium, phosphate, vanadium & rare earths**

#### ***Opens up potential business opportunities in other uranium & rare earth deposits***

Toronto, Ontario – June 21, 2012 – **U3O8 Corp. (TSX Venture: UWE; OTCQX: UWEFF)**, a Canadian-based company focused on exploration and resource expansion of uranium and associated commodities in South America, reports that it has filed an international patent application, together with Sulphide Resource Processing Pty Ltd. (“SRP”), a consulting metallurgical company, for a two-step metallurgical process using an initial ferric iron leach followed by an acid wash that was developed for the extraction of uranium, phosphate, vanadium, rare earths and other metals at U3O8 Corp’s Berlin Project in Colombia.

“U3O8 Corp. achieved a breakthrough in establishing a simple and efficient method to extract the diverse mix of commodities in the Berlin Project that resulted in excellent extraction of uranium, phosphate, vanadium, yttrium and neodymium,” said Dr. Richard Spencer, President and CEO of U3O8 Corp. “By applying for a patent on this metallurgical development, in which we improve on conventional ferric leach technology and increase the economic potential of recovering a broader suite of elements, we may be able to capitalize on new revenue-generating opportunities by offering this process for use on other deposits. Of particular interest are phosphate-bearing ores that contain valuable metals such as uranium and rare earth elements that may be more efficiently or economically recovered using our improved ferric leach process.”

“Of added note, U3O8 Corp’s patent could dove-tail with a patent application recently filed by another company, which specifically covers the use of bioleaching (using bacteria) as a means of generating ferric iron and its application for metal removal in the water treatment industry. Our metallurgical method uses ferric iron, which may be generated in a number of ways, to improve existing ferric leach technology for the extraction of metals from minerals.”

#### **Patent for Ferric Leach Process**

The patent application covers the two-step method developed by U3O8 Corp. and Dr. Paul Miller of SRP, and comprises the following enhancements made to the conventional ferric leach technology that was originally formulated in the 1950’s:

- **Step 1 – Ferric Leach:** Crushed whole ore is treated with a solution of ferric iron. Iron is encouraged to precipitate in order to generate much of the acid that assists in leaching the ore. Leaching of high-carbonate and/or phosphate-bearing ores, like Berlin mineralization, may require external sulphuric acid to supplement the acidity associated with the ferric iron. The ferric iron is a strong oxidizing agent that, with weak acid, efficiently makes soluble most of the metals and phosphate from the ore into a “pregnant” liquid. This leaching process takes approximately 48 hours to obtain full extraction from the Berlin ore, although high levels of metal extraction are obtained after only a few hours.
- **Step 2 – Acid Wash:** The iron which precipitates in step 1 of the ferric leach process re-captures a portion of the metals and phosphate from the pregnant solution. Therefore, a second leach step is required, which involves washing the iron precipitate with dilute acid to liberate those metals and phosphate. In this step, much of the ferric precipitate is also made soluble and may be recycled, which reduces reagent consumption and costs.

- In addition, the precipitation of iron in step 1 above results in a significant production of acid, thereby reducing the quantity of acid that would be required in a conventional ferric leach process.

Although work is ongoing to optimize the leach parameters, including reagent consumption, approximately 140 kilograms (“kg”) of acid and 100kg of ferric iron per tonne (“t”) of ore are estimated to be required in our ferric leach process, which compares to consumption of between 600kg/t and 700kg/t of acid for conventional ferric leach or conventional acid leach alone. It should be noted that the moderate reagent consumption of our ferric iron method applies to unbeneficiated ore; that is, ore that has simply been crushed with no further treatment prior to ferric leaching, which minimizes processing costs.

As evidenced by the test work on the Berlin ore, U3O8 Corp’s ferric leach process results in excellent extraction of uranium, phosphate, vanadium and a wide range of associated elements including zinc, lithium, thallium and rare earths (specifically, yttrium, lanthanum, cerium, neodymium, erbium, samarium, dysprosium, europium and gadolinium) and moderate extraction rates for nickel, rhenium, molybdenum and silver.

The patent will be jointly owned by U3O8 Corp. and SRP. The partner that successfully markets the technology to a third party receives 70% of the proceeds generated by applying the process to the third party project, and the other partner receives 30%. If either partner decides to sell its right to its share of proceeds, the other partner has the right of first refusal to purchase that share.

#### **About U3O8 Corp.**

U3O8 Corp. is a Toronto-based exploration company focused on exploration and resource expansion of uranium and associated commodities in South America – a promising new frontier for uranium exploration and development. U3O8 Corp. has one of the most advanced portfolios of uranium projects in the region comprising NI 43-101 compliant resources in Guyana, Argentina and Colombia.

#### **Forward-Looking Statements**

*Certain information set forth in this news release may contain forward-looking statements that involve substantial known and unknown risks and uncertainties. These forward-looking statements are subject to numerous risks and uncertainties, certain of which are beyond the control of U3O8 Corp., including, but not limited to, the actual result of current drilling and exploration activities, the impact of general economic conditions, industry conditions, the timing of laboratory results, the actual results of independent scoping studies and subsequent metallurgical testing, the approval of the patent application or that opportunities will arise from such patent, volatility of commodity prices, risks associated with the uncertainty of exploration results and estimates and that the resource potential will be achieved on exploration projects, currency fluctuations, dependence upon regulatory approvals, and the uncertainty of obtaining additional financing and exploration risk. There is no assurance that further exploration on the Berlin Project will add to U3O8 Corp’s resource base in the short-term, or at all. 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.*

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