



Commerce Resources Corp. Reports Mixed Rare Earth Oxide from Ashram Rare Earth Deposit Produced by Université Laval

July 24, 2018 - Commerce Resources Corp. (TSXv: CCE, FSE: D7H) (the “Company” or “Commerce”) is pleased to announce that Université Laval (“Laval”) has produced a mixed rare earth oxide concentrate using material from the Ashram Rare Earth Deposit. The test work is part of a larger program being completed in collaboration with Laval to process material from the Ashram Rare Earth Deposit, located in northern Quebec. The test program also includes pilot level components, (see news release dated May 31, 2018).

Highlights to date for the program include:

- Demonstration of entire process flowsheet, as developed by Laval, on the bench scale
- Bench scale production of mixed LRE⁽¹⁾ oxide (1.2 grams) and mixed LRE+SEG⁽²⁾+HRE⁽³⁾ oxide (0.6 grams)
- Validation of the software model simulator, using data from the bench scale processing of Ashram material, for the separation of rare earth elements (REEs) by solvent extraction (SX)

Company President Chris Grove states, “*The rapid progress of this collaboration now includes the first ever mixed rare earth oxide concentrate produced from Ashram Deposit material. This is a key milestone for the advancement of the Project. This test work has demonstrated again the versatility of the Ashram Deposit to be processed by a number of different flowsheet approaches.*”

The Company has previously produced among the highest-grade rare earth mineral concentrates in the rare earth development space (>45% REO), which also compare favorably with current operating mines globally. This is a direct result of the simple rare earth and gangue mineralogy of the Ashram Deposit, and the versatility in processing this permits. This versatility is further demonstrated herein with the bench-scale production of downstream mixed rare earth oxide concentrates by Laval using an alternative flowsheet approach. By extension, this versatility in processing approaches lends itself to more cost-effective methods to be incorporated into the final flowsheet to achieve the same products and quality desired.

During May 2018, a sample of whole rock material from the Ashram Deposit was beneficiated using flotation methods and the resulting concentrate was processed downstream using a



sequential caustic – acid leach to “crack” the rare earth minerals and liberate the REEs into solution with a low impurity content. This solution was then processed using conventional solvent extraction to obtain mixed LRE, SEG, and HRE fractions, with the LRE solution then further processed to final mixed oxide product. Although recovery was not a target factor in the completed test work, an overall recovery of 60 to 65% was achieved for several of the LRE. Recent modifications to the flotation conditions are expected to improve the recoveries, with the optimization process still on-going.

The primary objective of the test work is to validate a new software program (the software “model simulator”), developed by Laval, for the simulation of a continuous SX separation plant for the REEs. The software utilizes pre-defined inputs to generate a set of product outputs with specific characteristics. The bench and pilot scale test data, generated from the processing of the Ashram material, is then compared to the predicted outputs of the software in order to validate the results, and therefore, the software program.

This validation of the software has now been completed using bench scale test data from processing of the Ashram Deposit material, with results matching closely the predicted outputs of the model simulator. The next step is to complete the test work at the larger pilot scale and compare these results to those predicted by the model simulator.

As such, the large-scale crushing and grinding of ~1.5 tonnes of Ashram material is currently being completed at SGS Canada Inc.’s (“SGS”) Quebec City facility with the flotation component to follow shortly thereafter. The flotation concentrate will be used as feed to a semi-continuous hydrometallurgical pilot operation to produce a purified solution containing the REE. The REE solution will then be processed through a continuous SX separation pilot circuit to separate the LRE from the SEG and HRE. In parallel the solution composition will be used to simulate the pilot scale SX separation circuit using the model simulator. The comparison between the results of the pilot plant and the simulation will validate the model simulator, which could then be used to further assess the economics of the separation of the REE into individual rare earth oxides.

A targeted commercial benefit of the software model simulator is as a planning tool for process piloting to help reduce delays and costs associated with piloting the SX separation process for REE. Moreover, various scenarios may be run through the model simulator to obtain predicted outputs following process changes, prior to incurring the costs of physically completing the test work. Further, the simulation may include REE prices for the process optimization where one REE is favored over another one, as well as product specification optimization.

- (1) LRE – Light Rare Earth
- (2) SEG – Samarium, Gadolinium, Europium
- (3) HRE – Heavy Rare Earth



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NI 43-101 Disclosure

Darren L. Smith, M.Sc., P.Geol., Dahrouge Geological Consulting Ltd., a Qualified Person as defined by National Instrument 43-101, supervised the preparation of the technical information in this news release.

About Université Laval

Université Laval is a French-language university based in Quebec City, QC, Canada with over 42,500 students enrolled in some 500 programs. Laval is a highly regarded academic institution at the forefront of research and development in the country with over 60 departments and schools supporting a range of innovative initiatives.

About Commerce Resources Corp.

Commerce Resources Corp. is an exploration and development company with a particular focus on deposits of rare metals and rare earth elements. The Company is focused on the development of its Ashram Rare Earth Element Deposit in Quebec and the Upper Fir Tantalum-Niobium Deposit in British Columbia.

For more information, please visit the corporate website at <http://www.commerceresources.com> or email info@commerceresources.com.

On Behalf of the Board of Directors
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This news release contains forward-looking information which is subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ from those projected in the forward-looking statements. Forward looking statements in this press release include, but are not limited to, potential process methods and mineral recoveries assumption based on limited test work and by comparison to what are considered



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analogous deposits that with further test work may not be comparable; the availability of labour, equipment and markets for the products produced; and despite the current expected potential of the project, conditions changing such that the minerals on our property cannot be economically mined, or that the required permits to build and operate the envisaged mine can be obtained. The forward-looking information contained herein is given as of the date hereof and the Company assumes no responsibility to update or revise such information to reflect new events or circumstances, except as required by law.

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