



Progress Update on Rare Earth Recycling Demonstration Plant

Montreal, July 21, 2021 – Geomega Resources Inc. (“**Geomega**” or the “**Corporation**”) (TSX.V: GMA) (OTC: GOMRF), a developer of clean technologies for the mining, refining and recycling of rare earths, is pleased to provide shareholders with the following update relating to the construction of the rare earth recycling demonstration plant and certain other research and development (R&D) initiatives of the Corporation.

Demonstration Plant Engineering Work

Detailed engineering for the demonstration plant is progressing well by both external and in-house engineers. Since the completion of the pilot test work for which the [results were published in January 2021](#), the engineers have been reviewing all the test work and results in order to complete and / or update process computational models, stream tables, process flow diagrams (PFD), heat and mass balance, process design criteria (PDC), process control logic and diagrams (PCD), operating schedule, off-gas handling and the associated safety reviews.

Initial quotes for the plant equipment have been received and are being updated regularly based on any changes arising from the above work, such as equipment sizing. With technology selection now complete for the required equipment, the Corporation will proceed to ordering the equipment as soon as the aforementioned engineering work is finalized along with equipment design review. Procurement is now expected to take place in the fall of 2021.

The work over the last 6 months has demonstrated that the technology can be scaled up to the demonstration plant. In addition, during regular operation of the plant, it will not be producing liquid effluent and will be able to produce a boron and a cobalt compound as by-products. Finally, an internal study has demonstrated the low greenhouse gasses (GHG) impact in comparison to conventional mining.

Work in the lab is continuing on various magnet feeds from different magnet manufacturers. The objective of this work is to ensure that the technology can treat the multitude of chemistries and sources that will need to be processed as the demonstration plant capacity is ramped up from 1.5 to 4.5 tonnes per day. The Corporation has been working on 4 different magnet residue samples (swarf) provided by some of the largest magnet manufacturers in Japan and western manufacturers operating in China. With swarf representing one of the largest potential supply streams in the future, testing the various streams was important to evaluate the recoveries and economics. Each manufacturer’s stream has its own peculiarities and the Corporation proposed

and tested a pre-treatment method where needed. Our engineering team's conclusion is that it appears that the rare earth recycling technology is very robust and will be able to treat the various aforementioned streams.

Research and Development Activities

R&D activities on other streams of critical and strategic metals is continuing as well. With the technical team tripling in size over the last 18 months, part of the team is dedicated to the demonstration plant work while the rest of the team is working in parallel to leverage the gained expertise and apply it to other potential feeds along with the Montviel rare earths project. Following up on [the work with bauxite residues](#), which continues to advance, the Corporation is now applying its iron friendly processing technology on streams that could provide raw materials to other key industries that require critical metals, such as the Li-ion batteries, in a more sustainable way. The ability of the Corporation to recycle its main reagents is a key component in potentially offering an environmentally friendly solution to the mining industry.

“Creating new sustainable technology to recycle rare earths is challenging and our team of researchers and engineers has been successfully completing the required tasks with the goal of establishing a solid foundation for our demonstration plant in order for it to become a success. With the engineering work advancing and as we are nearing procurement, our R&D team is now constantly testing the potential of our technology and establishing the foundation to ensure the long-term growth vision for Geomega and its shareholders. Being fully funded for construction, we are focused on reaching production from the demonstration plant which will serve as the backbone of our technology as we gradually try to apply it to Montviel, bauxite residues and other materials.” commented Kiril Mugerman, President and CEO of Geomega.

About Geomega (www.geomega.ca)

Geomega develops innovative technologies for extraction and separation of rare earth elements and other critical metals essential for a sustainable future. With a focus on renewable energies, vehicle electrification, automation and reduction in energy usage, rare earth magnets or neo-magnets (NdFeB) are at the center of all these technologies. Geomega's strategy revolves around gradually de-risking its innovative technology and delivering cashflow and return value to shareholders while working directly with the main players in these industries to recycle the magnets that power all those technologies.

As its technologies are demonstrated on larger scales, Geomega is committed to work with major partners to help extract value from mining feeds, tailings and other industrial residues which contain rare earths and other critical metals. Irrespective of the metal or the source, Geomega adopts a consistent approach to reduce the environmental impact and to contribute to lowering greenhouse gases emissions through recycling the major reagents in the process.

Geomega's core project is based around the ISR Technology (Innord's Separation of Rare Earths), a proprietary, low-cost, environmentally friendly way to tap into a C\$1.5 billion global market to recycle magnet production waste and end of life magnets profitably and safely.

Geomega also owns the Montviel rare earth carbonatite deposit, the largest 43-101 bastnaesite resource estimate in North America and holds over 16.8M shares, representing approximately 16% of the issued and

outstanding shares, of Kintavar Exploration Inc. (KTR.V), a mineral exploration company that is exploring for copper projects in Quebec, Canada.

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