

Management's Discussion and Analysis Quarterly Highlights

Three months ended August 31, 2020

Management Discussion & Analysis- Quarterly Highlights Three months ended August 31, 2020

The following quarterly highlights management discussion and analysis (the "MD&A Highlights") of the financial condition and results of the operations of Geomega Resources Inc. (the "Corporation", "Company" or "Geomega") constitutes management's review of the factors that affected the Corporation's financial and operating performance for Q1-21. This MD&A Highlights should be read in conjunction with the Corporation's unaudited condensed interim financial statements as at August 31, 2020 prepared in accordance with the International Financial Reporting Standards ("IFRS"), as well as with the management discussion and analysis for the year ended May 31, 2020. All figures are in Canadian dollars unless otherwise noted.

Further information regarding the Corporation and its operations are filed electronically on the System for Electronic Document Analysis and Retrieval (SEDAR) in Canada and can be found on <a href="https://www.sedar.com">www.sedar.com</a>.

Abbreviation	Period
Q1-20	June 1, 2019 to August 31, 2019
Q2-20	September 1, 2019 to November 30, 2019
Q3-20	December 1, 2019 to February 28, 2020
Q4-20	March 1, 2020 to May 31, 2020
Fiscal 20	June 1, 2019 to May 31, 2020
Q1-21	June 1, 2020 to August 31, 2020
Q2-21	September 1, 2020 to November 30, 2020
Q3-21	December 1, 2020 to February 28, 2021
Q4-21	March 1, 2021 to May 31, 2021
Fiscal 21	June 1, 2020 to May 31, 2021

#### 1. NATURE OF ACTIVITIES

Geomega is a mineral exploration and evaluation corporation focused on the discovery and sustainable development of economic deposits of metals in Quebec. Geomega is committed to meeting the Canadian mining industry standards and distinguishing itself with innovative engineering, high stakeholder engagement and dedication to local transformation benefits. On the TSX Venture Exchange (the "Exchange"), common shares of the Corporation are trading under the symbol GMA.

As society moves from consumption of fossil fuels to more sustainable energy sources, Geomega believes that the future of clean energy resides in one of the rare earth elements ("REE") called neodymium. Neodymium is vital for the production of high-performance permanent magnets used in a wide variety of electrical motors. Such motors are in increasing demand with the growth of sustainable-energy initiatives such as hybrid and electric vehicles and direct-drive wind turbines.

Innord Inc. ("Innord") is the innovation arm of Geomega and was created in March 2015 to optimize the value of the separation technology by facilitating its development through direct investments of key financial partners. Innord is a subsidiary of Geomega that holds all the separation rights and laboratory equipment. The primary goal of Innord is to successfully scale-up its proprietary REE separation process. From now on, all research and development initiatives of Geomega are conducted by Innord.

### 2. CORPORATE UPDATE

# 2.1 Financial Highlights

Geomega has \$316,830 of cash and cash equivalents as at August 31, 2020 and a working capital of \$232,811 (working capital of \$460,470 as at May 31, 2020).

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### 2. CORPORATE UPDATE (CONT'D)

For Q1-21, the Corporation recorded a net loss of \$380,163 compared to a net loss of \$333,527 for Q1-20. Excluding the effects of fluctuations from the investment in an associate, a net loss of \$353,411 was realized in Q1-21 compared to a net loss of \$297,531 in Q1-20. The main variations are as follows:

- Directors fees of nil (\$11,250 in Q1-20). Since Q3-20, the Corporation has changed the remuneration package given to its directors. There is no more cash remuneration, but a share-based compensation package only.
- Exploration and evaluation expenses, net of tax credits of \$99,074 (\$77,166 in Q1-20). See the analysis of work on the Montviel property in Section 4.1. The level of activity was essentially the same as in the previous year, but the Government grant was slightly higher for Q1-20 (\$50,628 compared to \$38,490 for Q1-21). Additionally, during Q1-20, the Corporation benefited from a last rental income of \$20,739 for the rent of its warehouse and field equipment before it was sold in Q2-20.
- Professional fees of \$73,551 (\$45,605 during Q1-20). The Q1 expense for professional fees always
  includes the audit fees, which were slightly higher in Q1-21 compared to Q1-20. The Corporation also
  received an invoice of \$21,626 for legal consulting fees in regards of the debt financing and various
  transactions.
- Travel, conference, and investor relations of \$47,420 (\$73,294 during Q1-20). With the increase in the level of activity and the approaching production of rare earth oxides from the demonstration plant, the Corporation has invested in order to increase its visibility in the market with several marketing agreements as well as for its participation in tradeshows. Although, with the COVID-19 situation, some marketing activities were canceled, postponed, or put on pause. A total of \$27,200 for Q1-21 and \$28,463 of the Q1-20 expense represent share-based compensation.
- Depreciation of right-of-use asset of \$20,074 (nil in Q1-20). This expense represents the amortization
  of the long-term leased signed in February 2020 for the demonstration plant to be built in Saint-Brunode-Montarville.
- Share of loss of an associate of \$13,753 (\$106,048 in Q1-20) and net loss on dilution of investment in an associate of \$12,999 (net gain of \$40,252 in Q1-20). Kintavar is the only associate of the Corporation and this investment is accounted for using the equity method. There was no major change in Kintavar's Capital during Q1-21 and its expenses were significantly lower in Q1-21 compared to Q1-20, both due because of the COVID-19 which delayed some field work and the nature in the work performed itself.

### 2.2 Demonstration Plant

On July 16, 2020 the Corporation, along with and USA Rare Earth, LLC, the funding and development partner of the Round Top Heavy Rare Earth and Critical Minerals Project in West Texas, announced that they have entered into a Letter of Intent (LOI) to recycle rare earth-containing production waste from USA Rare Earth's future production of sintered neodymium iron boron (NdFeB) permanent magnets (sintered neo magnets) in the United States.

On August 6, 2020, the Corporation provided an update on engineering and development activities for the demonstration plant. Geomega received from Hatch process flow diagrams, equipment list, utilities, stream tables and a heat and mass balance. Several modifications and improvements were made on the process, which will be undergoing several demonstration test runs using the Corporation's pilot unit at its facilities in Boucherville, Quebec. The test runs of the updated process will also be used to collect data on emissions for permitting purposes. The modifications and improvements include a simplification of several units of operation, validation of various parameters for equipment selection and by-product recovery. The pilot test runs are all ongoing since the month of August while other in-house engineering activities are continuing.

See Section 3 for an outlook on upcoming activities.

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### 2. CORPORATE UPDATE (CONT'D)

### 2.3 Other Sources of financing

During Q1-21, the Corporation received a total of \$45,891 from the exercise of 277,778 warrants and 100,000 options. A total of 377,778 shares were issued.

On September 3, 2020, the Corporation announced that it has secured additional debt financing of \$1,326,000, which will be added to the funds required to build the rare earth magnet recycling demonstration plant in Saint-Bruno-de-Montarville. The amount is in addition to the first tranche amount of \$1,720,000 that was announced on February 7, 2020, for a total financing of \$3,046,000.

On October 9, 2020, the Corporation sold the dorms that were located on the Montviel property for a total of \$50,000. These dorms have not been used by the Corporation for the past 3 years and were totally amortized in the books of the Corporation.

#### 2.4 Various

On June 4, 2020, the Corporation announced that Mr. Matt Silvestro, President & Owner of Jobmaster Magnets, has joined the Board of Directors of the Corporation. This addition to the Board of Directors will bring significant experience and knowledge in the magnet industry.

On September 2, 2020, the Corporation announced that it is expanding and leveraging its Research & Development expertise. Geomega is currently evaluating the economic potential to extract and refine rare earths and other critical metals from a broader range of mining feeds, including mining and industrial waste streams (tailings). Geomega has begun to work with companies that are in production, and through testing at Geomega's R&D test centre in Boucherville, the company will be evaluating the potential to extract value that is otherwise being lost today. Geomega's intention is to apply its various technologies, through collaborative licensing and royalty agreements with several industrial partners, allowing for the extraction of valuable metals contained in their waste streams, which may not be economically, technologically, or environmentally feasible today.

On September 16, 2020, the Corporation announced that Mr. Nicholas Nickoletopoulos would be presented as a new nominee to the board of directors of Geomega. Director Jean Demers would not be standing for reelection. The new director was confirmed on October 21 at Geomega's Annual General Meeting. M. Nickoletopoulos brings with him operational, technical and executive management experience in the metals industry.

### 3. OUTLOOK ON THE UPCOMING MONTHS

Validation of the separation technology through processing industrial residues was and remains Geomega's main objective since 2015. The Corporation is focusing on producing rare earth oxides, which are used in the production of permanent magnets, from high grade industrial residues.

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## 3. OUTLOOK ON THE UPCOMING MONTHS (CONT'D)

The Corporation's objectives over the next months include:

- Finish the ongoing pilot testwork
- Complete detail engineering
- Permitting
- Select construction firm
- · Vendor selection and equipment ordering
- Separation tests to obtain a purity of 99.9% and higher
- Secure more supply to ensure long-term profitability of commercial plant operations
- Secure offtake agreements with potential clients
- Monitor the impact of COVID-19 on the market and adjust activities accordingly

### 4. EXPLORATION AND VALIDATION OF THE SEPARATION TECHNOLOGY ACTIVITIES

# 4.1 Expense summary - Montviel property

	Three months ended August 31	
Montviel Property	2020	2019
	\$	\$
Acquisition and maintenance	-	261
Exploration		
Salaries and payroll expenses	-	4,601
Share-based compensation	5,088	828
Supplies and tools	-	527
Transport and lodging	839	6,815
Depreciation of property and equipment	-	2,393
Taxes, permits and insurances	360	2,511
Billing - rental	-	(20,739)
Total exploration	6,287	(3,064)
Evaluation		
Salaries and benefits – separation process	113,807	77,136
Separation process	16,799	24,994
Depreciation of property and equipment	4,430	6,457
Engineering	-	22,010
Total Evaluation	135,036	130,597
Gross E&E expenses	141,323	127,794
Government grants	(38,490)	(50,628)
Net tax credits	(3,759)	<u> </u>
Net E&E expenses - Montviel	99,074	77,166

Alain Cayer, P. Geo., M.Sc., Vice-President Exploration of Geomega, a qualified person as defined in NI 43-101 supervised the preparation of the technical information in sections 4.1, 4.2 and 4.3.

The Corporation owns 100% of the Montviel property, located approximately 100 km north of Lebel-sur-Quévillon and 45 km west of the Cree First Nation of Waswanipi. The Montviel property comprises 161 mining claims totalling 8,942 hectares as at May 31, 2020.

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### 4. EXPLORATION AND VALIDATION OF THE SEPARATION TECHNOLOGY ACTIVITIES (CONT'D)

### 4.2 ISR Technology Development

Dr. Pouya Hajiani, process inventor, engineer and CTO of Geomega supervised and approved the technical information of this section.

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, reduction in greenhouse gas emissions and 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 ("Innord Separation of Rare Earths (ISR Technology)") while working directly with the main players in these industries to recycle the magnets that power all those technologies.

The Corporation completed a successful pilot scale-up in 2019 and had its material validated by potential end users for manufacturing of permanent magnets and has since focused on the next scale up of the technology to a demonstration plant. Geomega received from Hatch the required documentation to proceed to the next step of engineering and is working since August 2020 on completing its 2<sup>nd</sup> pilot plant to validate and confirm some of the changes that were completed to the technology since 2019.

Geomega is advancing towards the construction of the demonstration plant that will be using the ISR technology to recycle rare earth magnets and produce rare earth oxides. On October 1st, 2019, the Corporation published the results of the Front-End Engineering & Design ("FEED") study. The updated design has been scaled up in order to operate on a single work shift of 8 to 10 hours. As a result of this sizing increase and process optimization by Geomega, the demonstration plant could reach a throughput capacity of 1.5 ton per shift, a 50% increase over the initial design. On a per hour basis, this demonstrates a 4.5X increase.

The engineering work to date confirmed that the ISR process that was developed by Innord, a subsidiary of Geomega, is technically feasible and uses off the shelf equipment thereby making it easier to scale up.

In September 2020, the Corporation provided updated capital costs (including working capital) for the demonstration plant which increased from \$3.2M to \$4.8M. Although the equipment cost remains the same as what was presented in the FEED study, the Corporation revised upwards the estimate for plant construction and for the remaining cost of engineering.

The Corporation is currently conducting the pilot testing and has hired additional engineers to its team to advance the detailed engineering which will be completed both internally and with an external engineering group. Discussions with vendors and construction companies are ongoing and the Corporation is looking to order the main long lead items as soon as possible.

#### 4.3 Environmental Geochemistry

There are several environmental studies that are ongoing on Montviel. These are long term studies with repetitive sampling.

### 4.4 Preliminary Economic Assessment ("PEA")

The corporate commitment to sustainable development dictated the following operational parameters for the Montviel project: i) underground mining scenario with paste backfill, ii) reduction in reagents to be transported by road and iii) electrical operations with a low voltage power line. It has taken more than three and a half years of metallurgical work and optimization to meet these three parameters.

In 2015, Montviel's flow sheet was greatly simplified. All of the acid required for hydrometallurgy was to be generated on site with the insertion of a closed loop acid regeneration unit. In addition, two physical processes at the beneficiation step significantly decrease the ore mass moving to hydrometallurgy.

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### 4. EXPLORATION AND VALIDATION OF THE SEPARATION TECHNOLOGY ACTIVITIES (CONT'D)

The Corporation continues to evaluate the rare earth market and believes that the Montviel deposit, with the largest bastnaesite type mineralization 43-101 resource estimate in North America, could demonstrate solid economics based on its proprietary technology even at current market pricing.

To complete the PEA, the primary remaining work is the evaluation of the cost of the plant and infrastructure based on the May 2015 flow sheet (see press release dated May 20, 2015). The Company is focussing on scaling up its processing technologies prior to pursuing the remaining work for the PEA.

#### 5. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies, methods of computation and presentation applied in the Financial Statements are consistent with those of the previous financial year ended May 31, 2020.

October 21, 2020	
(s) Kiril Mugerman	<u>(s) Mathieu Bourdeau</u>
Kiril Mugerman	Mathieu Bourdeau
President and CEO	CFO

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### **Management**

Kiril Mugerman, President & CEO Alain Cayer, VP Exploration Mathieu Bourdeau, CFO Pouya Hajiani, CTO

### **Board of directors**

Gilles Gingras, President of the Audit Committee <sup>1)</sup>
Kosta Kostic<sup>1)</sup>
Mario Spino <sup>1)</sup>
Matt Silvestro
Nick Nickoletopoulos
Kiril Mugerman

Notes:

1) Member of the Audit Committee

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# **Auditors**

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