NMG Releases Updated Feasibility Study for Phase 2 Integrated Ore-to-Active Anode Material Operations

28.03.2025 | Newsfile

Matawinie Mine and Bécancour Battery Materials Plant

- Updated Feasibility Study covering NMG's Phase-2 Matawinie Mine and the Bécancour Battery Material Plant for an integrated production of natural graphite and active anode material within a 150-km radius of Montréal, Québec, Canada.
- Integrated production model refined and updated in light of technological development, project optimizations, engineering advancement, and updated economic factors.
- Significant derisking with the adoption of the prevalent purification technology, aligned with established commercial operations worldwide.
- Updated Feasibility Study indicates an after-tax IRR of 17.5% and NPV of US$1,053 million with revenue reflective of third-party market projection of NMG's offtakes with Panasonic and GM, and for the balance of production.
- Results confirm NMG's Phase-2 technical and economic viability, enabling the Company to enter its project financing stage with a view to FID.
- Updated Feasibility Study to be presented to targeted lenders, Anchor Customers and institutional equity investors to advance and formalize the project financing and reach FID.
- Upon a positive FID, NMG's Phase 2 Matawinie Mine and Bécancour Battery Material Plant could be built and enter commercial production within less than three years.

Mason Resources Inc. (TSXV: LLG) (OTCQB: MGPHF) ("Mason") is pleased to announce that Nouveau Monde Graphite Inc. ("NMG" or the "Company") (NYSE: NMG) (TSX: NOU) has issued the results of the Updated Technical Feasibility Study Report for the Matawinie Mine and Bécancour Battery Material Plant Integrated Graphite Projects (the "Updated Feasibility Study") carried out in accordance with the National Instrument 43-101 ("NI 43-101"). Conducted by BBA Inc. and various specialized consultants, the Updated Feasibility Study pulled from NMG's 2022 Feasibility Study and updated key parameters in light of technological development, project optimizations, engineering advancement, and updated economic factors.

NMG's integrated production model, covering the full value chain from mining to advanced processing, is designed to cater to the North American electric vehicle ("EV") and energy storage market with a turnkey, local source of natural graphite active anode material. NMG has signed offtake agreements with Panasonic Energy Co., Ltd. ("Panasonic Energy"), a wholly owned subsidiary of Panasonic Holdings Corporation ("Panasonic") (TYO: 6752), and General Motors Holdings LLC, a wholly owned subsidiary of General Motors Co. (collectively, "GM") (NYSE: GM), (together, NMG's "Anchor Customers") covering more than 80% of the Company's planned Phase-2 production of active anode material.

Results of the Updated Feasibility Study indicate that NMG's Phase 2 is technically feasible as well as economically viable. Upon a positive final investment decision ("FID"), the Matawinie Mine and Bécancour Battery Material Plant could be built and enter commercial production within less than three years. Considering that its project financing, nearly 100% of its revenue, a significant amount of its capital expenditures and interest expenses are expected to be denominated in U.S. dollars, the Company has aligned the Updated Feasibility Study financial metrics with this currency, enabling a better representation of the underlying economic realities of the cash flows associated with this integrated project and the associated capital structure.

Arne H Frandsen, Chair of NMG, said: "The underlying driver for NMG's ore-to-battery-material business is undeniable. While inflation, geopolitics, and trade dynamics create turbulences, we are focused on delivering on our mission to responsibly produce carbon-neutral advanced graphite materials to power the energy transition. Today's results demonstrate the attractive operation that we have engineered within a stable jurisdiction and underpinned by high ESG principles to help North American manufacturers secure and

reshore their supply chain."

Eric Desaulniers, Founder, President, and CEO of NMG, declared: "We have been hard at work over the past months to examine, challenge, and refine every component of our future operations. The input of our Anchor Customers coupled with advanced precision through engineering, equipment specifications, procurement, and construction planning have enabled us to optimize our projected Phase-2 commercial production. We are confident that our plans will deliver a performing and competitive operation, supplying highly specialized products to our Anchor Customers. I am eager to present the results to our financial partners in view of FID."

Integrated Production, From Ore to Battery Materials

Leveraging the Matawinie Mine production as feedstock for the Bécancour Battery Material Plant, NMG has developed an integrated material flowsheet to maximize the production of high-value active anode material destined to the battery market segments. Hence, the two facilities are set to operate in tandem to maximize operational efficiencies and margins along the value chain.

Table 1: Economic Highlights of NMG's Integrated Phase-2 Graphite Operations

ECONOMIC HIGHLIGHTS	Matawinie Mine	Bécancour Battery Material Plant	INTEGRATED NMG MODEL
Pre-tax NPV (8% discount rate)	US$402M	US$926M	US$1,328M
After-tax NPV (8 % discount rate)	US$252M	US$801M	US$1,053M
Pre-tax IRR	17.7%	17.1%	17.3%
After-tax IRR	16.0%	18.0%	17.5%
Pre-tax payback	5.5 years	6.0 years	5.8 years
After-tax payback	5.2 years	5.0 years	5.0 years
Initial CAPEX	US$415M	US$911M	US$1,326M
Annual OPEX	US$44M	US$124M	US$168M

Costs reflect steady-state production, exclude the initial ramp-up period, and are based on normalized operations
The after-tax IRR exceeds the pre-tax IRR, driven by the favorable impact of eligible tax credits, such as the Canadian Clean Technology Manufacturing Investment Tax Credit, Zero-Emission Technology Manufacturing (ZETM) tax measures, provincial tax holidays for large investment projects and other available incentives.

Both greenfield projects, the Matawinie Mine and Bécancour Battery Material Plan were costed using test work results, Phase-1 operations, supplier quotations and consultants' in-house databases. NMG and its consulting firms have refined design, engineering, and construction parameters to enable cost optimization. Furthermore, reserved blocks of Québec's affordable clean hydropower underpins the Company's operations, economics structure and carbon-neutrality commitment.

NMG's integrated business model, with a secured feedstock, close-by operations at the western market's doorstep and operational flexibility to adapt production based on demand, represents a stable and cost-effective structure in today's everchanging macroeconomics.

The Company's advanced processing capacities at the future Phase-2 Bécancour Battery Material Plant enable tailored production to unique customer specifications. The majority of the future Matawinie Mine production is set to be refined into active anode material, while a portion of jumbo and large high-purity flake graphite is set to be directed to specialty markets, with some flexibility in the allocation of volumes.

The Updated Feasibility Study incorporates NMG's supply agreements with Panasonic Energy, GM and Traxys, as well as market studies by Benchmark Mineral Intelligence, a recognized, regulated and independent price reporting agency. NMG's previously announced offtake agreements, which are subject to completion of conditions precedent and the project-related agreements, with its Anchor Customers provide

visibility, pricing confidence, and reduced commercialization costs.

Table 2: Commercialization Plans for NMG's Integrated Phase-2 Production

Products	Volume[1]	Average Price
Flake graphite	14,720 tpa	US$1,469/tonne
Active anode material	44,100 tpa	US$9,346/tonne (Y1 to Y7) US$10,402/tonne (Y8 to Y25) US$10,106/tonne (LOM average)
Micronized by-products	43,334 tpa	US$400/tonne

[1] Volumes reflect steady-state production, exclude the initial ramp-up period, and are based on normalized operations.

Matawinie Mine

The Matawinie Mine remains largely the same as reflected in NMG's previous technical report. The Updated Feasibility Study considers revised key parameters and costs, leveraging advancement in the project since the 2022 report, namely through detailed engineering, preparatory work at the site, key contracts awarded and/or negotiated, procurement planning, construction preparation, as well as optimization of operations between the two Phase-2 facilities.

Rendering of the Phase-2 Matawinie Mine set to produce ~106,000 tpa of flake graphite.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/1967/246457_010397fed4cd7b74_001full.jpg

The Matawinie graphite property, in which the Company owns a 100% interest, is located approximately 120 km as the crow flies north of Montréal, Québec, Canada, in Saint-Michel-des-Saints. The Tony Claim Block, part of the property, is composed of 159 exclusive exploration rights totaling 8,266 hectares. Since the deposit discovery, a comprehensive exploration program identified crystalline flake graphite mineralization, ultimately leading to the definition of Mineral Resources and Mineral Reserves (as presented below).

The Mineral Resources for the West Zone of the mining property is based on a total of 8,274 assay intervals collected from 27,888 m of core drilling and three surface trenches providing 207 channel samples. Proper quality control measures, including the insertion of duplicate, blank, and standard samples, were used throughout the exploration programs and returned within acceptable limits.

Table 3: Current Pit-Constrained Mineral Resource Estimate for the West Zone

Mineral Resources Category[1, 2]	Current Resources (March 25, 2025)[5, 6, 7]		
	Tonnage (Mt)	C(g) Grade (%)[3]	Contained Graphite (Mt)
Measured	28.5	4.28	1.22
Indicated	101.8	4.26	4.33
Measured + Indicated	130.3	4.26	5.55
Inferred[4]	23.0	4.28	0.98

[1] The Mineral Resources provided in this table were estimated by Yann Camus P.Eng., Qualified Person of SGS Geological Services, using current Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resources and Reserves, Definitions and Guidelines.
[2] Mineral Resources that are not Mineral Reserves have not demonstrated economic viability. Additional trenching and/or drilling will be required to convert Inferred and Indicated Mineral Resources to Measured Mineral Resources. There is no certainty that any part of a Mineral Resource will ever be converted into

Reserves.
[3] All analyses used for the Resource Estimates were performed by ALS Minerals Laboratories and delivered as % C(g), internal analytical code C-IR18.
[4] Inferred Mineral Resources represent material that is considered too speculative to be included in economic evaluations. Additional trenching and/or drilling will be required to convert Inferred Mineral Resources to Indicated or Measured Mineral Resources. It cannot be assumed that all or any part of the Inferred Resources will ever be upgraded to a higher Resource category.
[5] Current Resources effective March 25, 2025.
[6] Mineral Resources are stated at a cut-off grade of 1.78% C(g).
[7] Quality control standards used for these Mineral Resources returned within acceptable limits, no significant bias was found.

Table 4: Matawinie Mineral Reserve Estimate for the West Zone

Category	Tonnage (Mt)	C(g) Grade (%)	Contained Graphite (Mt)
Proven	17.3	4.16	0.7
Probable	44.3	4.26	1.9
Proven & Probable	61.7	4.23	2.6

[1] The Qualified Person for the Mineral Reserve Estimate is Jeffrey Cassoff, P.Eng., of BBA Inc.
[2] The effective date of the estimate is March 25, 2025.
[3] Mineral Reserves were estimated using a graphite concentrate selling price of US$1,334/t, and consider a 2% royalty, and selling costs of US$34.23/t. An average grade of 97% C(t) was considered for the graphite concentrate.
[4] A metallurgical recovery of 93% was used.
[5] A cut-off grade of 2.20% C(g) was used.
[6] The strip ratio for the open pit is 1.16 to 1.
[7] The Mineral Reserves are inclusive of mining dilution and ore loss.
[8] The reference point for the Mineral Reserves is the primary crusher.
[9] Totals may not add due to rounding.

The future Matawinie Mine site is easily accessible via the dedicated access road that NMG built to connect to the local highway and is close to key infrastructure, including paved roads and high-voltage power lines, and the regional community, which provides a pool of workers and contractors. The project is in proximity to the Montréal metropolitan area, which also has skilled labor and many key suppliers.

Since 2015, multiple metallurgical process development and optimization programs have been carried out on samples from the Matawinie graphite mineralization zones. The programs focused on the development of a flowsheet that maximizes concentrate grade and recovery, while minimizing flake degradation. NMG has been operating the Phase-1 Matawinie Demonstration Plant since 2018 to help de-risking the process and produce graphite concentrate samples for customer evaluation and processing technological development. All components incorporated in the Matawinie Mine process are mature technologies.

With a 25-year life of mine ("LOM"), the Matawinie Mine will leverage the West Zone deposit for a nominal production of 105,882 tonnes per annum ("tpa") of graphite concentrate. The deposit will be mined using conventional open-pit mining methods consisting of drilling, blasting, loading, and hauling. To maximize the NPV, mining phases have been designed and incorporated into the mining plan to defer waste rock stripping and provide a balanced blended feed grade for the on-site concentrator over the LOM. Through crushing, milling, flotation, cleaning, and drying, the ore will be concentrated to attain 97.5% C(t).

Tailings produced at the concentrator will be segregated after the desulphurization circuit into low-sulphur content of non-acid generating ("NAG") tailings and a sulphide concentrate of potentially-acid generating ("PAG") tailings. Both NAG and PAG will be filtered to reduce water content and then co-disposed with waste rock into deposition cells on a lined platform. The co-deposition storage facility will be located at surface and as of Year 7, tailings and waste rocks will also be placed in the mined-out areas of the open pit. The deposit will be mined from south to north to ensure adequate space is available for in-pit backfilling.

Table 5: Operational and Economic Highlights of the Matawinie Mine

Parameters	
LOM	25 years
Nominal annual processing rate	2.56 M tonnes
Stripping ratio (LOM)	1.16:1
Average grade (LOM)	4.23% C(g)
Average mill recovery	93%
Nominal annual graphite concentrate production	105,882 tonnes
Finished product purity	97.5% C(t)
CAPEX	US$415M
Annual OPEX	US$44M
OPEX cost per tonne of graphite concentrate	US$419/tonne

Costs reflect steady-state production, exclude the initial ramp-up period, and are based on normalized operations.

A ministerial decree authorizing the Matawinie Mine (Decree # 47-2021) was granted by the Québec Government and all permits and authorizations pertaining to exploration, geotechnical, hydrogeological, and early preparatory works to date have been obtained.

Early works at the Matawinie Mine have included thus far tree clearing, construction of the nearly 8-km access road, preparation of the industrial pad, and civil works for environmental infrastructure. The site is considered concrete-ready for the start of construction upon a positive FID, with a number of key contracts having been awarded, including process equipment, the dedicated powerline and the electrical substation.

Aerial view of the Matawinie Mine site in September 2024.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/1967/246457_010397fed4cd7b74_002full.jpg

Bécancour Battery Material Plant

The Phase-2 Bécancour Battery Material Plant is planned as a comprehensive advanced processing platform set to receive Matawinie graphite concentrate production for refining and commercial distribution. Plans for this facility have been substantially revised using inputs from NMG's Phase-1 operations, technology development, and engineering.

Approximately 150 km northeast of Montréal on the Saint Lawrence River, in the heart of Québec's "battery valley", NMG's Bécancour site is located adjacent to its Phase-1 purification plant, within an established industrial park. The site provides robust local infrastructure with a direct supply of chemicals from nearby producers, affordable hydroelectricity, multimodal logistics (international deep-sea port, railway, and expressway) and a regional pool of skilled workforce.

Rendering of the Phase-2 Bécancour Battery Material Plant, in the heart of the Bécancour industrial park set to produce ~44,000 tpa of active anode material.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/1967/246457_010397fed4cd7b74_003full.jpg

The future Bécancour Battery Material Plant will regroup shaping, purification and coating capacities to

produce battery-grade active anode material.

The shaping process, essentially a mechanical transformation, reduces the flake size (micronization) and rounds graphite material (spheronization) to increase the density of the spherical graphite for battery use. At its Phase-1 facility, NMG has already assimilated and refined this process, and tested different equipment to inform the engineering of the Phase-2 plant. Shaping generates a micronized graphite by-product to be sold.

Purification removes impurities from the spheronized graphite to bring the product to ≥99.90% carbon content. Following testing at its Phase-1 Purification Plant plus third-party sites, trade-off analyses and process optimization, NMG has selected the prevalent chemical purification technology for its future Phase-2 Bécancour Battery Material Plant. Commercial operations worldwide have demonstrated the performance and efficiency of this technology in line with battery manufacturers' requirements; thus, reducing the technological risks for the project. Continued optimization of the process to refine environmental performance, operational, and financial parameters along with sample production are being carried out at partnering facilities to support detailed engineering and commercialization efforts.

The coating aims at enhancing the electrochemical performance of active anode material in lithium-ion batteries. To establish the proper technology, precursor type and process parameters, NMG performed different studies and tests at its Phase-1 facility, in independent laboratories and at suppliers' test facilities. Most technologies selected are being widely used in the industry, further reducing technological risks.

Table 6: Operational and Economic Highlights of the Bécancour Battery Material Plant

Parameters	
Annual active anode material production	44,100 tonnes
Finished product purity	≥99.90% C(t)
CAPEX	US$911M
Annual OPEX	US$124M
OPEX cost per tonne of active anode material	US$2,810/tonne
Annual micronized graphite by-product production	43,334 tpa

Costs reflect steady-state production, exclude the initial ramp-up period, and are based on normalized operations.

In preparation for the launch of construction, preliminary works - tree clearing, on-site road construction, site grading - were carried out in 2024.

Responsible Production & ESG

In line with its environmental, social and governance ("ESG") practices, NMG plans to build and operate an integrated production that promotes stewardship throughout its value chain. The Company strives to prevent and limit potential impacts through the introduction of responsible practices including co-disposal dry stacking of tailings, progressive reclamation of the Matawinie site, strategy for the electrification of its operations, water recycling, greenhouse gas reduction measures, and active stakeholder engagement at every stage of project development. NMG has signed a collaboration and benefit-sharing agreement with the Municipality of Saint-Michel-des-Saints as well as an impact and benefit agreement with the Atikamekw First Nation of Manawan.

NMG is committed to pursuing its efforts to improve its practices, technologies, products, and procurement as it advances the detailed engineering, construction, commissioning, and launch of commercial production. The Company strives to maximize opportunities for Indigenous and local workers, contractors, and communities throughout the project execution.

Next Steps and Quality Assurance

The confirmation of NMG's Phase-2 viability through the Updated Feasibility Study enables the Company to

enter its project financing stage with a view to reach FID.

There is no certainty that the economic forecasts on which the Updated Feasibility Study is based will be realized. There are a number of risks and uncertainties identifiable to any new project and usually cover the mineralization, process, financial, environment and permitting aspects. Following an analysis of the major risks to the projects, a P50 management risk reserve of US$122M is recommended. This reserve is not included in the capital cost estimate but is within the range of the financial sensitivity analysis of the capital cost. The top risks are: 1) The optimization of the water treatment process technology; 2) The efficient integration of key Asian suppliers into the project detailed engineering and construction; and 3) The qualification by the customers of the product from the Matawinie Mine and the Bécancour Battery Material Plant.

A sensitivity analysis reveals that the viability of the Projects will not be significantly vulnerable to variations in capital and operating costs within the margins of error associated with the Updated Feasibility Study estimates. However, the viability of the Projects remains more vulnerable to the USD/CAD exchange rate and the larger uncertainty in future market prices.

Scientific and technical information presented in this press release was reviewed and approved by André Allaire, P.Eng. (BBA), Yann Camus, P.Eng. (SGS Geological Services) and Jeffrey Cassoff, P.Eng. (BBA), Qualified Persons as defined under NI 43-101.

The Updated Feasibility Study will be filed on SEDAR+ at www.sedarplus.ca, EDGAR at www.sec.gov and on the Company's website at www.NMG.com within 45 days of this press release. Readers are encouraged to read the Study in its entirety, including all qualifications, assumptions and exclusions that relate to the details summarized in this press release. The Study is intended to be read as a whole, and sections should not be read or relied upon out of context.

About Nouveau Monde Graphite

Nouveau Monde Graphite is an integrated company developing responsible mining and advanced refining operations to supply the global economy with carbon-neutral active anode material, which powers electric vehicles and renewable energy storage systems. The Company seeks to establish a fully integrated source of graphite active anode material in Quebec, Canada, from ore to battery materials. Through its recognized ESG standards and strategic partnerships with anchor customers, NMG is poised to become a strategic supplier to the world's leading lithium-ion battery and electric vehicle manufacturers, offering advanced materials while promoting sustainability and supply chain traceability. www.NMG.com

About Mason Resources Inc.

Mason Resources Inc. is a Canadian corporation focused on seeking investment opportunities. Mason is the largest shareholder of Black Swan Graphene Inc. (TSXV: SWAN) (OTCQB: BSWGF) which is focusing on the large-scale production of patented high-performance and low-cost graphene products aimed at several industrial sectors, including concrete and polymers, which are expected to require large volumes of graphene and, in turn, large volumes of graphite. Mason is also one of the largest shareholders of Nouveau Monde Graphite Inc. (TSXV: NOU) (NYSE: NMG), an integrated company developing responsible mining and advanced manufacturing operations to supply the global economy with carbon-neutral active anode material to power EV (electric vehicle) and renewable energy storage systems. The company is developing a fully integrated ore-to-battery-material source of graphite-based active anode material in Quebec, Canada. With enviable ESG standards and structuring partnerships with anchor customers, Nouveau Monde Graphite is set to become a strategic supplier to the world's leading lithium-ion battery and EV manufacturers, providing high-performing and reliable advanced materials while promoting sustainability and supply chain traceability. Lastly, Mason is the largest shareholder of NorthX Nickel Corp. (CSE: NIX), a Canadian Ni-Cu-Co-PGE focused exploration and development company with an extensive portfolio of assets in Quebec and Ontario, Canada. The company's flagship asset is the Grasset Project, located within the Abitibi Greenstone Belt, with an indicated mineral resource of 5.5 Mt @ 1.53% NiEq (such NiEq grade being established based on: 1.22% Ni, 0.13% Cu, 0.03% Co, 0.26 g/t Pt, 0.64 g/t Pd). In addition, the company holds a portfolio of 37 properties and over 300 km2 in the world-class mining district of Sudbury, Ontario.

For more information:

www.masonresourcesinc.com
www.blackswangraphene.com
www.NMG.com
www.northxnickel.com

Mason Resources Inc. on behalf of the Board of Directors

Peter Damouni, President & Chief Executive Officer

For more information please contact:
Paul Hardy, Vice President - Corporate Development
phardy@masonresourcesinc.com
+1 (416) 844-7365

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Forward-Looking Information

The information contained herein contains "forward-looking statements" or "forward-looking information" within the meaning of applicable securities legislation. Forward-looking statements or forward-looking information relate to information that is based on assumptions of management, forecasts of future results, and estimates of amounts not yet determinable. Any statements that express predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance are not statements of historical fact and may be "forward-looking statements" or "forward-looking information". Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation: risks related to Mason's investment in Sand Minerals and the likelihood that the investment, for which there is currently no market or liquidity, will result in profitability for the Corporation on the timeline projected or at all, the holding of the NMG, Black Swan and NorthX Nickel shares, risks related to the development of NMG's projects, risks related to Black Swan's and NorthX Nickel's business, risk related to the failure to obtain adequate financing on a timely basis and on acceptable terms; risks related to the outcome of legal proceedings; political and regulatory risks associated with the industry; risks related to the maintenance of stock exchange listings; risks related to environmental regulation and liability; the potential for delays in development activities or the completion of feasibility studies; the uncertainty of profitability; risks related to the inherent uncertainty of production and cost estimates and the potential for unexpected costs and expenses; results of feasibility studies, and the possibility that future results will not be consistent with Mason's expectations; risks related to commodity prices fluctuations; and other risks and uncertainties related to Mason's prospects, properties and business detailed elsewhere in Mason's disclosure record. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in forward-looking statements. Investors are cautioned against attributing undue certainty to forward-looking statements. These forward-looking statements are made as of the date hereof and Mason does not assume any obligation to update or revise them to reflect new events or circumstances, except in accordance with applicable securities laws. Actual events or results could differ materially from Mason's expectations or projections.