# Spark's Maiden Drilling Delivers 78m Rare Earth Intercept Grading 2,430 ppm TREO and 94m Grading 63 g/t Ga2O3

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**Peak interval of 2 meters grading 6,682 ppm TREO with 33% MREO**

Spark Energy Minerals Inc. (CSE: SPRK) (OTC Pink: SPARF) (FSE: 8PC) ("Spark" or the "Company") is pleased to report strong drill results from its maiden Reverse Circulation ("RC") program at the Arapaima Project in Padre Paraíso, northern Minas Gerais State, Brazil, highlighting thick, near-surface rare earth and gallium mineralization.

Final laboratory assays confirm extensive, continuous rare earth element ("REE") and gallium ("Ga") mineralization from surface, with grades and continuity consistent with an ionic-adsorption clay ("IAC")-style system. IAC-style deposits are globally recognized as a critical source of heavy rare earths used in permanent magnets and advanced technologies.

These results are based on final assays from the first three drill holes completed as part of Spark's maiden five-hole Reverse Circulation ("RC") drill program at the Arapaima Project. Assays from the remaining two drill holes are pending and will be reported once received.

"These initial drill results confirm the presence of thick, near-surface rare earth and gallium mineralization at Arapaima and validate our exploration model," said Dr. Fernando Tallarico, Chief Executive Officer of Spark Energy Minerals. "As maiden, first-pass discovery holes, the results demonstrate the presence of a laterally extensive mineralized system and support continued drilling to evaluate the lateral extension and scale of this mineralized system."

Figure 1: Maiden RC drill hole locations and selected near-surface rare earth and gallium intercepts at the Arapaima Project.

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/10093/283454_366cec2cc48358b7_002full.jpg

Highlights

- Thick clay-rich weathering profiles and REE-Ga distribution support an ionic-adsorption clay ("IAC")-style system.
- Hole ARA-RC003 returned 78 m grading 2,430 ppm TREO (21% MREO) from 16 m
  - Including 10 m grading 4,522 ppm TREO (25% MREO) from 50 m
  - Including 2 m grading 6,682 ppm TREO (33% MREO) from 70 m
  - Including 2 m grading 5,148 ppm TREO (28% MREO) from 64 m
  - 94 m grading 63 g/t $Ga_2O_3$ from surface
- Hole ARA-RC001 returned 28 m grading 2,031 ppm TREO (21% MREO) from 30 m
  - Including 2 m grading 4,741 ppm TREO (27% MREO) from 46 m
  - Including 6 m grading 2,663 ppm TREO (27% MREO) from 48 m
  - 58 m grading 52 g/t $Ga_2O_3$ from surface
- Hole ARA-RC002 returned 16 m grading 1,353 ppm TREO (22% MREO) from 26 m
  - Including 2 m grading 2,244 ppm TREO (22% MREO) from 30 m
  - Including 2 m grading 2,075 ppm TREO (28% MREO) from 38 m
  - 44 m grading 47 g/t $Ga_2O_3$ from surface

Exploration Results and Geological Interpretation

Assay results from the first three RC drill holes completed at the Arapaima Project confirm the discovery of thick, high-grade REE and gallium mineralization hosted within clay-rich weathering profiles. The consistent distribution of REEs, combined with the clay-hosted nature of the mineralization, supports the interpretation of an ionic-adsorption clay ("IAC")-style system, a recognized source of heavy rare earth elements.

All three maiden drill holes intersected broad, continuous intervals of REE mineralization, highlighting the continuity and thickness of the mineralized system. Notably, Hole ARA-RC003 returned 78 m of continuous mineralization grading 2,430 ppm TREO, including multiple high-grade internal intervals with grades reaching 6,682 ppm TREO, demonstrating both notable thickness and internal grade enrichment.

The mineralization is further distinguished by a high proportion of magnet rare earth oxides ("MREO"), reaching up to 33% of the total rare earth basket, underscoring the presence of the rare earth elements used in permanent magnet technologies. MREO is defined as the combined oxides of neodymium (Nd), praseodymium (Pr), dysprosium (Dy), and terbium (Tb).

In addition to REE mineralization, gallium mineralization was intersected in all three drill holes, with thick, near-surface intervals. The longest gallium intercept returned 94 m grading 63 g/t Ga₂O₃ from surface, including individual samples grading up to 84 g/t Ga₂O₃, highlighting the emergence of a multi-commodity critical-minerals system at Arapaima.

Drill Hole Information

The maiden RC drill program comprised five vertical reverse circulation drill holes (dip 90°). Drill hole collar locations, depths, azimuths, and sample interval information are summarized below:

| Hole ID | Project | Target | Drill Type | End Depth | Easting | Northing | RL | Datum | Survey Method |
|---|---|---|---|---|---|---|---|---|---|
| ARA-RC-001 | Arapaima | Cruzeta | RC | 58 | 235895 | 8114216 | 937 | SIRGAS2000 24S | GPS |
| ARA-RC-002 | Arapaima | Cruzeta | RC | 44 | 235944 | 8113829 | 960 | SIRGAS2000 24S | GPS |
| ARA-RC-003 | Arapaima | Cruzeta | RC | 94 | 235516 | 8113932 | 957 | SIRGAS2000 24S | GPS |
| ARA-RC-004 | Arapaima | Cruzeta | RC | 46 | 236227 | 8113938 | 948 | SIRGAS2000 24S | GPS |
| ARA-RC-005 | Arapaima | Cruzeta | RC | 54 | 235157 | 8114025 | 975 | SIRGAS2000 23S | GPS |

Regional Setting and Land Position

The Arapaima Project is located in the Padre Paraíso region of northern Minas Gerais State, within Brazil's Lithium Valley, a recognized district for lithium and critical minerals. This region has gained international recognition as a prospective corridor for critical minerals, supported by favourable geology, established infrastructure, and a mining-friendly regulatory environment.

Spark controls one of the largest and most contiguous land positions in the district, exceeding 91,000 hectares, providing substantial upside potential to expand the mineralized footprint well beyond the initial drill areas tested to date.

Project Pipeline and Exploration Upside

In addition to the REE-gallium discovery at Arapaima, Spark has identified four drill-ready lithium-bearing pegmatite targets within its broader land package. These targets have been prioritized for follow-up diamond drilling as part of a staged, district-scale exploration strategy.

The Company is actively evaluating strategic and non-dilutive financing alternatives to accelerate advancement of both the REE-Ga discovery and its lithium exploration pipeline, with the objective of rapidly building on the momentum generated by the Company's maiden drill program.

Qualified Person Statement (NI 43-101)

The planning and execution of the QA/QC program for the borehole samples from the Arapaima drilling program included placing a blank at the beginning of each batch (each batch corresponds to one borehole), before analysis of the first sample.

Two standard samples were inserted every 15 samples, and a duplicate was taken every 20 samples. The specifications for the standard samples are attached. The samples were collected at 2m intervals, and using a Jones splitter, the samples were reduced to an aliquot of approximately 2kg for laboratory analysis and another of approximately 1kg for project archiving.

Analytical Procedures & Laboratory

The samples were sent to the SGS Geosol Ltda laboratory, located on the MG-10 highway at km 24.5 in the Angicos neighbourhood, Vespasiano/MG. The laboratory is independent and has no relationship with the project or the company. The SGS Geosol laboratory is ISO 14001-2015 certified (certified on 11/09/2023) and ISO 9001-2015 certified (certified on 10/07/2024).

Samples were prepared by crushing 75% 3 mm/pulverizing 250 g, 95% <150# - Jones (code PRP70J_A2-PA).

Analyses were performed using ICPMS/OES by fusion with sodium peroxide for 56 elements, including lithium and the rare earth elements (code ICM90A).

Notes

MREO: Defined as the combined oxides of Nd + Pr + Dy + Tb. "% of TREO" represents MREO divided by TREO × 100.

TREO (Total Rare Earth Oxides): Defined as the sum of the following oxides: CeO₂, Dy₂O₃, Er₂O₃, Eu₂O₃, Gd₂O₃, Ho₂O₃, La₂O₃, Lu₂O₃, Nd₂O₃, Pr₆O₁₁, Sm₂O₃, Tb₄O₇, Tm₂O₃, Yb₂O₃.

Qualified Person:

The scientific and technical information disclosed in this news release has been reviewed and approved by Jonathan Victor Hill, BSc (Hons), FAusIMM, and Dr. Fernando Tallarico, P.Geo., each a Qualified Person as defined by NI 43-101. Mr. Hill is a Director of Spark Energy Minerals Inc. and is not independent of the Company. Dr. Tallarico is the Chief Executive Officer of Spark Energy Minerals Inc. and is likewise not independent of the Company.

About Spark Energy Minerals Inc.

Spark Energy Minerals Inc. is a Canadian company advancing the exploration and development of critical minerals essential to the clean-energy transition. The Company's primary focus is Brazil, where it controls a significant land position within the country's emerging Lithium Valley - a region recognized for its lithium, gallium, and rare-earth potential. Spark's flagship Arapaima Project spans approximately 91,900 hectares and hosts multiple targets for lithium and gallium-REE mineralization. Through systematic exploration, Spark aims to help strengthen the secure and sustainable supply of minerals that power electrification, renewable energy, and modern technologies. The Company is committed to responsible exploration practices and supporting Brazil's development of a transparent, sustainable critical minerals supply chain.

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:
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Forward-Looking Statements

Certain statements contained in this news release may constitute "forward-looking statements" or "forward-looking information" (collectively, "forward-looking information") within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995 and similar Canadian legislation. Forward-looking information includes, but is not limited to, statements regarding the interpretation of exploration results, the potential significance, continuity, extent, and grade of mineralization encountered, the identification and potential implications of an ionic-adsorption clay ("IAC")-style system, the potential for future exploration and drilling programs, the advancement of the Arapaima Project, the evaluation of additional targets within the Company's land package, the availability of financing, and the Company's future plans, objectives, and strategies.

Forward-looking information is generally identified by the use of forward-looking terminology such as "may," "could," "expect," "intend," "believe," "will," "projected," "estimated," "anticipates," or similar expressions, or statements that certain events or conditions "may," "could," or "will" occur. Such statements are based on the Company's current expectations, assumptions, and beliefs, including assumptions regarding geological interpretations, exploration results, continuity of mineralization, metallurgical characteristics, market conditions, access to capital, and regulatory approvals.

Actual results may differ materially from those expressed or implied by such forward-looking information due to a variety of risks and uncertainties, including, but not limited to, geological uncertainty, the inherently preliminary nature of exploration results, the selective nature of rock, soil, and drill samples, the possibility that future exploration results may not be consistent with expectations, changes in market conditions, availability of financing, and risks associated with mineral exploration and development. There can be no assurance that any exploration program will result in a mineral discovery or that any mineralization identified will ultimately be developed into a commercially viable deposit.

The forward-looking information contained in this news release is made as of the date hereof, and the Company does not undertake any obligation to update or revise such information, except as required by applicable securities laws.