

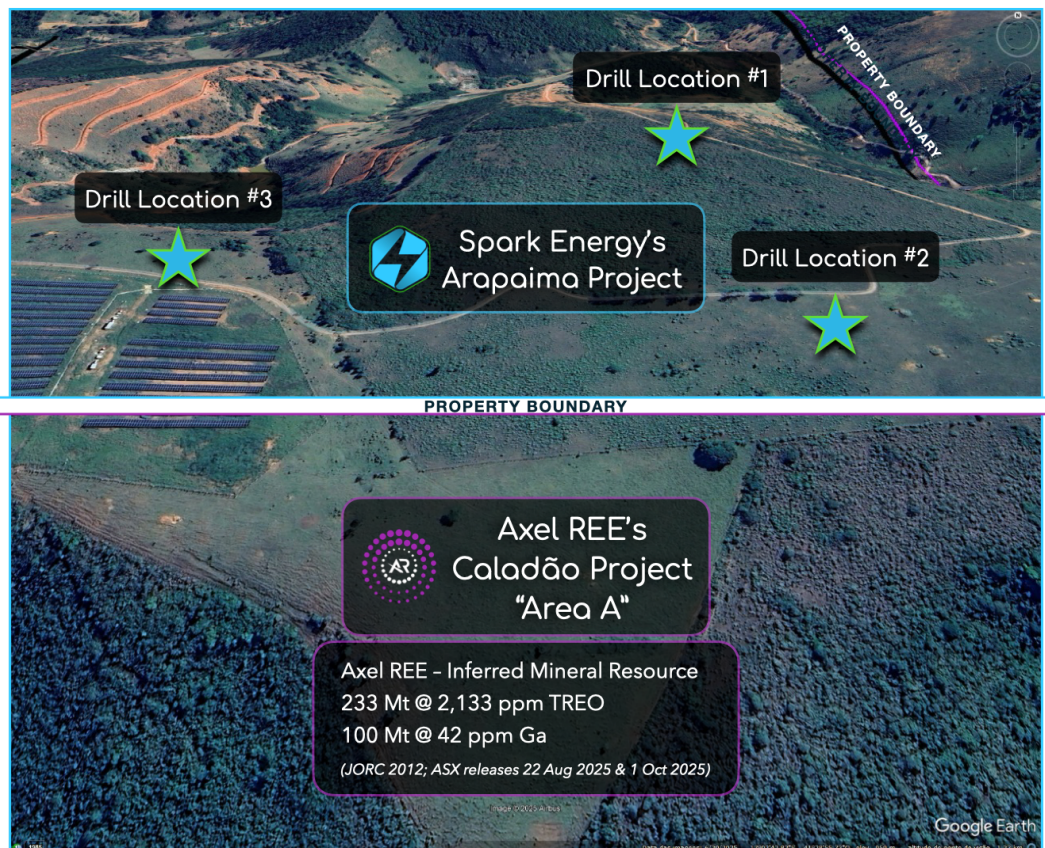


## Spark Commences Drill Program Targeting Gallium-Rich REE Zones at the Arapaima Project, Brazil

***Initial 3-hole, 300-metre drill program targeting gallium-rich rare earth element (REE) zones south of Cruzeta.***

VANCOUVER, BC / December 1, 2025 / Spark Energy Minerals Inc. ("Spark" or the "Company") (CSE: SPRK) (OTC: SPARF) (Frankfurt: 8PC) **announces that drilling is now underway in its maiden reverse-circulation program at the Arapaima Project in Minas Gerais, Brazil.** The program is configured to operate with either an air-core bit or an RC hammer, depending on formation characteristics. The contracted reverse-circulation rig and compressor are on site, and drilling is underway.

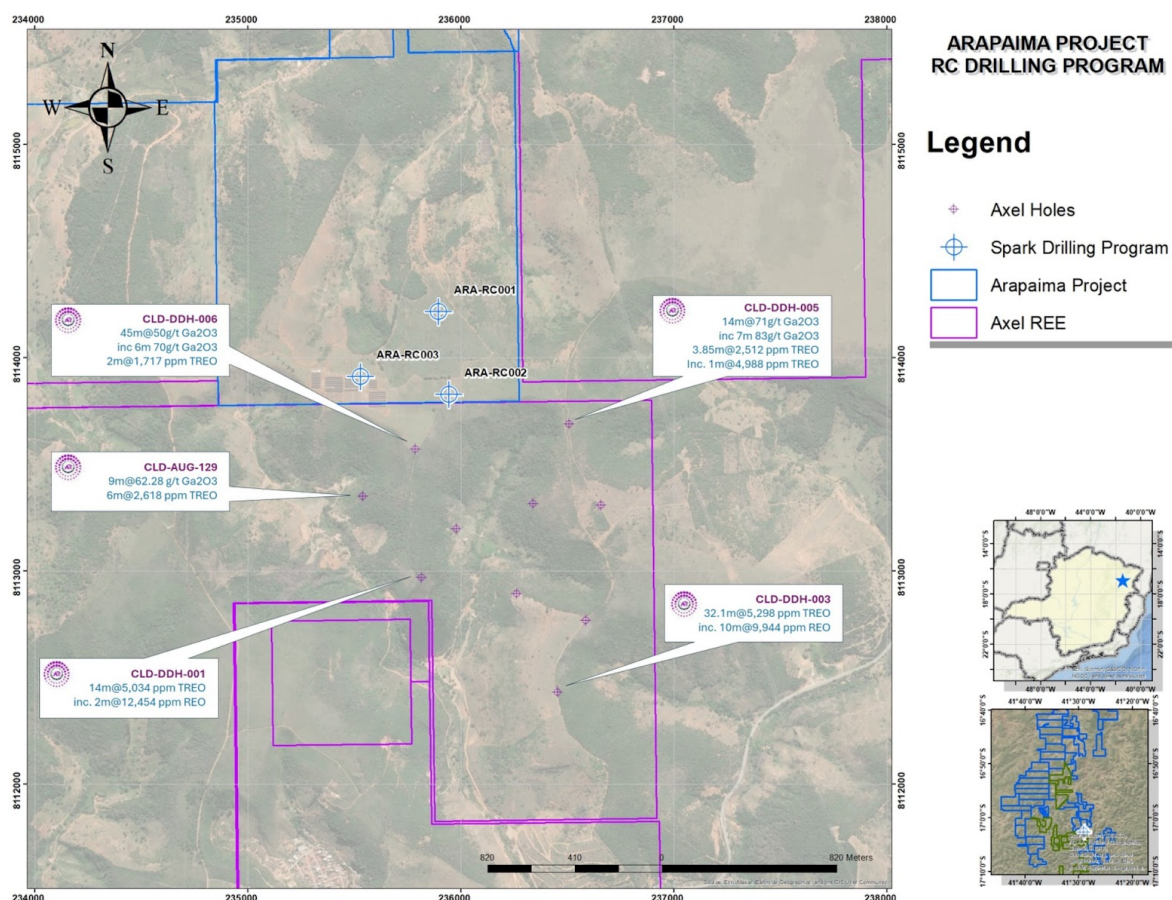
This marks Spark's first drill campaign at Arapaima, designed to test **rare earth element (REE) and gallium anomalies** identified in surface sampling south of the Cruzeta Target, within the **Caladão Granite Corridor** — a setting widely considered highly prospective for REE–Ga systems.



**Figure 1.** Planned Spark drill locations situated immediately north of Axel REE's Caladão Project "Area A," where Axel has reported a JORC 2012 Inferred Mineral Resource of 233 Mt @ 2,133 ppm TREO and 100 Mt @ 42 ppm gallium. Spark's maiden RC program is designed to test whether this REE–gallium system extends southward onto the Arapaima Project.

**"The commencement of drilling at Arapaima, combined with our recently announced private placement, marks a pivotal moment for Spark Energy Minerals," commented Dr. Fernando Tallarico, CEO of Spark Energy Minerals.** "Our team is advancing a disciplined strategy that positions Spark at the forefront of Brazil's emerging critical minerals landscape. These initiatives are **catalysts for unlocking transformative value and driving the Company toward long-term growth and global relevance.**"

Over its first year of fieldwork in Brazil, Spark has advanced exploration across its broader **91,900-hectare landholding**, completing systematic prospecting, reconnaissance, and geochemical sampling over roughly 30% of the project area (approx. 27,000 hectares). This early-stage work has **narrowed a wide greenfields area into a focused pipeline of ranked, drill-ready targets.** The transition from reconnaissance-scale evaluation to defined drill targets reflects the Company's **disciplined and methodical approach to advancing large mineral districts.**



**Figure 2.** Planned Spark drill collars located south of Cruzeta and immediately beside Axel REE's high-grade TREO and gallium intercepts.

### Initial Drill Program Summary

- Total metres: 300 m
- Holes: 3
- Planned depth: ~100 m per hole
- Rig: SCR-100 reverse-circulation rig, capable of air-core or RC-hammer configuration, with Atlas Copco X1200 compressor
- Program duration: ~15 days
- Target area: South of the Cruzeta Target, Arapaima Project

Drill sites were selected based on a combination of **elevated REE and gallium surface geochemistry, favourable structural trends, and surface features** that indicate shallow weathered horizons and saprolite zones overlying Caladão granite intrusives.

### Exploration Objectives

The program is designed to:

- Test **near-surface REE/Ga<sub>2</sub>O<sub>3</sub>** mineralized saprolite
- Evaluate potential **pegmatite-hosted spodumene zones**
- Intersect **gallium-rich REE mineralization** along priority structures
- Assess the **potential southward extension** of the adjacent Axel REE resource
- Collect material for **metallurgical testwork**

### Sampling approach:

- **2 kg aliquots every 2 m** for certified assay
- **50 kg composite sample per hole** for potential metallurgical recovery studies

Samples will be shipped in two batches — the first after 7 days of drilling and the second immediately upon program completion. Assay turnaround is estimated at ~20 days from laboratory receipt.

### Access, Logistics & Permitting

The target area benefits from excellent access via established roads near the city of Padre Paraíso, allowing efficient movement between sites and potential expansion if results warrant.

All required environmental clearances for this initial program are in place:

- **Environmental Licensing Exemption:**

Canopus Geologia e Projetos Ltda., Spark's drilling contractor, is formally exempt from state-level environmental licensing requirements for reverse-circulation drilling configured with air-core tooling (certificate issued October 29, 2025).

- **Insignificant Water-Use Certification:**

The program is registered as "Uso Insignificante de Recursos Hídricos," confirming that no water-use permitting is required.

Although reverse-circulation drilling configured with air-core or hammer tooling does **not require water**, Spark maintains all relevant certifications, including its Insignificant Water-Use registration, in line with ESG best practices.

### **Safety & ESG Measures:**

- Daily safety and environmental briefings
- Real-time monitoring of all drilling activities by Spark field staff
- Immediate notification procedures to Spark management and the Board for any incident, whether or not it results in lost time

### **Potential Next Steps**

Pending results — expected in early Q1 2026 — Spark may consider:

- Expanding the reverse-circulation program
- Follow-up diamond drilling
- Additional soil, channel, or metallurgical sampling
- Updating and refining the district-scale REE–Ga geological model

The commencement of drilling at Arapaima represents a meaningful step in Spark's strategy to **evaluate the REE–gallium potential of its extensive land package in Brazil's Lithium Valley**. With high-quality targets, clear geochemical vectors, and a fully permitted program now underway, the Company is positioned to rapidly generate the subsurface data needed to refine its exploration model and **propel the project toward its next set of catalysts**.

### **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 exploration company focused on critical minerals essential to the clean-energy transition. The Company's primary focus is Brazil, where it holds a significant land position within the country's emerging *Lithium Valley*, a district recognized for its lithium, gallium, and rare-earth potential. Spark's flagship Arapaima Project covers approximately 91,900 hectares and hosts multiple early-stage targets prospective for lithium and gallium-REE mineralization. Through systematic, staged exploration, the Company aims to contribute to a secure and sustainable supply of minerals required for electrification and modern technologies, while maintaining responsible exploration practices and supporting Brazil's development of a transparent critical-minerals supply chain.

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**FOR ADDITIONAL INFORMATION, PLEASE CONTACT:**

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