



Spark Energy Identifies Pegmatite Corridor at its Arapaima Lithium Project in Brazil's Lithium Valley

VANCOUVER, BC / December 3, 2024 / *Spark Energy Minerals Inc.* ("Spark" or the "Company") (CSE: SPRK) (OTC: SPARF) (Frankfurt: 8PC) an exploration Company focused on the discovery of battery metals in Brazil's prestigious Lithium Valley, is pleased to provide an update from the first week of exploration at the Company's 64,359-hectare Arapaima Lithium project located in Lithium Valley, Minas Gerais, Brazil.

Arapaima Lithium Project Exploration Highlights:

- Identified a **~1.7km long pegmatite strike corridor** of pegmatite bearing granite exposure through an erosional window in shallow laterite cover in the central northern portion of the tenement package.
- Area identified and mapped is characterized by **widespread evidence of weathered and kaolinized pegmatite intrusives hosted within granite.**
- Target occurrence located within the drainage basin identified and highly ranked and referenced by the CPRM as being prospective for Lithium-based on the presence of **visible spodumene** in heavy mineral concentrates and anomalous stream sediment sampling results.
- **To date, Spark has already identified 5 priority targets** for follow-up outcrop rock chip sampling.

On November 25, 2024, the team arrived in Padre Paraiso, quickly working to complete some preparations and reconnaissance of road conditions and field access. During the first week, the exploration team conducted tactical traverses across the tenements to validate the location of known pegmatite occurrences mapped by CPRM. The first day in the field started returning confirmation of identified pegmatites in known areas as well as previously unknown, compounding the potential to unearth multiple trends on the 64,358-hectare land package.

Five prospective areas for pegmatite-hosted mineralization were identified, the most promising of which is currently a 1.74km segment, roughly trending east-west.

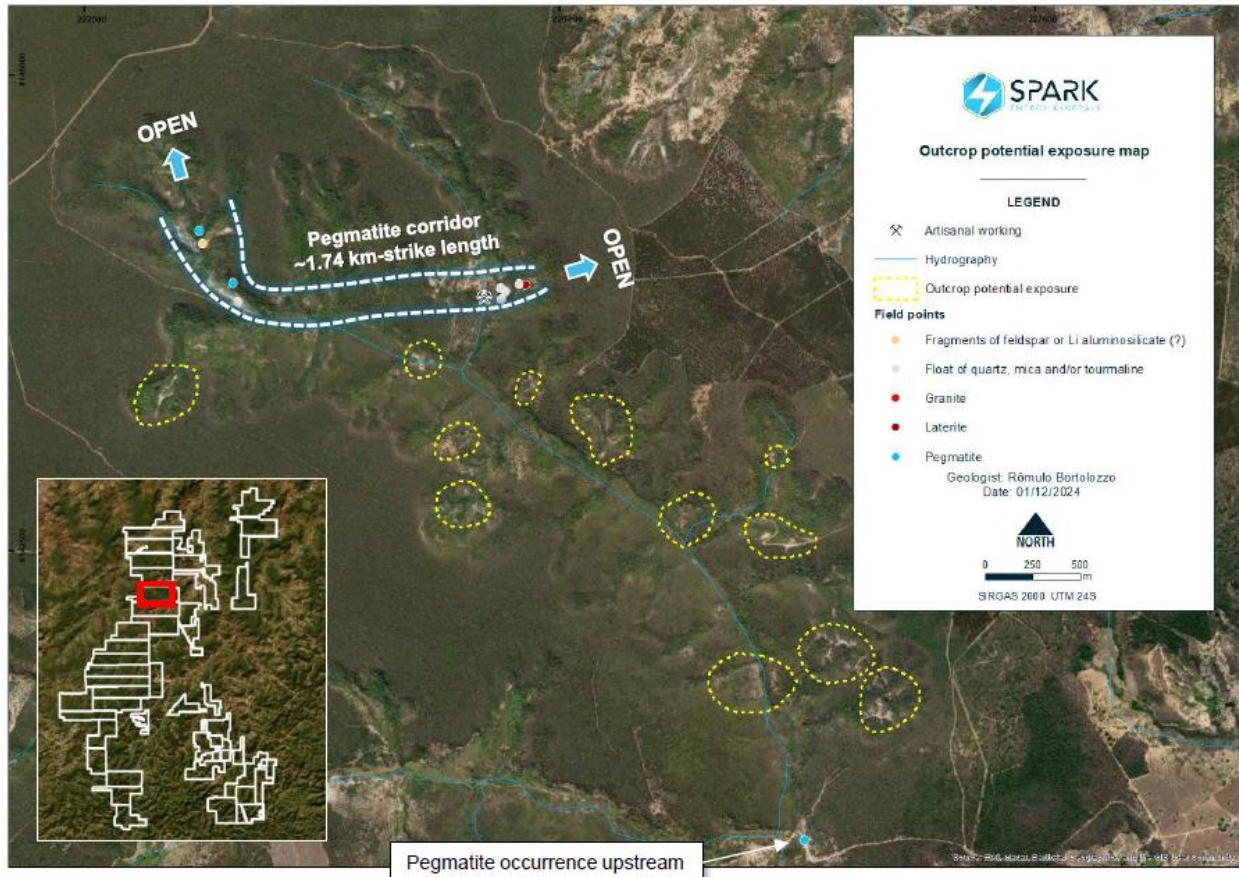


Figure 1: Mapped pegmatite corridor trending east-west spanning 1.74km in the northern half of the Arapaima Lithium project tenements

During the field reconnaissance, an extensive white domain trending east-west was observed with the use of a drone and further confirmed on the ground. The western portion has the presence of multiple pegmatite bodies in situ (up to 0.5 m in thickness). In addition, booklets of white mica and tourmaline-quartz aggregates were found widespread on slopes.

The true thickness of the various pegmatite bodies identified is unknown due to the intensely weathered nature of the outcrop, while the exposure (mixed granite and pegmatite) is some 50-75m across. The pegmatite corridor remains open on both sides (up to 8 km based on geophysics), and potential outcrops exposures further southeast could reveal new trends.

Jon Hill, VP of Exploration stated, “Our tactic to kickstart field exploration by using the positive results reported by cprm sampling to get us into the right areas early turned out to be correct and produced results well above our already high expectations. There is no doubt we have now clearly demonstrated an easterly extension to the prospective footprint of the known well-endowed pegmatite province hosting the historical and emerging development projects in the Lithium Valley. We look forward to building our knowledge and database as results from the initial sampling start to be reported over the coming months.”

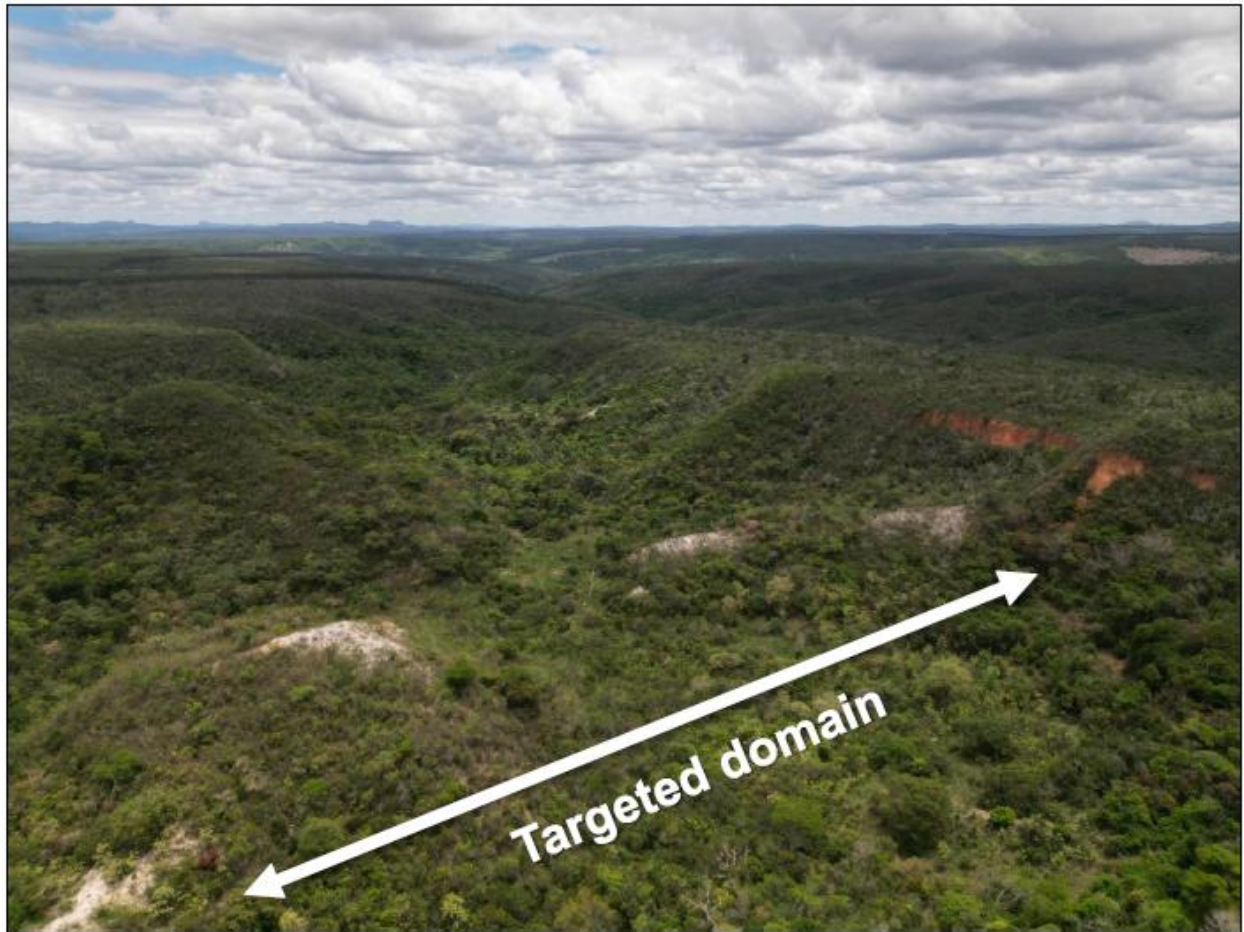


Figure 2: Drone view targeted trending domain within an erosional window beneath the overburden as seen in red/orange exposure on the right-hand side



Figure 3: Weathered pegmatite intruded into two-mica granite

Targeted Generation Program: Planning for this week

- Further follow up on the 5 targeted zones identified in week 1
- Continue stream sediment program focused on spodumene occurrences in heavy mineral concentrates initiated in northern tenements (as identified in Brazil's 2016 & 2023 government reports)^{1 & 2}
- Further explore artisanal miners' historical adits with known beryl and tourmaline mineralization
- Verify potential outcrop exposures adjacent to ~1.74km pegmatite corridor outlined in Figure 1

Recent Activity from Neighbouring Lithium Projects:

- **Sigma Lithium** (15km west of Spark claims): Announced Q3 2024 results, beating production guidance and generating \$34 million in operating cash flow (see news [here](#))

- **Perpetual Resources** (10km northwest of Spark claims): Identifies additional high-grade lithium pegmatite trends at Isabella Project (see news [here](#))
- **Lithium Ionic** (15 km west of Spark claims): Lithium Ionic drills 1.77% Li₂O over 16m, including 2.36% Li₂O over 9m at Bandeira Project (see news [here](#))
- **Lightning Minerals** (50km northwest of Spark claims): Spodumene bearing pegmatite identified yielding 4.04% Li₂O with LIBS analyzer at Esperança Project (see news [here](#))

Eugene Hodgson, Spark's CEO said, "The discovery of this significant pegmatite corridor at our Arapaima Lithium Project marks a pivotal moment for Spark Energy Minerals. This early success not only validates our strategic approach but also underscores the immense potential of our expansive land package in Brazil's Lithium Valley. Our team's swift progress and the quality of initial findings position us well for an exciting and productive exploration campaign ahead."

Qualified Person:

The scientific and technical information disclosed in this document has been reviewed and approved by Jonathan Victor Hill BSc Hons, FAUSIMM, a Qualified Person consistent with NI 43-101.

1. Source: "Evaluation of the Lithium Potential in Brasil" – Mid – Jequitinhonha River, North-East Minas Gerais` Ministry of Mines and Energy, Secretary of Geology, Mines and Development, the Geological Survey of Brazil promoting mineral research. Technical Report – 2016
2. Source: "Lithium Potential Assessment Project in Brasil" ' in the Eastern Pegmatite Province of Brasil: the Geological Survey of Brazil promoting mineral research. Technical Report 19 – August 2023 DOI: 10.29396/ITCPRM.2023.19

About Spark Energy Minerals Inc.

Spark Energy Minerals, Inc. is a Canadian company focused on the acquisition, exploration, and development of battery metals and mineral assets, with a particular emphasis on its substantial interests in Brazil. The Company's flagship project is the Arapaima Lithium project spanning 64,359 hectares in Brazil's renowned Lithium Valley, one of the most prolific mining regions in the world. This region is rapidly gaining global recognition for its vast deposits of lithium and rare earth minerals, positioning Brazil as a critical player in the global energy transition.

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FOR ADDITIONAL INFORMATION, SEE THE COMPANY'S WEBSITE AT

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