Bihor Sud Exploration Project

Leading Edge Materials Corp.

June 2024

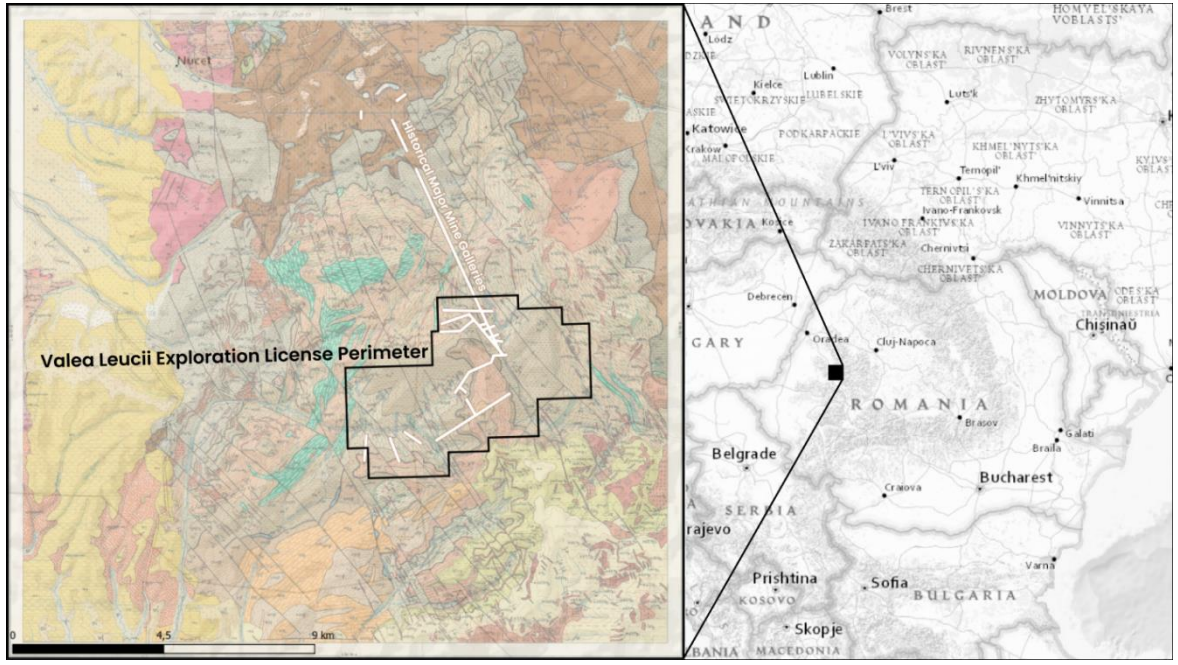
Romania Bihor Sud Nickel-Cobalt Project

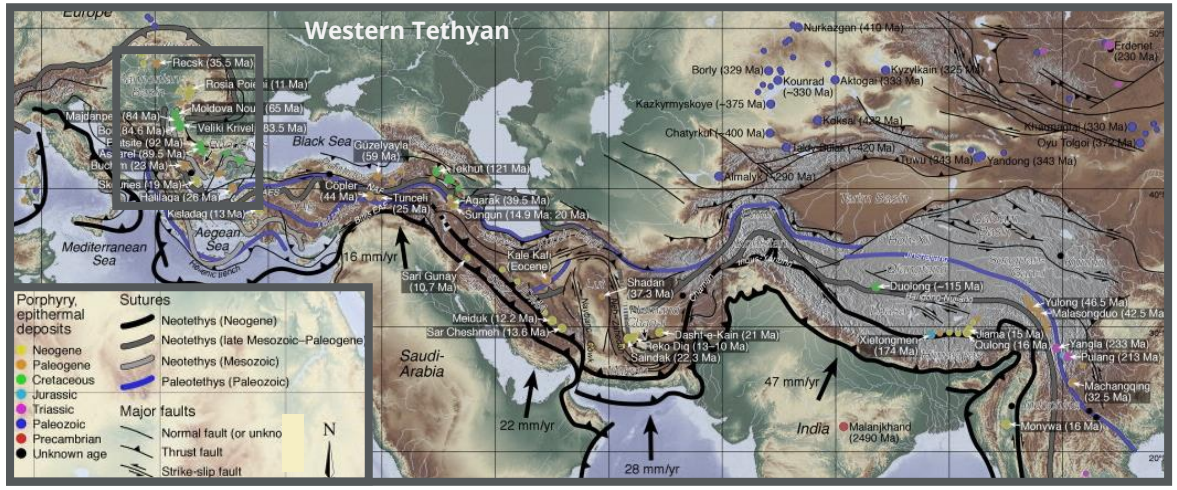
Overview

- JV from 2018 with 51% ownership with potential to move to 90%. Local JV partner operates a Dolomite mine in the area offering shared resources and local knowledge
- Located in the upper Cretaceous metallogenic belt, part of the Tethyan Belt in a historic mining area with a number of historic mines, one being a significant uranium mine
- Initial prospecting campaign and sampling from past mine workings indicates potential for high grade nickel-cobalt mineralization

Opportunity

- Bihor Sud is relatively isolated site whilst the road and power network is well developed due to prior mining and forestry. No permanent residences lie within 5km of the Exploration License boundary.
- Exclusive five year exploration license was granted on 12 May 2022, moving the project towards pre-submitted exploration program. A two year-extension is possible.
- Romania is a historic mining country with rich opportunities but nowadays one of Europe's economically weaker nations which should attract interest from strategic investors.

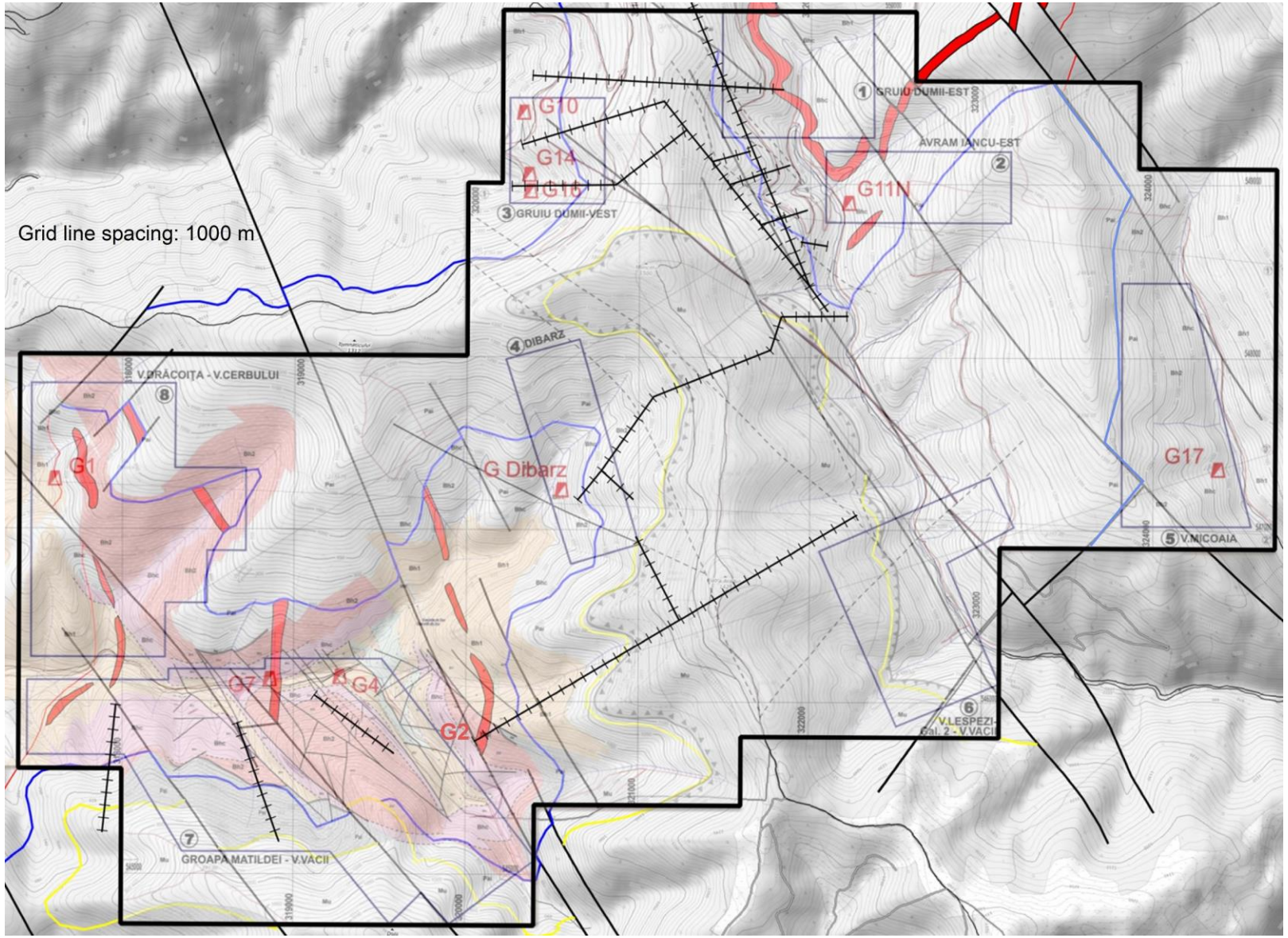




Bihor Sud Exploration License

Historic mining camp

- Tens of kilometers of galleries are developed in the license area, previously targeting and mining uranium in replacement orebodies on carbonate.
- A separate mineralization phase yielded Co-Ni-bodies, which was ignored because the responsible division of 1960-90s Romanian state mining only targeted what was then called “strategic metals“, which did not include Co and Ni.
- Extensive Co-Ni-mineralization has been reported from the galleries, especially in the north (area with G10-G16 on the map).
- LEM achieved first the opening of galleries G4 and G7 in the southwestern license area, followed by G2 in Spring 2024.
- Waste dump samples suggested the presence of Co-Ni chiefly in G7, but also Zn-Pb-Cu-Ag mineralization in G4. High-grade Zn-Pb-Cu-Ag has reportedly been mined from G. Dibarz, which forms a near-term target of exploration.



Bihor Sud Samples

Left: Stringers of silvery-golden Co-Ni mineralization in low grade metamorphic sediments (gray) from the waste dump of G7.

Right: Cu-rich sample from previously mined Zn-Cu-Pb-Ag deposit in the license area.

Bihor Sud – In situ Co-Ni mineralization

- On 23 January 2023, the Company reported having entered historic galleries G7 and G4 head of schedule because of stringently following all applicable procedures.
- Systematic chip sampling confirms in-situ high grade Co-Ni-Au in G7 and Cu-Zn-Pb-Ag mineralization in G4 within +150 m and 350 m gallery segments, respectively.
- G7 highlights include 6.7% Cobalt , 29.7% Nickel, 15.65 g/t Au with about half of the chip samples exceeding 0.44% Nickel equivalent.
- Co-Ni-Au mineralization occurs on shallow-dipping foliation in schists, on fault cleavage, and in late-state veins cutting the other mineralization styles.
- Although high-grade, the Cu-Zn-Pb-Ag veins in G4 were found to be too thin and discontinuous, not forming a target for further exploration.

Below: Powdery, greenish nickel oxide minerals on the wall of G7 and rocks on the gallery floor. Yellow magnetic pen for scale.

Left: Powdery, pinkish cobalt oxide mineral on foliation in graphitic schist. Individual Co-oxide mineral grains are about 1 mm across.

Below: Pinkish cobalt oxide mineral weathering from schists. Hammer for scale.

Romania Bihor – Reopened galleries

Gallery safety

- The re-opened historic galleries G2, G4, and G7 are technically in very good condition
- Measurements of the air quality detected radon in G4 and G7, which needed to be reduced for a safe work environment
- Romanian contractor Radioactiv Mineral Magurele (RMM, a 100 % state-owned company) installed ventilation systems in G4 and G7. Tests demonstrated the successful removal of radon, creating a safe work environment for LEM's geologists and partners. The same system will be installed in other galleries as needed, where after mapping, channel sampling, and underground drilling can commence.
- G2 is connected via raises to the higher, northern gallery systems of Dibarz and G10-G16 (see Slide 3 for location). This causes a continuous natural air flow, which becomes strong at times. Due to this fortunate circumstance, the Company will most probably not have to install a large ventilation system for radon-removal.
- Beyond its restored mouth zone, G2 is very well preserved and provides safe access to the principal gallery axis of about 3200 m straight length, from which extensive transversals emanate to the north for a total of over 8,000 m of galleries in the G2-level.

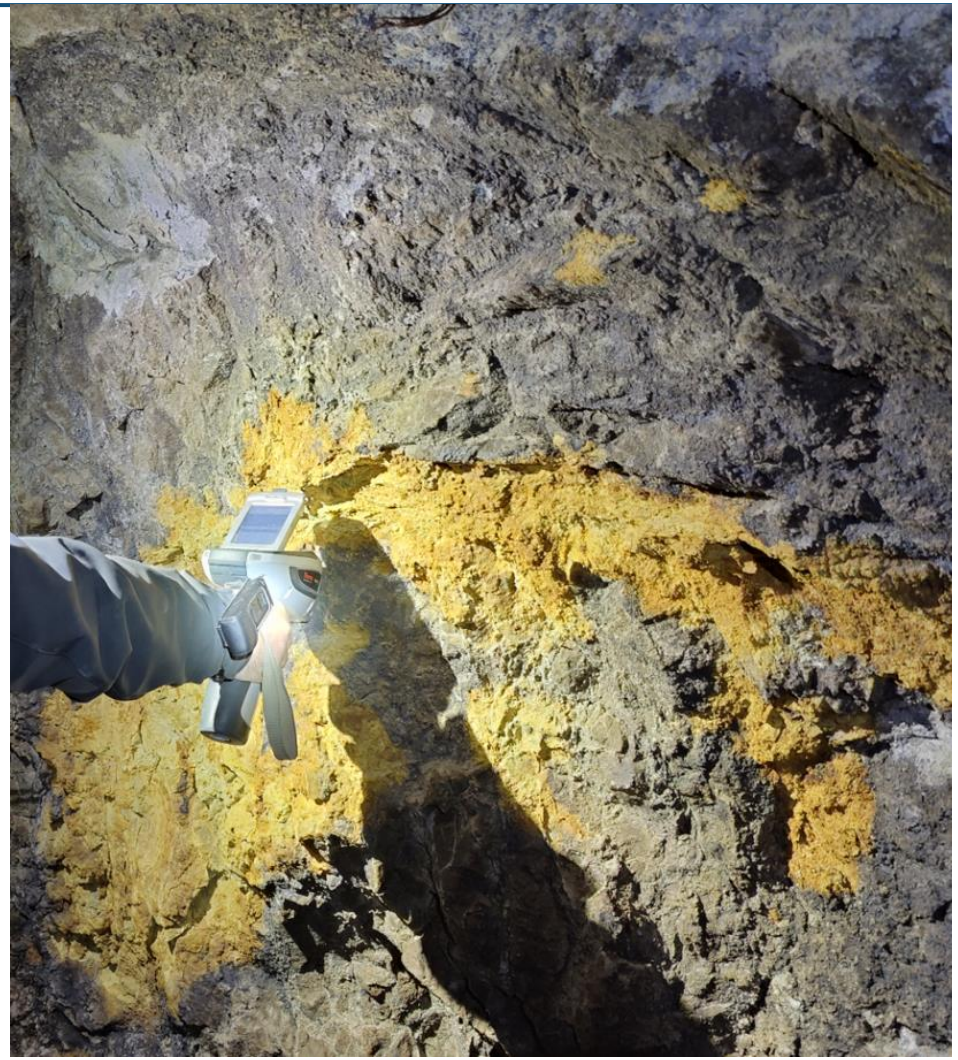
Romania Bihor – Outlook

Preliminary observation in G2

- A preliminary visit in the secured G2 gallery system yielded further Co-Ni and Pb-Zn-Ag zones of significant extent. In the first 1600 m, a several meters thick carbonate level was found pervasively altered and mineralized in several places on a +100 m scale as far as exposed underground. Hand-held XRF-data shows Pb-Zn grades of several percent along with significant silver grades in the altered carbonates.

Imminent tasks

- Preparation and submittal of the Y2 annual exploration report to the National Agency of Minerals Resources (NAMR) in Romania.
- Installation of acquired and delivered on-site laboratory for crushing-grinding of larger samples, and cutting drill core.
- Test of acquired Atlas Copco Diamec 232 underground drill rig.
- Drilling of mapped and sampled Co-Ni-Au mineralization in G7 to understand its extent and thickness, approx. 1,500 m
- Surface drilling of geophysically detected conductivity anomalies.
- Mapping and sampling of Co-Ni and Zn-Pb-Ag-mineralized zones detected visually and by hand-held XRF in G2.
- 6,000 m underground drilling in G2
- Opening of further galleries to the north of G2 and establishing a safe work environment inside.



Altered and pervasively Zn-Pb-Ag-mineralized carbonate (gray) in G2, exhibiting partial oxidation of accompanying Fe-sulphide (ocre).