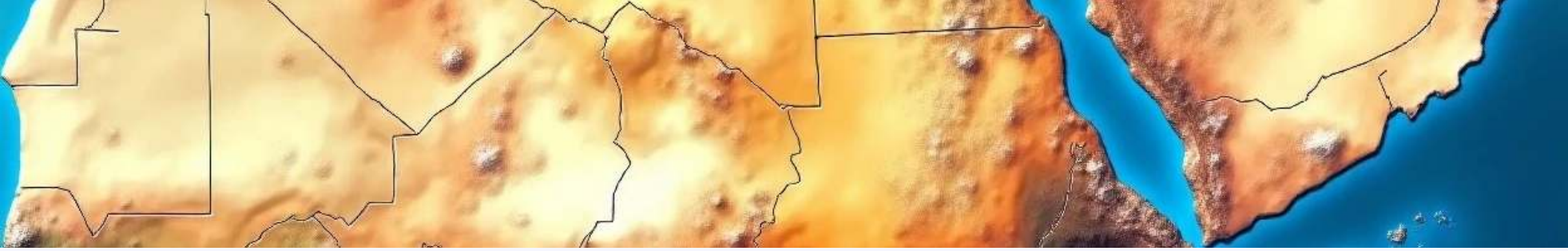

BN Energy's Block RS-12V: A Transformative Polymetallic Discovery in Arabian-Nubian Shield

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Introduction

Introduction

BN Energy's Block RS-12V in Sudan's Red Sea State represents what could potentially be one of the most significant mineral discoveries in the recent history of the Arabian-Nubian Shield (ANS). Initial assay results reveal an extraordinary convergence of three high-grade mineralization systems—copper-gold volcanogenic massive sulfides (VMS), orogenic gold, and magmatic nickel-cobalt sulfides—within a single concession. This polymetallic signature (Au-Cu-Ni-Co) positions Block RS-12V as a strategic, world-class exploration target with the potential to host a multi-commodity mining camp. The discovery is particularly remarkable for its nickel-cobalt mineralization, which represents a geological revelation in a region traditionally known for gold and base metal deposits rather than battery metals. This report provides a comprehensive analysis of the discovery's geological context, regional implications, and strategic recommendations for maximizing its potential within the expanding understanding of the Arabian-Nubian Shield's mineral endowment.

02

Block RS-12V Mineralization

High-Grade Copper-Gold VMS Mineralization

The volcanogenic massive sulfide (VMS) mineralization identified in Block RS-12V exhibits exceptional grades that rank among the highest in the region:

Copper Values: Multiple samples returning >7% Cu (including 7.81% Cu, 6.31% Cu, and 7.17% Cu) far exceed typical economic cut-off grades for copper mines (usually 0.5-1.0% Cu) and approach direct shipping ore quality.

Gold Association: The strong correlation with gold (2-3 g/t Au) adds considerable value to the copper mineralization, enhancing project economics through byproduct credit opportunities.

Geological Significance: These high-grade surface samples suggest the presence of outcropping or shallow massive sulfide lenses, potentially indicating a substantial VMS system at depth. The grades are comparable to early surface samples from world-class VMS deposits like Neves-Corvo (Portugal) or Bisha (Eritrea).

Orogenic Gold Mineralization

The project also hosts a robust orogenic gold system distinct from the VMS mineralization:

1

Consistent Grades: Nine samples returning +2 g/t Au, with a peak value of 68.91 g/t Au, demonstrate remarkable consistency across multiple samples.

2

Pathfinder Elements: The correlation with arsenic (As) represents a classic signature of orogenic gold systems, helping to validate the geological model.

3

Standalone Potential: This mineralization style provides a parallel exploration target that significantly de-risks the project economically—if one commodity's price is depressed, the others provide a financial floor.

Magmatic Nickel-Cobalt Sulfide Mineralization

The most geologically significant aspect of the discovery is the presence of nickel-cobalt mineralization.

Exceptional Values: Multiple samples (RS-09 to RS-25) reporting >10,000 ppm Ni (>1% Ni) represent concentrations far beyond background levels, indicating a significant nickel sulfide event.

Regional Anomaly: This discovery is highly atypical for the ANS, which has no known economic magmatic Ni-Cu-Co sulfide deposits. This suggests BN Energy may have discovered a previously unrecognized geological setting in the Red Sea State, potentially related to undifferentiated ultramafic rocks in the suture zone.

Battery Metal Potential: Nickel and cobalt are classified as critical minerals essential for the global energy transition (batteries, EVs). A discovery of this nature in a prospective jurisdiction would attract immense strategic interest from major miners and battery manufacturers seeking to diversify supply chains away from traditional sources.

03

Strategic Implications

Strategic Implications

BN Energy's Block RS-12V represents a potentially transformative discovery that could significantly alter the mineral potential understanding of the Arabian-Nubian Shield, particularly in Sudan's under-explored regions.

The convergence of three high-grade mineralization styles—including the exceptionally rare (for the ANS) nickel-cobalt sulfide mineralization—positions this project as a strategically important asset with implications beyond the company itself.

The discovery challenges existing geological models of the Arabian-Nubian Shield which previously recognized mainly orogenic gold and VMS deposits. The presence of significant nickel-cobalt mineralization suggests either a previously unrecognized geological domain within the shield or a new mineralization model that could open up new exploration frontiers across the region.

From a strategic perspective, the timing of this discovery is particularly advantageous given the global energy transition and increasing demand for the very metals (copper, nickel, cobalt) that appear to be concentrated in this discovery.

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