



REVIEWER'S REPORT

Manuscript No.: IJAR-57124

Title: METALLOGENIC POTENTIAL EVALUATION OF PAN-AFRICAN GRANITES FROM BAFOUSSAM (WEST-CAMEROON): INSIGHTS FROM GEOCHEMICAL APPROACH.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		Good		
Techn. Quality	Excellent			
Clarity	Excellent			
Significance	Excellent			

Reviewer's ID: Dr. Sumathi

Detailed Reviewer's Report

- 1. Bafoussam granites are Pan-African syn-tectonic igneous rocks located in the western Cameroon region of the Central African Orogenic Belt. They are characterized as high-K calc-alkaline I-type and S-type granitoids, often showing deformation from syn-magmatic processes and containing accessory minerals like monazite, zircon, and allanite.**
- 2. Metallogenic potential refers to the capacity of a specific geological environment, region, or tectonic setting to host economic mineral deposits, determined by assessing its geological history, rock types, and ore-forming processes. Evaluating this potential involves analyzing tectonic evolution, such as rifts, subduction zones, and orogenic cycles, to identify, locate, and explore for valuable critical metals and ores.**
- 3. Metallogeny is the science of ore and mineral deposit formation in geological space and time. Metallogeny is interdisciplinary by nature, comprising elements of natural science disciplines such as planetology to solid state physics and chemistry, and volcanology.**

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- 4. Shear zones are generally wider than faults and may accommodate displacements over a range of scales from some centimeters to tens of kilometers. Strain is considerably higher in shear zones with respect to the surrounding rocks, which may appear weakly deformed or non-deformed at all.**
- 5. Geochemical approaches provide critical insights into Earth's processes by analyzing the distribution and migration of elements within rocks, soils, water, and gases. This method enables the identification of large-scale footprints of mineral systems, acts as a tool for , and helps reconstruct past environmental changes, mapping fluid flow and metamorphism patterns.**
- 6. Metallogenic potential evaluation is a systematic, multi-disciplinary approach used to identify areas with high potential for mineral deposits by analyzing geological, geochemical, and geophysical data. This process, often driven by machine learning and GIS modeling, defines target areas by comparing known mineral occurrences with regional data sets.**
- 7. Metallogeny is the science of ore and mineral deposit formation in geological space and time. Metallogeny is interdisciplinary by nature, comprising elements of natural science disciplines such as planetology to solid state physics and chemistry, and volcanology.**
- 8. Key words are given good.**
- 9. Pictures, graphs and tables are excellent.**
- 10. Summary points only can be included.**
- 11. References should be with alphabetical order.**
- 12. After a small changes good to publish in your journal.**