

Supplementary materials for

## Sedimentary evidence of limnic eruptions in Lake Monoun, West Cameroon

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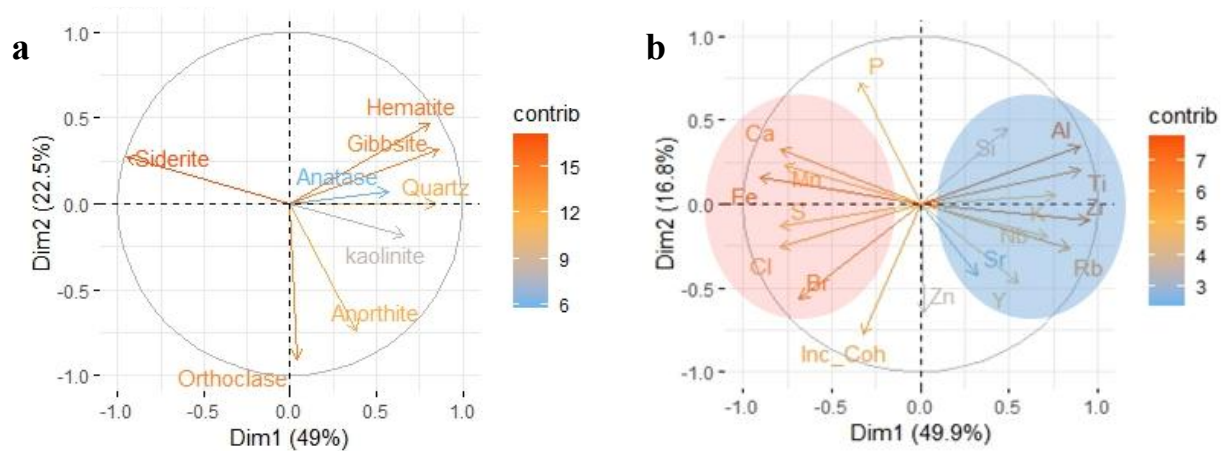
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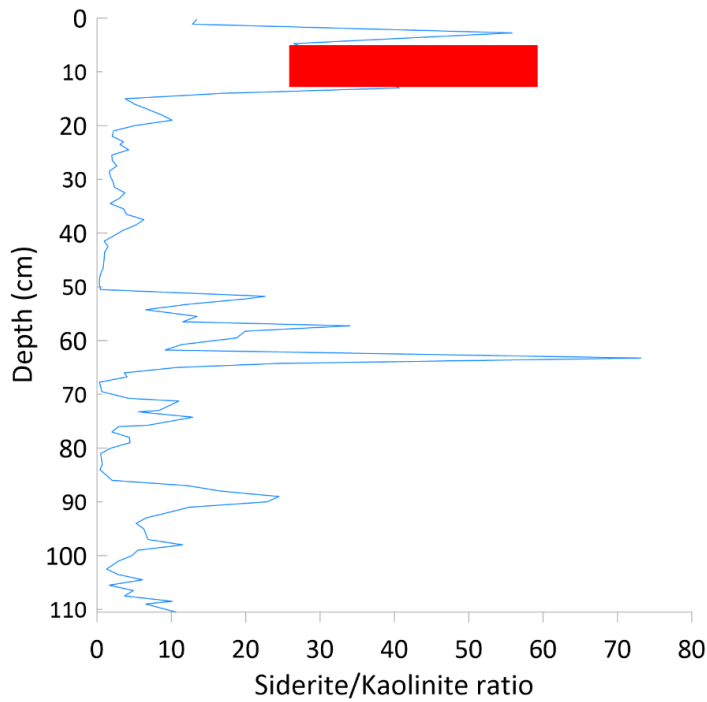
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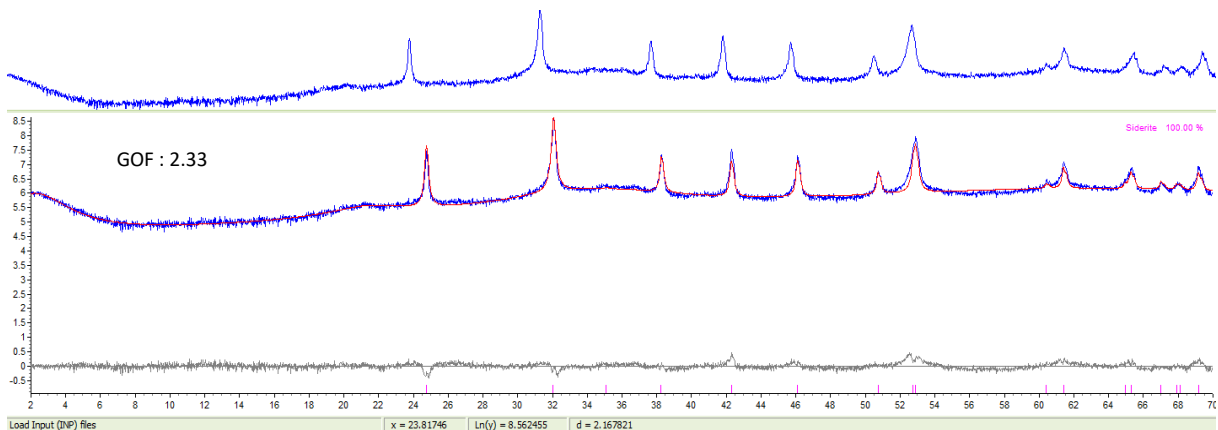
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**Figure S1. Principal component analysis (PCA).** **a** PCA of mineralogy with siderite on the negative axis and the others on the positive axis. **b** PCA of geochemical elements with one group of elements on the negative axis (red circle) and another on the positive axis (blue circle).



**Figure S2.** Relationship between siderite and kaolinite peaks to support the TOPAS quantification of these two main minerals. The red box highlights the highest siderite content in core LMo23-2.



**Figure S3:** Result of the refinement quality of the relative quantification on topaz of the sample containing 100% siderite (10-9cm). The calculated good-of-fitness parameter (GOF) of the reconstructed profile is considered as good 2.33 (value < 3).