Supplementary Information S1

Permian-Triassic red-stained albitized profiles in the granitic basement of NE Spain: Evidence for deep-seated alteration beneath the Triassic palaeosurface

“Fàbrega et al.”

This Supplementary Information S1 of “Fàbrega et al.” contains pictures and sketches of the study sites in the Guilleries and Roc de Frausa Massifs presented in the Figure 1 of the article. Most of the pictures include the UTM coordinates (UTM 31N / ETRS89).

Guilleries Massif

(1) Susqueda dam; (2) Sau dam; (3) Bojons; (4) Arbúcies; (5) Osormort; (6): Mas Vidal-Timonar; (7): Viladrau; (8) Tagamanent hill; (9) Valllornès
Maps from the website of the Institut Cartogràfic i Geològic de Catalunya (ICGC).
1. Susqueda dam

Fig. 1. (a) Fresh granodiorite in the Susqueda dam. (b) Red stained albitized Cambro-Ordovician metavolcanic rocks close to the Triassic unconformity. (c) Position of the Triassic unconformity (dashed line) over the Susqueda dam. (d) Sketch of (c) showing the granitic (grey) and metamorphic (oblique lines) rocks beneath the Triassic unconformity affected by the red albitized profile (red overprint). The crystalline basement is covered by Paleocene red-beds (orange) and limestones (blue).
2. Sau dam


3. Osormort

Fig. 3. Red albitized granites close to St. Sadurní d’Osormort. (a) Road BV-5201. (E (X): 447785 - N (Y): 4638129). (b) Road BV-5201. (E (X): 449915 - N (Y): 4640098).

4. Arbúcies

Fig. 4. Boulders of primary granodiorite north of Arbúcies village. Road GI-543. (E (X): 454233 - N (Y): 4633511).
5. Bojons

Fig. 5. Red stained albitized fractures in the Bojons area. (E (X): 449880 - N (Y): 4640199).
6. Mas Vidal-Timonar

Fig. 6. (a, b, c, d) Red albitized granodiorite beneath the Triassic unconformity (dashed line) covered by Lower Triassic sandstones (Buntsandstein facies) and Paleocene red-beds (orange). Road GIP-5251. (E (X): 446174 - N (Y): 4634395). (e) Lower Triassic quartz arenite (Buntsandstein facies) covering the red albitized granodiorite in the Collet del Timonar area. (E (X): 444856 - N (Y): 4634075). (f) Pink albitized dikes beneath the Lower Triassic red beds (Bundsandstein facies) in the Collet del Timonar. (E (X): 444918 - N (Y): 4634057).
7. **Viladrau**

![Primary granodiorite boulders in Viladrau area. Road GI-543. (E (X): 447708 - N (Y): 4633423).](image)

**Fig. 7.** Primary granodiorite boulders in Viladrau area. Road GI-543. (E (X): 447708 - N (Y): 4633423).

8. **Tagamanent hill**

![Sketch of the Tagamanent hill showing red albitized porphyritic granite covered by Triassic red beds (Bunstandstein facies) and limestones (Mushelcalk facies).](image)

![Red albitized porphyritic granite covered by Lower Triassic sandstones (Bunstandstein facies).](image)

![Red albitized porphyritic granite with microclinized K-feldspar phenocrysts (1-3cm) in the upper part of the profile.](image)

**Fig. 8.** (a) Picture of the Tagamanent hill. (b) Sketch of the Tagamanent hill showing red albitized porphyritic granite covered by Triassic red beds (Bunstandstein facies) and limestones (Mushelcalk facies). (c) Red albitized porphyritic granite covered by Lower Triassic sandstones (Bunstandstein facies). (d) Red albitized porphyritic granite with microclinized K-feldspar phenocrysts (1-3cm) in the upper part of the profile. (E (X): 441938 - N (Y): 4621975).
9. Vallfornès

Fig. 9. Fresh porphyritic granite with white orthoclase phenocrysts (1-3cm) in the Vallfornès area. (E (X): 444490 - N (Y): 4620267).
**Roc de Frausa Massif**

(10) La Vajol; (11) Maçanet Cabrenys; (12) St, Laurent Cerdans; (13) Coustoges; (14) Villerouge; (15) Puig Mondavà; (16) Boadella dam; (17) St. Aniol; (18) Hortmoier; (19) Oix

Map from the website of the **Institut Cartogràfic i Geològic de Catalunya (ICGC)**.

**10. La Vajol**

*Fig. 10.* Boulders of primary granite in La Vajol. (E (X): 480762 - N (Y): 4693301).
11. Maçanet de Cabrenys

**Fig. 11.** Primary granite in the Arnera river, Maçanet de Cabrenys area. (E (X): 479259 - N (Y): 4691511).

12. St. Laurent de Cerdans

**Fig. 12.** Primary granites close to Saint-Laurent-de-Cerdans. Road D3. (E (X): - N (Y): ).
13. Coustoges

Fig. 13. (a, b) Pink albitized porphyritic granite (red) covered by Upper Cretaceous red beds (orange). East of Coustoges. Road D-3. (E (X): 471751 - N (Y): 4690688 ). (c, d) Pink albitized granites close to the Coustoges village. (E (X): 470535 - N (Y): 4690868).
14. Villerouge

Fig. 14. Red albitized granites close to Villerouge village. Road D-3a. (E (X): 468420 - N (Y): 4689998).

15. Puig de la Creu de Mondavà

Fig. 15. (a) Image of Puig de la Creu de Mondavà zone. (E (X): 480340 - N (Y): 4689108). (b) Sketch of Puig de la Creu de Mondavà showing the red-albitized granites beneath the Triassic unconformity (dashed line) covered by Upper Cretaceous red beds (orange). (c) Red stained albitized porphyritic granite with microclinized K-feldspar phenocrysts (1-3 cm). (d) Pink albitized granite.
16. Boadella dam

Fig. 16. (a, b) Red albitized porphyritic granite below the Triassic unconformity (dashed line) covered by Upper Cretaceous red-beds. Boadella dam. (E (X): 486439 - N (Y): 4687438). (c) Pink albitized porphyritic granite. Boadella dam. (d) Primary porphyritic granite close to Darnius village. (E (X): 486748 - N (Y): 4688547).
17. St. Aniol

![Image of porphyritic granite showing red albitized fracture walls.](image17)

**Fig. 17.** Porphyritic granite showing red albitized fracture walls. St. Aniol d’Aguja. (E (X): 466100 - N (Y): 4684931).

18. Hortmoier

![Image of pink albitized porphyritic granite with microclinized K-feldspar phenocrysts.](image18)

**Fig. 18.** Pink albitized porphyritic granite with microclinized K-feldspar phenocrysts (1-3cm). Hortmoier. (E (X): 463016 - N (Y): 4682408).
19. Oix

Fig. 19. Pink albitized porphyritic granite west of Oix village. (E (X): 458168 - N (Y): 4679412).