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**The Jurassic sequence of the Niesen nappe in the region of Le Sepey - La Forclaz (Switzerland): witness of the Piemonte rifting in the Helvetic paleogeographic domain**

The Dogger *Couches à Posidonies de la Grande Eau* belongs to the front of the Niesen nappe (Western Switzerland). Detailed sedimentological/stratigraphical studies allowed to precise the age and to characterise the depositional environment as well as the petrology of these sediments. The geodynamic context can be related to the Piemonte ocean rifting.

This formation was deposited in a deep-sea fan environment. Its base is of Aalenian age and reworked microfossils give a Bathonian age to the top of the formation.

The petrology of the displaced elements, current directions as well as a compilation of data on the helvetic domain and the Alps in general, helped to reconstruct the paleogeography of the sedimentary sources. These were derived from a major topographic high, interpreted as the rift shoulder of the Helvetic margin. The sediments were deposited south of this rift shoulder in a proximal position.

If we compare the *Couches à Posidonies de la Grande Eau* with the contemporaneous deposits of the Brèche inférieure (Brèche nappe), it seems that these two formations are connected to the same event (the rifting of the Piemonte ocean) and were laterally continuous in Middle Jurassic times. Their present position on the same cross-section in the western Alps implies a duplication of the Jurassic south European margin through the Cretaceous opening of the Valais domain.

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