Freyenstein fault

Structure ID: FYS
Fault Section IDs: FYS_01 to FYS_02
Related terms: zlom Freyenstein (Cz); Freyenstein Subfault System (Eng); Freyenstein-Teilstörungssystem (De)
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General description

According to the Austrian fault database this ca. 45 km long NE-SW, partly NNE-SSW trending Subfault System extends from Windpassing to Freyenstein, Ysper and Klein-Nondorf (SW of Grafenschlag). It is part of the Vitis-Pribyslav Fault System at the eastern end of the South Bohemian Batholith. (see http://resource.geolba.ac.at/structure/162).

The FYT_02 section is plotted on the Austrian geological maps as an edge of Bohemian Baholith (see the Geological map of Austria 1 : 50 000, gk036 Ottenschlag). The FYT_01 can be traced through the Bohemian Batholith as a mylonite or ultramylonite belt which is a contact zone of the gneiss filling and Weinsberg-type granite.

Fault structure and dip

This fault structure includes an approximately 500 m thick ductile, SE-dipping mylonitic normal shear zone with top S/SE sense of shear dated to the Late Variscan.

The interpretation is not complete yet.

Cross structures and Segmentation

The FYT_02 section is probably a continuation of the FYT_01 section towards the NE. A NW–SE cross fault divides them.

No more data yet.

Scarp morphology

It has not been monitored yet.

Seismicity

To be revisited after completion of earthquake catalogue.

Pre-Miocene and Tertiary evolution

The Late Miocene reactivation, with left-lateral movement, is assumed (Griesmeier et al., 2016).

The interpretation is not complete yet.

Fault activity in late Cenozoic

No data yet.

Related local evidence

The fault plane of FYT_02 accompanied by shear zone was detected in the granite quarry marked by a point WHS_A.

The interpretation is not complete yet.

References

GRIESMEIER, G.E.U., IGLSEDER, C., SCHUSTER, R. & PETRAKAKIS, K., 2016. The Freyenstein Subordinated Fault System – Shear zone and Fault development along the South Bohemian Batholith (Austria). - GeoTirol 2016: Annual Meeting DGGV: 25-28 September 2016, Innsbruck, Austria: Abstract Volume, p. 90.

http://resource.geolba.ac.at/structure/162 (state to 2020-03-09).