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Reply on CC1

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Author comment on "Late Cretaceous – early Palaeogene inversion-related tectonic structures at the NE margin of the Bohemian Massif (SW Poland and northern Czechia)" by Andrzej Głuszyński and Pawel Aleksandrowski, Solid Earth Discuss., https://doi.org/10.5194/se-2021-99-AC1, 2021

Dear Dr Tari,

We appreciate your positive impression of our manuscript, as well as the particular interest in one of our examples of Late Cretaceous-Early Palaeogene tectonic structures in the Sudetes, namely the Czerwieńczyce Reverse Graben presented in our Figure 15. The figure shows Józef Oberc's (1972) interpretation, redrawn by us from his original figure without changing the structure's geometry. We confirm that the horizontal and vertical scales are equal in this figure. The width of the graben is almost precisely 1 km at the ground surface and now we realize the necessity to add the scale bar to the figure in the revised manuscript and, perhaps, also to complete the figure with the geological information concerning the graben's both sides and basement.

The constraints on the geometry and stratigraphic content of the Czerwieńczyce Reverse Graben, as illustrated in Oberc's cross-section originally resulted from the surficial field mapping of this author (Oberc 1957), who was most probably also inspired by underground geological cross sections coming from the nearby coal mines directly adjacent to the portrayed part of the reverse graben in the NE, N and SW. The coal mines were active from the 19th to the early or late (some of them) 20th centuries. The geology of the Czerwieńczyce Reverse Graben as shown in Fig. 15, although conjectural at depth, was later partly verified and mostly confirmed by the exploration borehole Dzikowiec IG-1, drilled in 1984-1985 c. 1.5 km SSE of the cross-section presented in Fig. 15. The borehole has penetrated the Rotliegend base at a depth of 991 m and the base of Carboniferous clastics/top of Lower Devonian gabbro at 1422 m, the latter rock variety found to continue until the borehole terminal depth at 1800 m (Bossowski 1995).

References:

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