

Diapirism and Folding Associated to Recent Tectonics in the Guadix-Baza Basin (SE Spain)

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The relation between tectonics and sedimentation is analyzed in several structures formed from the late Miocene to the present in the Guadix-Baza Basin. They correspond to a combination of diapirs and folds and some faults. The most important of them are crossed by de Guadiana Menor River. The nucleus of the diapirs is formed by Triassic materials, overlain by upper Neogene to Quaternary sediments. The most conspicuous structures are the Negratin dome, elongate in the N85E direction with dimensions of 1.5 Km for 1 Km, and a perpendicular anticline situated immediately to the NW, with a length of 3.5 Km. Other structures, folds and diapiric folds, are situated to the W and NW of the previous ones.

During the formation of the diapirs and folds noticeable synsedimentary unconformities were formed in the upper Miocene, Pliocene and Quaternary sediments situated in the proximities of these structures. This fact indicates a progressive deformation during this period of time. These deformations even affect the Pleistocene glaciais of the Guadix- Baza Basin, showing the recent activity of the tectonics in this basin. These deformations have been formed within a N-S to NNW-SSE compression and a ENE-WSW linked extension. This position of the stresses is inferred from the study of macro and minor structures.

Key words. Diapirism, Neogene, Quaternary, Neotectonics.