

WNW COMPRESSION IN THE LATE CRETACEOUS KYOKPO BASIN, S.KOREA; IMPLICATIONS FOR BASIN FORMATION

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Small-scale non-marine sedimentary basins including the Kyokpo basin are distributed along the north and south boundaries of the Ogcheon belt in the southeastern part of the Korean peninsula. This study focuses on the analysis of the fault system in the Kyokpo basin and its basement, and discussion of basin evolution in relation to fault system. In the study area, three types of faults are recognized: dextral strike-slip faults, normal faults and reverse faults. The strike-slip faults can be subdivided into three sets. Among the strike-slip faults which is running along the northern coastline, has conjugate sinistral strike-slip faults of NW direction. The normal faults of nearly WEW direction well develop at the northeastern coastline and the reverse faults of NS direction are distributed in the western coastline. These different sets of the faults can be simultaneously formed by the compression of about 110 direction. The compression also resulted in the formation of thrusts and slumped beds or asymmetrical folds, which have well-developed NNE-NS strike of the axial plane. The thrusts and folds only occur within any particular horizons and are covered with overlying undeformed strata, indicative of syndepositional origin. Conclusively the Kyokpo basin is interpreted as a fault wedge basin rather than an pull-apart basin.