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Structural Pattern for Normal Faulting of West Central Iran

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Abstract. The studied area is situated in the North West Isfehan province in central Iran. The oldest outcropped rocks are upper Jurassic, the upper of which contacts are unconformable. Lower Cretaceous units are composed of conglomerate, sandstone and orbitolina limestone (Aptian-Abian). Upper Cretaceous units are composed of limestone and marl with interbeds of orbitolinaferous limestone. According to the study of ETM data, systematic conjugate mega-joints are generally observed in the whole area. These joints are also observed in Jurassic and Cretaceous units. Jurassic units are ductile and Cretaceous units are brittle. Transtensional faults developed in Pre-Jurassic units. Activation these faults formed new normal faults in Cretaceous units. Syntectonic Oligo-miocene limestone was deposited on the Cretaceous unit disconformably, so that the lower Cretaceous units show normal faults and Oligomiocene units show syncline structures. The fault system of the study area is a part of the Alpine orogeny. Based on the ETM data, a clockwise rotation could be observed in the whole area. Blocks between these mega-joints have experienced and elongation.

Keywords. Normal fault, Transtension, dominant structures, central Iran, Sanandaj -Sirjan zone