

**Distinction of dolomites based on texture  
in the Middle Jurassic carbonate rocks  
of Northeast Mashhad**

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**Abstract:** The Mozduran One Formation (Middle Jurassic) in NE Mashhad is mainly composed of dolomite and limestone. Based on texture (size and fabric), dolomites were divided into 5 different types with a crystal size which ranges from 10 to 1200 microns. Type one is very fine to fine subhedral to euhedral crystals, while type two is fine to medium euhedral with poikilotopic texture. Type three is medium planar subhedral to anhedral crystals with idiotopic texture. Type four is medium to coarse anhedral nonplanar crystals and type five is coarse with dolomite cement. Distinction between types 3 and 4 is difficult and is mainly based on the larger number of crystal boundaries in type three and stronger undulose extinction in type four. Dolomites of types one to three are mainly formed in the early stages, while types 4 and 5 formed during the burial, in the late stages of the diagenetic history of the rock. It is concluded that based on texture, dolomites can be divided into different types and thereby their origin can be interpreted.