

Dolomitization experiments by aragonite-solution reactions

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Dolomitization experiments were carried out with aragonite powder and Mg-Ca-Sr solution. Aragonite dissolved within few hours at 180 – 250 degree C. Dolomite formation from aragonite to dolomite is consecutive first order reactions. Aragonite dissolution progress significantly after induction period depending on temperature. Activation energies of the single reactions are 59 +/- 7.5 kJ/mol and 46 +/- 12.3 kJ/mol, respectively. Textures of dolomite in run products are resemble to natural dolomite occurred in sabkha.