

CLAY MINERALOGY OF LUTITES IN THE KEUPER OF THE
CATALONIAN COASTAL RANGES (SPAIN)

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In the Catalonian Coastal Ranges, Keuper deposits outcrop between Ebro and Llobregat rivers, reaching thicknesses from 50 to 150 m and three stratigraphical domains have been defined (ORTI & SALVANY, 1987).

Three lithostratigraphical formations have been defined in this Keuper (ORTI & SALVANY, 1987). From base to top, they are: Miravet Gypsum Fm, Molar Gypsum and Clays Fm and Gallicant Carbonates and Clays Fm. The first one is interpreted as a regressive evaporitic unit; the others are interpreted as evaporitic transgressive series whose top is the Imon Dolomite Fm.

The mineralogical assemblages in the defined formations had been analyzed. The observed variations are more related to the stratigraphical domains than the lithostratigraphical formations.

The observed assemblages are:

- a) North domain: Illite † regular chlorite-smectite mixed layer † illite-smectite mixed layer † chlorite † quartz † calcite † dolomite † magnesite † feldspar.
- b) Middle domain: illite † smectite † chlorite † chlorite-smectite mixed layer † quartz † dolomite † calcite † gypsum.
- c) South domain: illite † chlorite † chlorite-smectite mixed layer † illite-smectite mixed layer † quartz † calcite † dolomite † feldspars † gypsum † anhydrite.

The beds of lutites are interpreted as mudflats related with sabkhas and coastal saline lagoons, and that agrees with the mineralogical assemblages found.