

THE APPLICATION OF GEOCHEMISTRY OF CARBONATES TO AN EXPLORATION PROJECT OF RAW MATERIALS TO THE CEMENT INDUSTRY. TRIASSIC AND JURASSIC CALCAREOUS FORMATIONS IN THE IBERIAN RANGE, SPAIN (N.E. OF ARAGONIAN BRANCH)

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The working area is around of Morata de Jalón (Zaragoza, Spain) and has an extension of 15 km² and the stratigraphic and geochemical characteristics of calcareous series were studied during this project. The investigated stratigraphic series are of Mesozoic age and are made up by high carbonate marine formations varying from Triassic to Lower Jurassic. Geochemical analysis were carried out over 57 samples. All of this calcareous rocks should be pass a standard specifications regarding the quality requirements for the raw materials for the production of Portland cement. The following results have been obtained by this research: 1. Geological mapping of the area at 1:25,000 scale. 2. Stratigraphic study of all carbonatic formations of the region. 3. Geochemical study of 57 samples that have been checked to the chemical requirements for the production of Portland cement. 4. Definition of the lithologies with optimum conditions for the cement manufacture. 5. Evaluation of a limestone resources of 100,000,000 tones with a chemical content of 96 % in CaCO₃, 0.8 % of MgO and 53.5 % of CaO.