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Dept: Geology 18/SC114/023

Course: GEY 204

Assignment

AT: Principles of Stratigraphy and Sedimentation

Question: Define the following processes

List other three examples of diagenesis

1) Lithification is the process in which sediments compact under pressure, expel connate fluids, and gradually become solid rock. Essentially, lithification is a process of porosity destruction through compaction and cementation.

2) Cementation involves ions carried in groundwater chemically precipitating to form new crystalline material between sedimentary grains. The new pore-filling minerals form "bridges" between original sediment grains, thereby binding them together.

3) Compaction is a process that brings about an increase in soil density or unit weight, accompanied by a decrease in air volume. There is usually no change in water content.

4) Induration is the hardening of rocks by heat or baking, also hardening of sediments through cementation or compaction, or both, without the introduction of heat.

5) Three examples of diagenesis

1) the chemical alteration of a feldspar to form a distinctly new mineral in its place, a clay mineral.

2) another example is the marble (which is used for countertops and worktops in kitchen and bathroom) is an example of metamorphosis of pre-existing rocks like the carbonate rock.

3) A form of diagenesis is permineralization, in which buried organisms are replaced by minerals.