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# Flint-Clay Facies Illustrated within One Deposit of Refractory Clay

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**Abstract:** The flint-clay facies, originally proposed from widespread stratigraphic evidence, is represented by four of its six members within a single commercial deposit of Cheltenham refractory clay in Missouri. Scan electron micrographs show progressive changes in texture from plastic refractory clay (as in ball-clay "swirl" texture) through semi-plastic, semi-flint, to typical flint clay (recrystallized, well-ordered kaolinite). Micrographic evidence supports the interpretation of the origin of the Cheltenham clay earlier made from field and macroscopic evidence. Source material from nearby residual, weathered clay was transported into paludal basins, "digested," partly recrystallized to kaolinite, brecciated and reconsolidated, essentially completed before being covered by younger Pennsylvanian-age sediments.

**Key Words:** Cheltenham • Flint-clay • Kaolinite • Refractory

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