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Abstracts of Papers

CROSSEY, LAURA J.

**Organic/Inorganic Reactions During Progressive Burial:
Implications for Porosity and Permeability Enhancement**

A natural consequence of the burial of sedimentary prisms is the maturation of organic material. Nuclear Magnetic Resonance (NMR) profiles of kerogens show that carbonyl and phenol groups are released from the Kerogen molecule prior to the generation of liquid hydrocarbons. Experimental data indicate that these water-soluble organic acids can significantly increase aluminum mobility, resulting in the dissolution of aluminosilicate minerals, as well as carbonate grains and cements. Water-soluble organic acids have been observed in oil field brines in concentrations up to 15,000 ppm. Both the experimental work and observations suggest that the interaction of organic and inorganic constituents during progressive burial may result in porosity enhancement in many hydrocarbon environments. Because of the time and temperature dependence of these reactions,