Rapid source rock evaluation by programmed pyroanalysis in petroleum exploration

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New methods of assisting in the search for petroleum are constantly being developed. Pyroanalysis is a relatively recent development that will play an increasingly more important role in exploration. The technique is substantially faster than conventional methods of geochemical analysis and as such may be used as an aid in exploration programme decisions at the wellsite.

Pyroanalysis refers to the thermal degradation of organic matter in an inert atmosphere. Natural hydrocarbons in small quantities of rock cuttings or cores can be measured together with the products from the cracking of insoluble kerogens. The results can be used as an aid to determine; the source rock potential, degree of maturation, the expected type of hydrocarbon generated from a mature rock, and identify petroleum accumulations.

When used in conjunction with total organic carbon determinations then kerogen typing, quality of the source rock and degree of maturation can be further substantiated.

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