

1. Record Nr.	UNINA9910146251103321
Titolo	Clay mineral cements in sandstones [[electronic resource] /] / edited by Richard H. Worden and Sadoon Morad
Pubbl/distr/stampa	Malden, MA, : Blackwell Pub., c2003
ISBN	1-4443-0433-X 9786612042409 1-282-04240-8 1-4443-0434-8
Descrizione fisica	1 online resource (523 p.)
Collana	Special publication number 34 of the International Association of Sedimentologists
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Disciplina	549.6 549/.6 553.53
Soggetti	Clay minerals Sandstone
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Clay Mineral Cements in Sandstones; Contents; Introduction; Acknowledgements; Review papers; Clay minerals in sandstones: controls on formation, distribution and evolution; Predictive diagenetic clay-mineral distribution in siliciclastic rocks within a sequence stratigraphic framework; Oxygen and hydrogen isotopic composition of diagenetic clay minerals in sandstones: a review of the data and controls; Palaeoclimate controls on spectral gamma-ray radiation from sandstones; Smectite in sandstones: a review of the controls on occurrence and behaviour during diagenesis Patterns of clay mineral diagenesis in interbedded mudrocks and sandstones: an example from the Palaeocene of the North SeaCross-formational flux of aluminium and potassium in Gulf Coast (USA) sediments; Silicate-carbonate reactions in sedimentary systems: fluid composition control and potential for generation of overpressure; Experimental studies of clay mineral occurrence; Effect of clay content

upon some physical properties of sandstone reservoirs; Quantitative analysis of clay and other minerals in sandstones by X-ray powder diffraction (XRPD)

A review of radiometric dating techniques for clay mineral cements in sandstones; Chlorite case study; Chlorite authigenesis and porosity preservation in the Upper Cretaceous marine sandstones of the Santos Basin, offshore eastern Brazil; Kaolinite case studies; Origin and diagenetic evolution of kaolin in reservoir sandstones and associated shales of the Jurassic and Cretaceous, Salam Field, Western Desert (Egypt); Microscale distribution of kaolinite in Breathitt Formation sandstones (middle Pennsylvanian): implications for mass balance; The role of the Cimmerian Unconformity (Early Cretaceous) in the kaolinitization and related reservoir-quality evolution in Triassic sandstones of the Snorre Field, North Sea; The formation and stability of kaolinite in Brent sandstone reservoirs: a modelling approach; Illite case studies; Illite fluorescence microscopy: a new technique in the study of illite in the Merrimelia Formation, Cooper Basin, Australia; Geochemical modelling of diagenetic illite and quartz cement formation in Brent sandstone reservoirs: example of the Hild Field, Norwegian North Sea

The effect of oil emplacement on diagenetic clay mineralogy: the Upper Jurassic Magnus Sandstone Member, North Sea; Glauconite case study; Application of glauconite morphology in geosteering and for on-site reservoir quality assessment in very fine-grained sandstones: Carnarvon Basin, Australia; Index; Colour plates

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## Sommario/riassunto

Clay minerals are one of the most important groups of minerals that destroy permeability in sandstones. However, they also react with drilling and completion fluids and induce fines migration during hydrocarbon production. They are a very complex family of minerals that are routinely intergrown with each other, contain a wide range of solid solutions and form by a variety of processes under a wide range of temperatures and rock and fluid compositions. In this volume, clay minerals in sandstones are reviewed in terms of their mineralogy and general occurrence, their stable and radiogenic i

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