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Journal of Structural Geology

Volume 47, Pages 1-52 (February 2013)

Changes in to the Editorial board

Page 1

Cees W. Passchier

Photograph of the month

Page 2

Shear-enhanced compaction bands formed at shallow burial conditions; implications for fluid flow (Provence, France)

Original Research Article

Pages 3-15

Gregory Ballas, Roger Soliva, Jean-Pierre Sizun, Haakon Fossen, Antonio Benedicto, Elin Skurtveit

Highlights

► Description of shear-enhanced compaction bands formed in poorly consolidated sands. ► Bands formed during Pyrenean contraction involved cataclasis at only ~400 m burial depth. ► These deformation bands are too permeable to significantly influence fluid flow. ► Such bands are restricted in coarse-grained and less porous sand layers within the sand unit. ► Comparison with US bands shows the influence of burial depth on the sealing capacity of such bands.

Computation of subsidence parameters resulting from layer movements post-operations of underground mining

Original Research Article

Pages 16-24

Eray Can, Çetin Mekik, Şenol Kuşçu, Hakan Akçın

Highlights

► Underground mining studies cause displacements on the earth's surface. ► Zonguldak Hard Coal Basin has been affected due to mining activities. ► This study yields computations about the subsidence parameters. ► The average slope angle values estimated as +16".67 and -18".03

directions. ► The horizontal unit deformation values estimated 0.26 mm/m for compression and 0.28 mm/m for extension.

Dissimilar properties within a carbonate-reservoir's small fault zone, and their impact on the pressurization and leakage associated with CO₂ injection

Original Research Article

Pages 25–35

Pierre Jeanne, Yves Guglielmi, Frédéric Cappa

Highlights

► Damage zone of small faults are characterized by more or less fractured layers. ► Damage zone is composed by level acting as drain or barrier for fluid flow. ► The hydraulic properties variations influence the pressurization of the fault zone.

Monitoring *in situ* stress/strain behaviour during plastic yielding in polymineralic rocks using neutron diffraction

Original Research Article

Pages 36–51

S.J. Covey-Crump, P.F. Schofield, I.C. Stretton, M.R. Daymond, K.S. Knight, J. Tant

Highlights

► Neutron diffraction is used to monitor the deformation of calcite + halite composites. ► The measured elastic properties agree well with shear lag and Eshelby-type analyses. ► The importance of load transfer during plastic yielding is emphasized. ► In situ stress/strain curves are recovered for the weak phase during plastic yielding.

Corrigendum to “Patterns of mineral transformations in clay gouge, with examples from low-angle normal fault rocks in the western USA” [Journal of Structural Geology 43 (2012) 2–32]

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Samuel H. Haines, Ben A. van der Pluijm