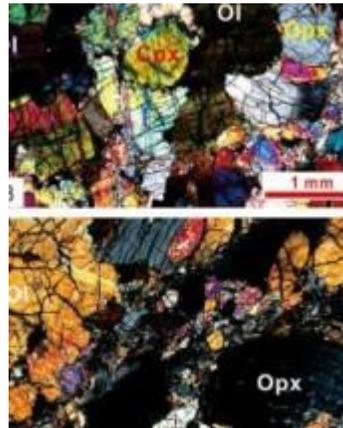


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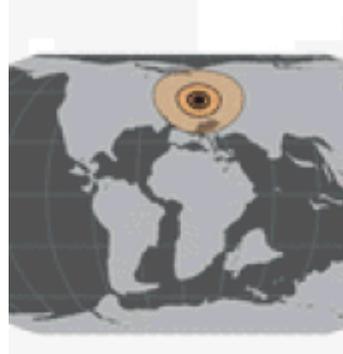


### **Fabrics and water contents of peridotites in the Neotethyan Luobusa ophiolite, southern Tibet: implications for mantle recycling in supra-subduction zones**

By Meng Yu, Qin Wang and Jingsui Yang

The preservation of ultra-high-pressure and super-reducing phases in the Neotethyan Luobusa ophiolite in Tibet suggests their deep origin near the mantle transition zone. Dunite and harzburgite core samples from the Luobusa Scientific Drilling Project show supra-subduction zone geochemical signatures and equilibration temperatures of c. 950-1080° C...[read more](#)

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### Evaluating the influence of meteorite impact events on global potassium feldspar availability to the atmosphere since 600 Ma

By B.C. Coldwell and M.J. Pankhurst.

Potassium feldspar present in global mineral aerosol (<5%) plays a disproportionate role in modulating the microphysics of mixed-phase cloud. Via exceptional ice nucleation properties, it is capable of changing cloud properties and behaviour. Here we identify times of substantial and abrupt change in the global availability of potassium feldspar since 600 Ma. Normally, weathering and vegetation cover contribute to low availability...[read more](#)



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### The Geochemistry of oil in Cornish Granites

By Mas'ud Baba, John Parnell and Stephen Bowden

Oil residues in Variscan granites in Cornwall, SW England, preserve biomarker data which indicate an origin from marine source rocks. The biomarkers also indicate a thermal maturity that excludes an origin from the Devonian-Carboniferous rocks intruded by the granites, but is similar to that of Jurassic-sourced oil...[read more](#)



### **Determining constraints imposed by salt fabrics on the morphology of solution-mined energy storage cavities, through dissolution experiments using brine and seawater in halite**

By L.P. Field, A.E. Milodowski, D. Evans, B. Palumbo-Roe, M.R. Hall, A.L. Marriott, T. Barlow and A. Devez



Large-scale compressed air energy storage facilities offer one solution to the UK's energy demands, using solution-mined caverns in salt lithologies. For optimum gas storage efficiency, cavern geometry should ideally be smooth: spherical to cylindrical with a circular cross-section. However, such caverns are often irregular with marked asymmetry or ellipticity, and although..[read more](#)

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### **Geochemical zonality coefficients in the primary halo of Tavreh mercury prospect, northwestern Iran: implications for exploration of listwaenitic type mercury deposits**

By Ali Imamalipour, Mahdieh Karimlou and Behzad Hajalilo

The Tavreh mercury prospect is located in the NW of Iran. This prospect is a listwaenite alteration and mineralization system which is controlled by structural agents and is restricted to shear zones. In this study, the primary

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geochemical halo was investigated to estimate the level of erosion of mineralization based on...[read more](#)



### The 'Black Band': local expression of a global event

By Malcolm B. Hart

The organic-rich, black mudstones that were initially described as the Black Band in Lincolnshire, Humberside and Yorkshire are known to be a local representation of the Cenomanian-Turonian Boundary Event (CTBE). This world-wide event is known as Oceanic Anoxic Event II (OAEII) and it marks a distinctive extinction event within the Cretaceous biota. Since some of the original work on the benthic foraminifera that are found in both the Black Band and coeval sedimentary rocks, there...[read more](#)

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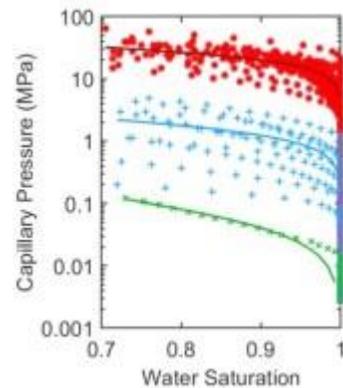
### Site selection of small round holes in crinoid pluricolumnals, Trearne Quarry SSSI (Mississippian, Lower Carboniferous), north Ayrshire, UK.

By Stephen K. Donovan and Gary Hoare

Small round holes, *Oichnus* Bromley, are a locally common feature of crinoid pluricolumnals in the Mississippian of the British Isles. Numerous examples have been found from mudrocks in the Brigantian (Mississippian) Blackhall Limestone, Lower Limestone Formation, at Trearne Quarry, near Beith, north Ayrshire, all assigned to *Oichnus simplex* Bromley. These trace

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fossils are typically associated with growth deformities of the pluricolumnals...[read more](#)

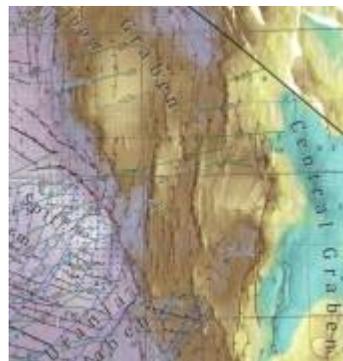


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### Multiphase flow and unerpressured shale at the Bruce nuclear site, Ontario, Canada

By Michael R. Plampin and C.E. Neuzil

Hydraulic testing has revealed dramatic underpressures in Paleozoic shales and carbonates at the Bruce nuclear site in Ontario. Although evidence from both laboratory and field studies suggests that a small amount of gas-phase methane could be present in the shale, previous studies examining causal linkages between the gas phase and the underpressure have been inconclusive. To better elucidate processes in such a system, we used a highly simplified 1D representation of the site to tests....[read more](#)



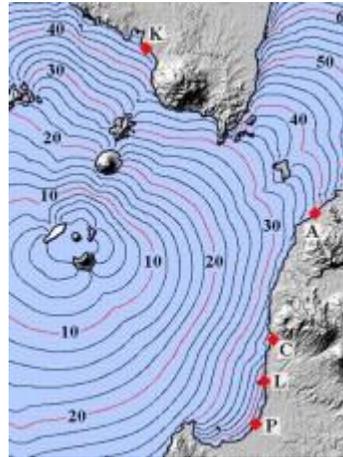
### Structural development of the northern Dutch offshore: Paleozoic to present

By M.M. ter Borgh, B. Jaarsma and E.A Rosenthal

We used new high-quality 2D and 3D seismic data covering the northern Dutch offshore to develop a structural framework for Paleozoic-recent times. Early Carboniferous extension was accommodated predominantly along WNW-ESE-trending faults, and was characterized by an alternation of highs and lows; in the northern Dutch offshore, the principal high coincides

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with the present-day Elbow Spit Platform. An Early Carboniferous low, the North Elbow Basin, is present north of this high...[read more](#)



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### **Tsunami hazard related to a flank collapse of Anak Krakatau Volcano, Sunda Strait, Indonesia (Originally published in 2012)**

By T. Giachetti, R. Paris, K. Kelfoun and B. Ontowirjo

Numerical modelling of a rapid, partial destabilization of Anak Krakatau Volcano (Indonesia) was performed in order to investigate the tsunami triggered by this event. Anak Krakatau, which is largely built on the steep NE wall of the 1883 Krakatau eruption caldera, is active on its SW side (towards the 1883 caldera), which makes the edifice quite unstable. A hypothetical 0.280 km<sup>3</sup> flank collapse directed southwestwards would trigger an initial wave 43 m in height that would reach the islands of Sertung, Panjang and Rakata in less than 1 min, with amplitudes from 15 to 30 m...[read more](#)

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