

die Zeit davor kalibriert wurde und umgekehrt. Dies weist darauf hin, dass Änderungen der meteorologischen Bedingungen alleine die Veränderung nicht erklären. Vielmehr ist es nötig, Speicher- und Austauschparameter anzupassen, um die beobachtete Veränderung nachbilden zu können. Interessanterweise ist der Austausch zu Zeiten mit verändertem Abflussverhalten höher, d.h., mehr Wasser fließt in das benachbarte Schmelzbachsystem. Dies ist im Einklang mit einem Markierungsversuch aus dem Jahre 2008, wo gezeigt werden konnte, dass bereits bei recht niedrigen Schüttungen der Übertritt in das andere System stattgefunden hatte. Des Weiteren ist eine Erhöhung des Speichers bei Kalibrierung auf den Zeitraum des gedämpften Verhaltens erforderlich. Dies ist einerseits verständlich, um das langsamere Auslaufen abbilden zu können, andererseits aber auch in Einklang mit der Vorstellung, dass hochdurchlässige Fließwege durch das Starkniederschlagsereignis blockiert worden sind und somit Wasser länger zurückgehalten werden kann. Die Rückkehr zum ursprünglichen Verhalten der Hammerbachquelle seit Sommer 2009 könnte durch die Ausräumung dieser blockierten Abschnitte bedingt durch Starkregenereignisse erklärt werden.

### **Tectonic coupling of the eastern Southern Alps and northwestern Dinarides with the Adriatic microplate**

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In order to assess the tectonic relationships between eastern sectors of Southern Alps and north-western Dinarides of the Friuli orocline with the Adriatic foreland in the south, the structural relations have been studied using published seismic lines, subsidence analysis of wells and structural analysis of the Istrian platform. The northern margin of Adria shows a clear segmentation between uplifted stable blocks (Monti Euganei, Istria) of the foreland, which are attached to and are over-thrusted by Southern Alps and Dinarides, and the Venetian platform and deformed Croatian coast. The new data indicate that there is no convincing evidence for polarity reversal of subduction during collision of Alps as recently postulated. The main stage of back-thrusting of Southalpine units towards Adria is between Eocene and Early Oligocene, and the corresponding flexure of the foreland is seemingly shifted towards west. Only minor record of Late Miocene subsidence exists close to the NE-trending margin of Dinarides along the Friuli orocline. The main stage of subsidence within Adria is related to the Pliocene-Pleistocene flexure of Adria by overriding Apennines, and north-eastward migration of the peripheral bulge. Structural analysis of Istria demonstrates the main phase of deformation during Eocene, subsequent peneplanation and only minor further deformation within E-W and NE-SW directed stress fields.

### **Gold in Austria: Recent exploration and preliminary results**

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Selected precious metal occurrences in Austria are currently explored by Noricum Gold Ltd., a London-based exploration company.

The main focus is on the Rotgülden area (Muhr, Salzburg), which is situated in the eastern part of the Tauern window. The most important mineralisations are massive sulphide ore bodies hosted within Jurassic metasediments. In 2011, an extensive pick sampling campaign and 1,300 m of core drilling were carried out. Drilling close to the former arsenic mine intersected auriferous mineralisation. The best intersection was 3.1 metres at 11.69 g/t gold. Several mineralisation types were found at the Altenberg Valley, 3 km SE of Rotgülden, including native gold in carbonate-hosted talc veins. Pick samples from this location yielded up to 86.4 g/t gold and up to 1,011 g/t silver.

Additionally, surface and downhole geophysics (electromagnetic and magnetic surveys), and helicopter-borne VTEM and magnetic surveys, were carried out during 2011-2012 and served as a valuable guide to ore. Further exploration targets include Au-As-quartz veins at Kliening (Bad St. Leonhard, Carinthia); gold mineralisation at Goldeck (Spittal/Drau, Carinthia), gold bearing copper veins at Flatschach (Knittelfeld, Styria) and Tauern gold veins at Goldzeche (Carinthia).