

## Evaporite Diapirism in Albania and its Influence in the Thrusting Process

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The Upper Triassic evaporites have a wide extension in the orogenic zones of the continental margin (throughout the Albanide-Helenide-Dinaride tectonic assembly), and therefore across the Adriatic platform. They constitute the substratum of all the above tectonic zones, playing a significant role both in the structural model and in aiding the thrusting process.

Generally, these evaporites consist of intercalations of anhydrite, gypsum, chlorites, dolomites, limestones, multicoloured clays etc. Occasionally volcanic matter, e.g. bipiramidal quartz crystals are encountered. The age of the evaporites is Upper Triassic, and is verified by palynological determination with the presence of species such as: *Camerosporites*, *Patinosporites*, *Vericosporites*, *Ovalipolis*, *Zonalisporites* etc.

In Albania, the evaporite diapirs may be encountered in three tectonic settings:

1. Evaporite diapirs that have erupted across or via regional fault planes associated with a marked overthrust westwards and which border the different tectonic subzones of the Ionian zone.

a) In the western front of the Internal subzone (Berati belt) a regional overthrusting fault of 20-30 km magnitude can be traced. This overthrust occurs because of the presence of a large diapir sheet which outcrops in depressional sectors such as Dumrea, Zavrana, etc. There are sufficient data (mainly seismic) showing that some carbonate structures of western units occur beneath this overthrusting tectonic structure.

b) In the western front of the external subzone (Çika zone) a regional overthrusting fault exists, which deviates northeastward in its northern part. The orogen overthrusts through this fault and the diapiric body to the Apulian Platform 50-100 km and in this way hides a transitive (or platform-orogenic) zone of interest for exploration.

c) The Kruja tectonic zone also has another thrust fault in its western front covering part of the Southern Adriatic basin. It cuts diagonally the structural lines and is also associated with evaporite diapirism.

2. Evaporite diapirs which have erupted via local faults of the individual structures of the middle Ionian subzone, such as Delvina's, Bashaj's etc. The thrusting magnitude of this diapir sheet is of 8-10 km allowing masking of new structural units.

3. Evaporite diapirs which have erupted nearly vertically in the centre of the carbonate anticline structures, such as Navarica's, Janicati's, Kardhiqi's etc. These diapirs generally have a cupola form.

In the internal zones the evaporites appear in tectonic windows of cupola shape (e.g. Korabi zone, Albania and Radek, Macedonia). In this case they are in contact with the Kruja Oligocene flysch and Upper Cenomanian rudist carbonate. This led to the suggestion that the Korabi evaporites have to belong to the Kruja zone, which shows a global allochthony of the internal zones and subduction of the external ones.

