

**O16-8****TECTONIC RELATIONSHIP BETWEEN THE KRUJA AND THE IONIAN ZONES OF THE ALBANIAN THRUST BELT****ENGJELL PRENJASI<sup>1</sup>, VILSON SILO<sup>2</sup>, IRAKLI PRIFTI<sup>1</sup> and MAKSIM SHULI<sup>1</sup>**<sup>1</sup>OIL AND GAS Institute, Fier, Albania<sup>2</sup>ALBSEIS, Fier, Albania

The Kruja zone and the Ionian one are integral parts of the Albanian Thrust Belt, which lie directly in the northern continuation of the Western Hellenic Nappes up to their interruption against overthrust front.

Numerous detailed geological surveys, seismic surveys and exploratory wells, carried out along the area between the two above-mentioned tectonic zones have provided an invaluable information on their facial, structural and tectonic features.

Both sides, along the contact between the Kruja zone and the Ionian one consist of flysch and flyschoid deposits of the Oligocene age, in southern part of the Albanides Thrust Belt. Farther north the molasses deposits of the Middle and Upper Miocene cover transgressively the flysch and flyschoid deposits. Nevertheless, existing seismic data and the dry exploratory wells ones offer the possibility of interpreting the tectonic relationships between the two zones in question, under the molasses cover, in this part of the Albanides.

Lithological features of the Lower Oligocene flysch deposits of the Kruja and the Ionian zones are very similar to each other. So, flysch of this age consists of intercalations of sandstone, siltstone, clays, as well as puddings and limestone olistoliths of the Upper Cretaceous-Eocene age. While the Middle and Upper Oligocene flysch deposits of the Kruja zone different from their homologues in the Ionian zone. Massive sandstone, conglomerates and puddings dominate the flysch section of the Kruja zone. Whereas a more fine material as foraminifers limestone, marly clays and clays characterise the flysch section of this age in the Ionian zone. (4).

Regarding the facial nature, in the carbonate deposits of the Upper Cretaceous age, which outcrop in both tectonic zones in question, there are observed some interesting phenomena. So these deposits consist chiefly of dolomite limestone, dolomites and bituminous dolomite shales in the eroded carbonate anticlines of the Kruja zone, as Dajti, Tomorri, etc. (3,4). Whereas in the carbonatic deposits of the same age, in the Ionian zone is not encountered any dolomite layer. On the other hand, carbonate deposits of the Cretaceous-Eocene section in Leskoviku anticline located in the Western edge of the Kruja zone (5) are quite similar to their counterparts in the Ionian zone. On other words the anticline of Leskoviku represent a classical of quick gradual lithological changes of the carbonate deposits between the Kruja and the Ionian zones.

The structural and tectonic features of the anticline structures of the Kruja and the Ionian zones are very similar to each other. So, in both zones in question, prevail folds of the western asymmetry, associated frequently with longitudinal reserve faults along the western flanks of the most eroded anticline structures. Whereas faults of backthrust type are depicted very rarely. (1) and the Ionian zones. Usually, there are two almost parallel reserve faults, which die and replace each other along their extension through the Oligocene flysch deposits at surface. In addition, following the Top Eocene limestone, towards the depth is detected a normal tectonic transition from the eastern flank of the Maraku anticline (Ionian zone) to a big syncline of the Kruja zone. Also normal is the transition from the western flank of Leskoviku anticline (Kruja zone) to its neighbouring syncline in the Ionian zone (5). Both these normal structural transitions are depicted owing to very good records of the top Eocene limestone by seismic survey. In addition normal must be the structural transition, in the West of the anticline structures of Rova and Papri, located along the western edge of the Kruja zone. In these examples both anticlines consist of deposits of the Middle Oligocene at surface. While longitudinal reserve faults complicated the flysch deposits along their western flanks must remain suspended in the flysch deposits of the Lower Oligocene age, in depth.

## Conclusions

1. considering the following facts:

- \* facial similarity and gradual transitions of flysch and carbonate deposits zone and the Ionian one.
- \* structural and tectonic similarity between the anticline structures of both tectonic zones in question
- \* existence of sectors with normal tectonic transition, from the Kruja zone to the Ionian zones one, as well as of the sectors tectonic contact between them.

It is clear that the transition between the Kruja (Gavrovo) zone and the Ionian one is essentially gradual. Almost the same conclusion present a study on the structural and tectonic relationships between these two zones in Greece, where they are not separated to each other, in the background of the western Hellenic Nappes (2).

2. the anticlines, covered successively with a considerable flysch thickness, as Paprri and Rova deserve further attention as potential oil prospects.

## References

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