

O17-3**THE DETERMINATION OF SEDIMENTOLOGICAL ENVIRONMENT AND OIL-BEARING EVALUATION THROUGH LOGGING METHODS IN PATOS MARINZA REGION****ARQILE GJINI** and **MIHAL GJOKA**

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The study region lies in the southern part of Periadriatic depression.

The purpose of this paper is the determination of sedimentological environments based especially on geological survies, regional seismic lines, correlation of well data and interpretation of log measurements.

After the tectonic phase of Burdigilian and creation of carbonate structures, Orogen outcrops undergone an intensive erosion.

In the paleorelief of the transgressive surface are distinguished some erosional uplifts and troughs. These forms have played an important role in deposits creation, and have determined the sedimentological environment and their distribution. Among them we can mention Patos, Marinza, Kallm, Kolonja bays and in the more eastern part we evidence Kuman-Jagodina uplift. In the central part there also is the erosional uplift of Zharreza with Crete-Paleocene carbonate deposits, which have had a determinous role in the migration and trapping of oil-bearing sandstones.

The above bays are almost set in succession and characteristic is increasing of the new strata toward the northwest dip.

Changing of structural plan and the dip orogene toward the northwest, as the result of the tectonic Messinian Phase, made the region be invaded by the sea, which gradually dashed, covering the Patos-Verbas structure. As the result, the sedimentological environments are mainly those of the slopes, which are vertically evidenced by the seismic data and furthermore detailed by the wells data.

The transgressive surface is obviously evidenced by a correlative seismic horizon, that is associated upper by some parallel reflections and is correlated with a stratified environment.

In the recent deposits and especially over the Kuman-Jagodina uplift, a facie with curved configuration of reflections to sigmoid is observed. It is interpreted as a lobe of complex delta formed by a relief dipping.

Environments in detail from down-up are as follows:

- Shelf environment of transgressive series with littoral reef facies and lithothamnic deposits. This facie is represented by Sandstone, typically for regression, which, in the western part changes lithologically to the shelf clay. In the slopes are evidenced turbidity deposits with overpressure gradient.
- The coastal environments is characterized from intercalations of sandstones and clay beds.
- Delta environments includes clay-sandston facies of Kuçova-Poloniva suite that changes to a lagoon environment with gypsum packets, toward the west.

The postpliocene tectonic phase determined the erosion and the rise of a part of the region, whereas, during the Pliocene phase the region plunges again creating Helmesi & Rrogozhina suites.

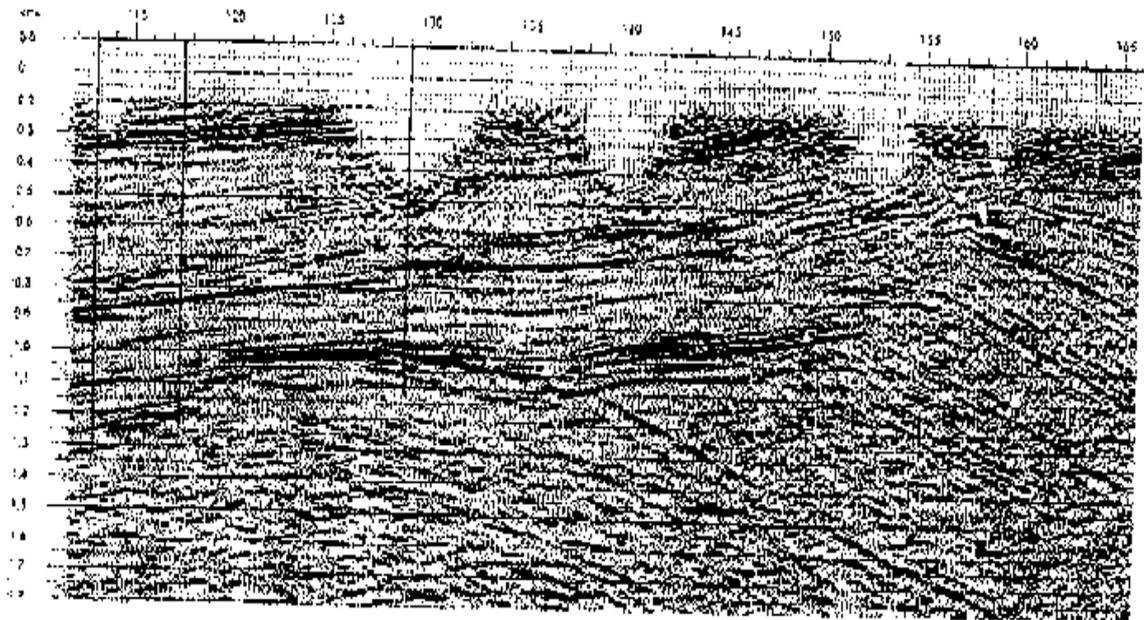


Fig.1 Seismic line in Marinza oilfield

Regional seismic lines and wells data prove in detail the above mentioned environment. such phenomena as lithological changes in the southern part, especially for Driza suite beds related to the lagoon character, are explained, too (fig.1).

The identification of equivalent section is realized by log measurements in Selenica, Cakran, Kreshpan monocline, which is divided from Patos-Kolonja monocline by postpliocene tectonic faults.

This paper is accompanied and illustrated by unconformable surface map, regional seismic lines and correlation of log measurements.