

## **Aalenian-Bajocian Basaltic Volcanism in Kazbegi-Lagodekhi Zone of the Caucasus Main Range by the Example of Kakheti Region over the Alazani river**

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On the territory of Georgia, basaltic, andezibasaltic magmatism is widely presented in series of Caucasian Jurassic age shales in the form of dike effusive facies; it is observed from the other side of Alazani river to the west including the source of the Bzipi river.

It is established that: a) genesis of volcanic complexes is closely related to the geological formation of the region and presents one of the main keys to determine its history; b) copper-polymetal pyrite mineralization is directly genetically connected with basal magmatism and c) immediate product of the magmatic activity such as hypabyssal and extrusive rocks, is a precious stone raw material for manufacture purposes. Therefore, the study of this complex has theoretical and practical importance. The study of volcanic processes began in Georgia a century ago. Academician D.S. Belyankin first (1914) separated diabases of the types of albite (Kolotani river) and labrador (Asa river) in Khevsureti zone of the main ridge. Later, the existence of a diabase dike complex as a diabasic belt in the shale series was confirmed in Kakheti (L. Vardanyants, 1932), Abkhazeti (G. Chkhotua, 1941), Racha (N. Tatrishvili, 1941) and Svaneti (G.Zaridze 1941, 1947), i.e. on the whole strip of the shale series on the southern slopes of the Caucasus.

As a result of later studies, the facts were collected, according to which in the shale series of Caucasus, along with the diabase complex, some basaltic effusive magmatism knots revealed in the upper part of the Bzipi (M. Beridze, 1977, 1983), Khevi-Khevsureti region (G. Chikhradze, 1979) and Kakheti territory at the other side of Alazani river (P. Avalishvili, 1956; M. Pruidze, 1979; K. Akimidze, 2004).

Besides, magma complex is best identified as hypabyssal and effusive facies in Kakheti region. Three stages of magmatism are fixed: Synemurian-Early Pliensbachian; Late Pliensbachian –Early Torsian and Aalenian- Bajocian ones.

In the Kakheti region, Aalenian- Bajocian volcanism is still poorly studied. In summer of 2018 we carried out geological fieldworks in this region. It was an attempt to fill the gap in this field.

The results of our research in the neighborhoods of village Shakriani (Telavi district) performed the existence of Aalenian-Bajocian volcanism, which was fixed by P. Avalishvili in 1956.

The results of our study of the exposure are as follows: volcanogenic-sedimentary stratum with the thickness 120-130 m is observed by 3.7-4 km. It has two lava sheets of pillow texture with 12 and 7 m thickness and tuffite horizon with 2 and 3.5 m thickness. The horizon is isolated with layers and packets of sandstones and clay shales. For the purpose of petrologic research we have got the appropriate stone material, which is currently being processed. The existence of a spilitic complex is already established by the microscopic study. The detailed analysis of the complex will be discussed in detail in the report.