

Introducing Ordovician plutonism as a result of Caledonian orogeny from North East of Iran

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Abstract: Gabbroic intrusions are located about 40 Km southeast of Fariman in Central Iran zone along the Fariman- Torbatjam road that could be seen at the end of Bardoo river and in Chahak village. Previous studies have emphasis on the age and genesis relationship between granites and gabbroic rocks. So in order to investigate this matter, granites and gabbroes dated by using U-Pb method in Oslo University. Granites show the age of 548.3 Ma that is concurrent with the formation of schists during high temperature metamorphism in Fariman area. Dating of gabbroic rocks suggest an age of 471.14 ± 0.85 mainly Early Paleozoic age that is younger than magmatism formed granites. Introducing Ordovician plutonism in this area is very important for reconstruction of Caledonian event. It seems that the formation of Gabbroic rocks is as a result of a short orogeny event due to opening of paleotethys during ordovician and Silurian.

Keywords: *Sibak; Fariman; Gabbro; Early Paleozoic; Caledonian*

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