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Crustal evolution is currently governed by plate tectonics and it has been shown that between the Archean and the Phanerozoic major changes in subduction styles occurred. Among others, the chemistry of different plutonic rocks through time and the understanding of their petrogeneses have helped to define different stages in the evolution of plate tectonics. An important change around 2.7 Ga led to the formation of magmas within a metasomatized mantle: the sanukitoids. This diachronous event is interpreted as the result of the evolution from a shallow to a steep subduction style. Similar rocks are generated in the modern Earth, for example the Caledonian (Palaeozoic) high Ba-Sr plutons in northern Scotland [1].

In this contribution, we aim to study this Caledonian sanukitoid-like suite and test the reliability of several isotopic systems within the abundant accessory minerals. Whole rock chemistry (including radiogenic and stable isotopes) is well constrained. We now present a multi-isotope study of three accessory minerals (titanite, zircon and apatite). New Sm-Nd in-situ isotope results in titanite and apatite and Hf in zircon results are discussed in the light of oxygen isotopes previously published on the same samples [2]. These data are then compared to previous WR data obtained on the same samples [3], [4].