

## **URANIUM AND THORIUM SERIES MEMBERS DISTRIBUTION IN QUATERNARY LIMESTONES OF THE BODOQUENA RIDGE, MATO GROSSO DO SUL, BRAZIL.**

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The Bodoquena Ridge is an north-south elongated plateau located at the southeastern border of the Pantanal Basin, in Central Brazil. It is composed mainly by neoproterozoic carbonatic rocks. Due to the of these rocks, the Bodoquena Ridge draining rivers have clear and bicarbonated waters that favor the formation of limestone deposits, not always lithified, with different aspects and genesis. These deposits receive the general classification of tufas. In order to investigate their mobilization in a region where carbonate deposits are being continuously dissolved and re-precipitated, activities of gamma emitting members of the uranium ( $^{238}\text{U}$ ) and thorium ( $^{232}\text{Th}$ ) were measured in quaternary tufas deposited at the drainage of the Bodoquena Ridge. The obtained results show that these deposits are characterized by very low concentrations of uranium and thorium. The ( $^{238}\text{U}$ ) and ( $^{232}\text{Th}$ ) series are in disequilibrium and  $^{210}\text{Pb}$  is in excess, in relation to the  $^{226}\text{Ra}$  supported activity, in most of these deposits.