

Prospecting of potential meteorite impact structures in Gabon

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The circular forms that were observed in Gabon according to the works of Reimold et al. (2001) and Koebrerl (1994), suggest that these structures could be derived from meteorite impacts.

The structures of Bélinga and those present on the Batéké's trays are both about 7 km. They are located north and southeast of Gabon. The first structure is based on lands from meso to neoproterozoic age. These lands are mainly volcano-sedimentary and ferriferous of the Belinga group based on a plutonic pedestal and located on the western part of an anticline. The structure reveals outcrops of porphyroid monzogranites, syenites, alkaline granites surrounded by mafic rocks, schists, conglomerates, paragneiss garnet and/or clinopyroxene. These granites could be useful in the search for shock indices. In addition, golden indices dot the structure. The area where the structure rests shows relative concentrations of Total Radiometry ($0 < RT < 4.8$) more or less low, and an intensity of the electromagnetic energy high at this level. For now we can estimate the age of the structure from post-neoproterozoic.

The second structure is housed in the sandstone formations of the Batéké's trays which are Quaternary. It is located on a vast expanse of savannah whose continuity extends over more than 1000 km counting the RDC (border country).

We can visualize these structure images combining shaded relief and satellite imagery (Figs. 1, 2). In addition, we have observed other circular structures in countries that have attracted our attention : P1 (14°14'59"E, 0°32'54"S), P2(14°13'46"E, 0°34'09"S), P3(13°42'54"E, 0°40'43"S), DB (12°41'23.27"E, 0°16'31.84"S), MC (01°33'25,1"S, 14°15'49,9"E).

The preliminary studies of these structures using satellite images enabled us not only to identify outcrops allowing rock samples but also to evaluate the different means of access as well as the topographical and geological context of these outcrops.

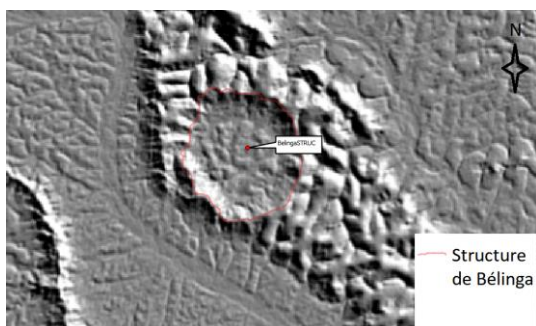


Fig. 1 : Belinga structure

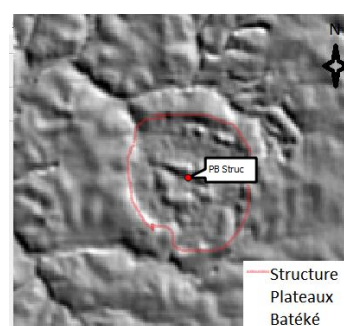


Fig. 2 : Bateke's trays structure

Keywords : Crater impact, Gabon, Belinga, Batéké's trays

References

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