A general tectonic framework in the Sangmelima Greenstone Belt in southern Cameroon (NW Congo Craton): Mining exploration implications

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The Sangmelima Greenstone Belt in southern Cameroon (NW Congo Craton) displays a D_2 regional fabrics that consist of an S_2 sub-vertical foliation, L_2 stretching lineation and F_2 folds resulting from a dextral transpressive regime. D_3 late granulitic deformation synchronous with a migmatisation episode is characterized by F_3 post-folds with oblique axes, sometimes associated with localized C_3 shear zones showing inverse movements alongside an anatexy phenomenon. The plutons were emplaced during the regional deformation. The regional structure, combined with the existence of contemporary intrusive and extrusive rocks in the surface today, buttress a vertical tectonic model with burial of supra-crustal rocks in soft underlying material during the ENE-WSW to EW horizontal crustal shortening. The important magmatic intake within the craton allows a warming and a general softening of the lithosphere. Finally, CN has been affected by the Eburnean orogeny (D_4), characterized by the development of the N40-60E transverse step with a generally sinusoidal component, to which some dextral conjugate bands are associated.

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