

LATE TRANSAMAZONIAN TRANSPRESSIONAL STRUCTURES IN SOUTHERN FRENCH GUIANA : THE WAKI-INIPI FAULT SYSTEM

LAHONDERE D.(1), DELOR C.(1), ROSSI P.(1), THEVENIAUT H.(1)(1) BRGM, BP6009, 45060 Orléans, France

In southern French Guiana, the Guiana shield is structurally characterized by large E-W to WNW-ESE strike-slip faults. The Awara Soula-Camopi fault separates two distinct domains. The southern part is constituted by magmatic and sedimentary Rhyacian rocks issued pro parte from a recycled Archean basement while the northern domain is characterized by an important mantle-derived magmatism at 2.1 Ga. Structural data obtained within the framework of the French Guiana BRGM's geological mapping program enable to precise how these faults behaved during the Transamazonian orogeny. South of 03°30'N, field surveys led to the observation of E-W to WNW-ESE (Waki-Tampok) and N-S to NNW-SSE (Inipi) major shear-zones. Lateral extension of these faults has been deduced from the high-resolution geophysical maps obtained from the 1996 airborne survey. Within these shear-zones, near vertical mylonitic to ultramylonitic foliations were developed. Observed kinematic indicators (C/S structures, porphyroclasts dissymetry, asymmetric boudinage, etc.) are consistent with sinistral movements on the E-W to WNW-ESE directions and dextral movements on the N-S to NNW-SSE directions. Multiscale observations show that these shear-zones correspond to conjugate structures associated with a NE-SW crustal shortening. The development of these shear-zones is contemporaneous with the emplacement of voluminous 2.1 Ga granitic intrusions. This tardi-orogenic transpressive structuration also characterizes the greenstone belt of northern French Guiana.