

TECTONICS OF THE SOUTHERN PROVINCIA SERRANA (MATO GROSSO, BRAZIL)

LEONARDO DISPERATI(1), RICCARDO SALVINI(1), MICHELE BOCCI(2) & ROSARIO NAPOLI(3)(1) Dipartimento di Scienze della Terra, Università di Siena, Siena, Italia;(2) Geologo, Siena, Italia;(3) Istituto Sperimentale per lo Studio e la Difesa del Suolo, Firenze, Italia;

This work is realised in the framework of the EU funded project "Geo-environmental dynamics of Pantanal-Chaco: multitemporal study and previsional modelling". The aim of the study is to define the tectonic setting of the southern Provincia Serrana, which is roughly located between Caceres and Cuiaba (Mato Grosso - Brasile). In this region the formations belonging to the Gruppo Cuiabà e Gruppo Alto Paraguay crop out. From the bottom up the sequence is made of para-conglomerates of glacial transport followed by marine deposits. These last are dolomites and limestone with cherts. At the top of the stratigraphic succession sandstones starting and finishing with stratified phyllites and silts occur. The whole out cropping sequence is referred to the late Pre-Cambrian. The structural setting was first analysed by means of aerial photographs and Landsat TM5 satellite images. Then, a fieldwork carried out in July-August 1999, allowed to check the preliminary photo-geologic interpretation and to collect structural and kinematics data. The main structural features of the region are near-vertical kilometric faults about NE-SW trending. Large-scale asymmetric and reverse folds are connected to such faults system. The fold axes are near parallel to the faults direction. Small-scale structures (S-C structures and folds in cataclasites, tension gashes and slickensides) were also recognised. Small and large-scale features are in agreement with a left-lateral transpressive kinematics. These results suggest that the Provincia Serrana represents part of a large intra-cratonic shear zone deformed during the final phases of the Brazilian Cycle.