

THE BEND IN THE FUNDÃO-CAMBOTAS THRUST SYSTEM

1GOMES, C. J. S.; 2PEREIRA, M.; BRAGA, S. M., PESSOA, M. V.- 1,2Federal University at Ouro Preto, Brazil, 2research assistants.

The Fundão-Cambotas Thrust System constitutes a curved west-verging fold-thrust belt of the neoproterozoic Brasiliano cycle in the eastern part of the Quadrilátero Ferrífero, which is situated in the southeastern portion of the São Francisco Craton. The north domain of the Fundão-Cambotas Thrust System has been simulated in sandboxes to investigate the kinematics of the regional structure, which is described in the geologic literature as an orocline. Three models were set up. In model I two obstacles in the foreland and one moving wall, or indenter, produced the fold-thrust belt, and in the models II and III two indentors simulated an additional wrench fault. In experiment III a ductile layer (silicone) was introduced under the brittle crust (dry sand). While model I produced a low curvature drag in map view, both models II and III formed drags and, simultaneously, displacements along strike-slip faults as was expected from the geologic maps. These models, specially the experiment II, were characterized additionally by a pure-shear deformation component along the wrench fault. This was a consequence of the lateral collision of the deformation front with the obstacle. In the field the lateral collision is evidenced by the strong confinement of the northeast domain of the preexistent Gandarela Syncline, which is located at the south of the Cambotas Fault. The experiments referred to above suggest that the curvature in the Fundão-Cambotas Thrust System result of the combined effect of the wrench faults and the presence of obstacles in the foreland.