

Metallogenetic potential for platinum group elements in the Brazilian Amazon Region

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The Archeoproterozoic terrane of Brazilian Amazon Craton contain a variety of geological and metallogenetic environments, some of them, favourable for deposits of platinum group elements – PGE. In this context, the layered intrusions are the most attractive exploration targets. Such layered intrusions include the Cateté Intrusive Suite and the Luanga Complex in the State of Pará; the Bacuri Complex in the State of Amapá; the Tapuruquara Intrusive Suite in the states of Amazonas and Roraima; and the the Cacoal Intrusive Suite in the State of Rondônia. They are mafic-ultramafic differentiated and strataform bodies that extend for kilometres and are correlated to other complexes, such as the Bushveld Complex (Republic of South Africa) and the Stillwater Complex (United States of America), which are well known to contain PGE deposits. Some of these deposits contain PGE mineralization associated with sulphides, chromitites, and in nuggets similar to the Bacuri, and the Luanga complexes and in the Cateté Intrusive Suite (Serra da Onça and Serra da Puma). This last occurrence is a new discovery of world-wide importance. The lavas and mafic-ultramafic intrusions associated with greenstone belt sequences and transcurrent basins, for example, the Vila Nova Suite and the Grão Pará Group, from which significant values for PGE have been obtained, are the second priority favourable potential for PGE. Finally, there are the Precambrian basic and ultrabasic intrusions of the alaskine type that contain enrichments in Pt and Pd such as the Borrachudo Target in the State of Pará.