

PALEOMAGNETISM OF THE PARÁ DE MINAS MAFIC DIKE SWARM, WEST OF BELO HORIZONTE, MG, BRAZIL

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Preliminary paleomagnetic results from 64 oriented hand samples belonging to 20 unmetamorphosed dikes from west of Belo Horizonte, Minas Gerais (Fig. 1) are presented. The paleomagnetic analysis showed a complex magnetic behavior after AF (alternating field) and thermal treatments, when stable but incoherent directions were disclosed by samples of many dikes. For example, Figure 2 displays results obtained for three specimens from different samples of the same dike. In spite of this, however, two characteristic magnetization directions could be isolated for some of the dikes. Three dikes presented an eastern direction with high negative inclination (Fig. 3) similar to that found for Middle Proterozoic ($^{40}\text{Ar}/^{39}\text{Ar}$ radiometric ages between 1.00 and 1.08 Ga) dikes from the Ilhéus-Olivença and Salvador regions (D'AGRELLA-FILHO et al., 1989, 1990), suggesting that this magmatic intrusive event may have affected several areas of the São Francisco Craton. $^{40}\text{Ar}/^{39}\text{Ar}$ datings of the Pará de Minas dikes are in progress and if their ages prove similar to those of the Ilhéus-Olivença and Salvador areas, this would imply that these portions of the craton did not undergo great relative movements following dike formation, unless their poles of rotation remained very near to the geographic pole. The other characteristic magnetization, presented by 7 dikes, is less consistent and corresponds to a southwestern direction with low inclinations similar to that found for some granulitic rocks of the Jequié Complex in northern São Francisco Craton (Figures 4 and 5). $^{40}\text{Ar}/^{39}\text{Ar}$ age determinations on these granulites are in progress in order to constrain the age of this component of magnetization.

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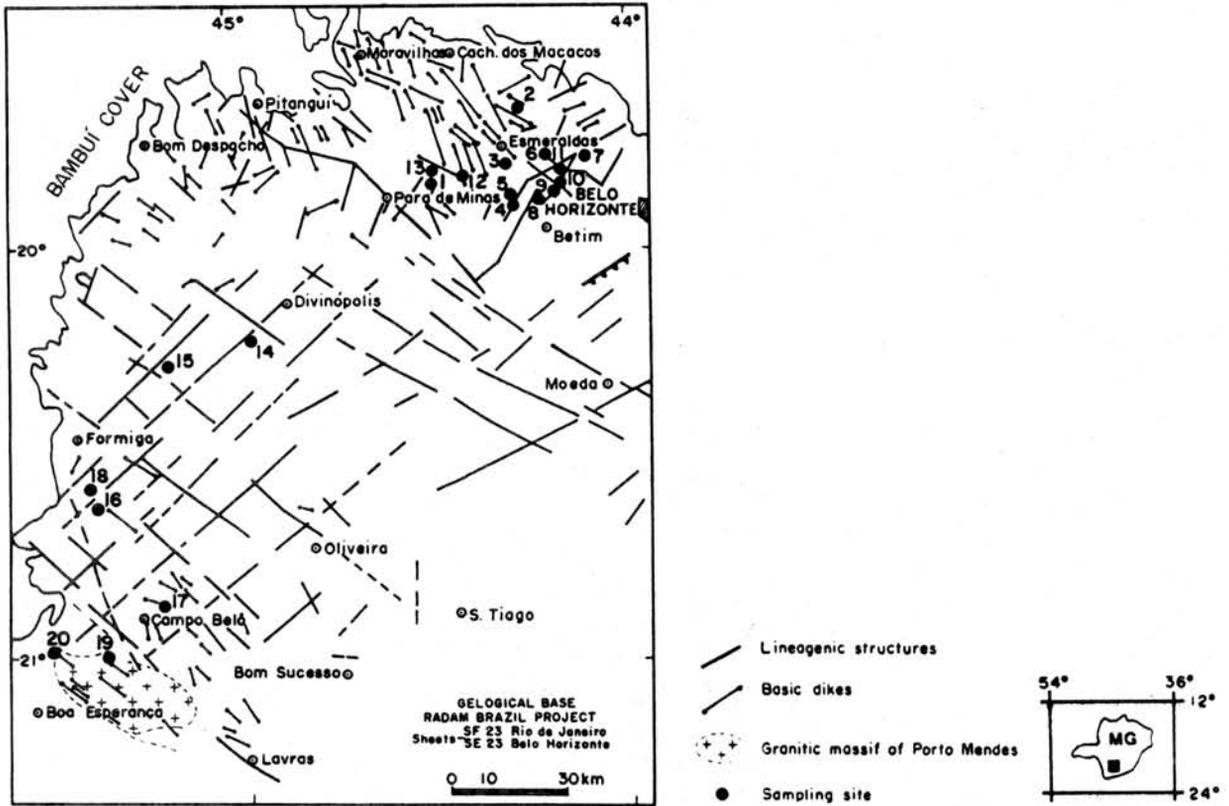


Figure 1 - Sample site localities.

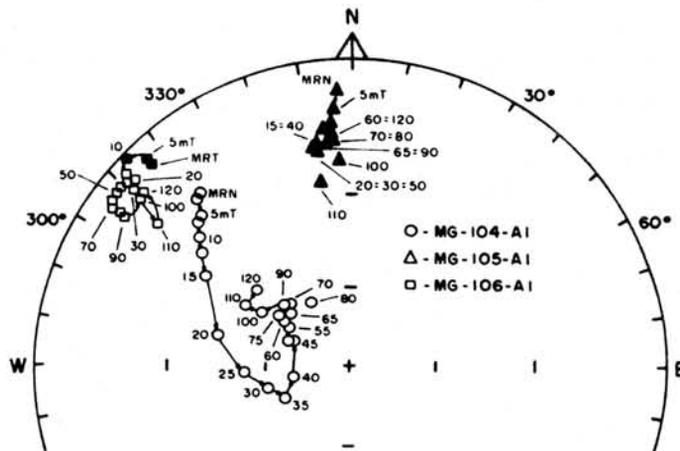


Figure 2 - Magnetic behaviour presented by the samples from a dike near the town of Campo Belo, MG (site 19), after AF treatment. Negative (positive) inclinations are indicated by open (solid) symbols.

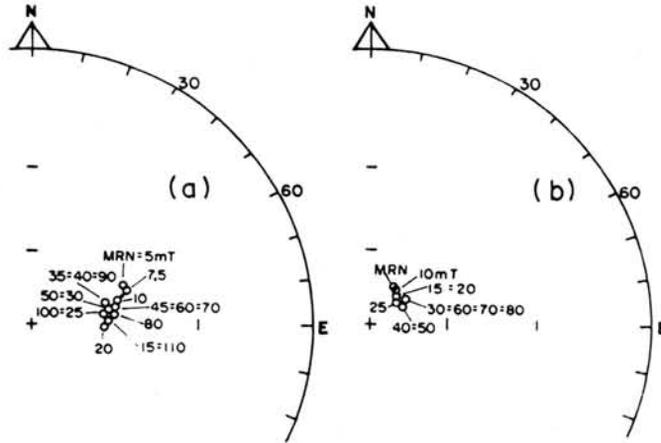


Figure 3 - Magnetic behaviour presented by the samples (a) MG-110-A1 (site 18) and (b) MG-1-D1 (site 1) after AF treatment. Conventions as in Figure 2.

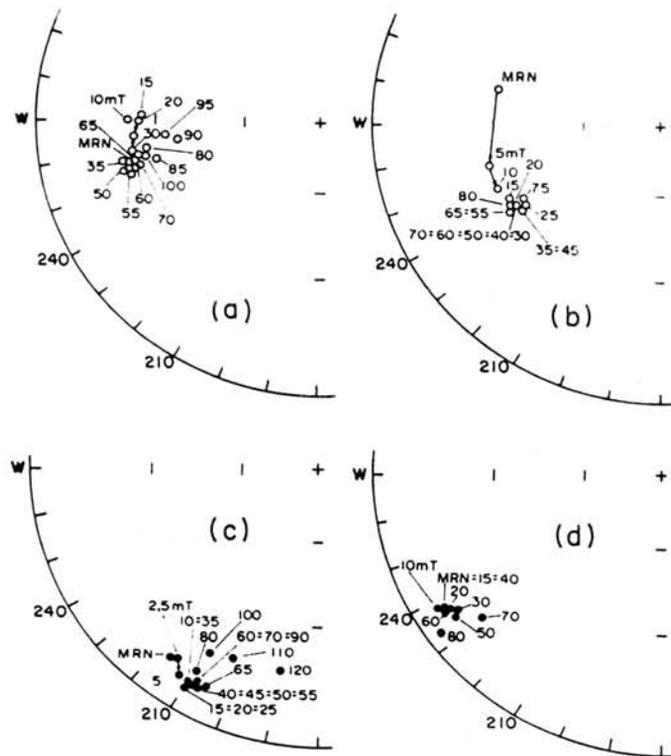


Figure 4 - Magnetic behaviour presented by samples from the Pará de Minas dike swarm: (a) MG-18-D1 (site 3), (b) MG-38-C1 (site 7), (c) MG-109-A1, (site 18) and (d) MG-78-A (site 15) after AF treatment. Conventions as in Figure 2.

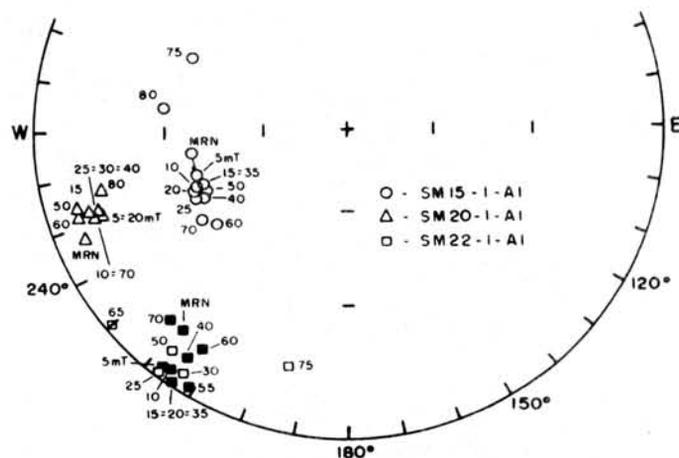


Figure 5 - Magnetic behaviour presented by granulitic samples of the Jequié Complex after AF treatment. The conventions as in Figure 2.

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