supported by metamorphic textures, definitely indicates a metamorphic origin from sediments rich in manganese, magnesia, and iron.

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Meteoric origin of the secondary minerals of the Deccan Trap lavas

FERMOR (1925) made a detailed investigation of the secondary minerals in the basaltic lavas penetrated by borings at Bhusawal, and showed much evidence for a late magmatic origin for them. Although later workers on the Deccan Traps have accepted the view of Fermor, it is

difficult to account for the formation of secondary silica in the basalts, which are not oversaturated with silica.

Similar basalts have been reported from the western portion of the Deccan Trap country, in which various forms of silica are seen as secondary constituents, and during a regional study of the Deccan Traps the author has observed that the secondary minerals are found more abundantly in the weathered zones of the lavas, and this feature has led him to think of the effectiveness of meteoric waters in their formation. Walker (1960) and Nashar and Davies (1960) have shown that secondary minerals may form by the action of meteoric waters, long after the eruption of the lavas. Nashar and Davies considered that the secondary constituents were deposited from cold solutions derived from the basalts during the process of weathering. It is, therefore, suggested that meteoric waters may well have been potent agents in the formation of secondary minerals in the Deccan Traps, though not necessarily to the exclusion of late magmatic fluids.

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Computer programmes for the recalculation of rock and mineral analyses

HEY *et al.* (1966) have described a computer programme which recalculates rock and mineral analyses containing up to 33 elements. The approach of the present writer has been different. With a view to processing large numbers of chemical analyses for statistical or regional studies, the number of elements dealt with has been reduced to 14 (SiO_2, TiO_2, Al_2O_3, Fe_2O_3, FeO, MnO, MgO, CaO, Na_2O, K_2O, H_2O+, P_2O_5, CO_2, S), although corrections for other elements may be simply performed manually before processing, if desired. Whereas the reduction