

REPLY TO CAPITANIO 2005

Mineralogic and bulk rock composition of Italian wollastonite- and melilite-bearing paralava and clinker: Further evidence of their pyrometamorphic nature

LEONE MELLUSO,^{1,*} SANDRO CONTICELLI,^{2,†} MASSIMO D'ANTONIO,¹ NICOLETTA P. MIRCO,³ AND EMILIO SACCANI⁴

¹Dipartimento di Scienze della Terra, Università degli Studi di Napoli Federico II, Via Mezzocannone, 8, I-80134, Napoli, Italy

²Dipartimento di Scienze della Terra, Università degli Studi di Firenze, and Istituto di Geoscienze e Georisorse, Consiglio Nazionale delle Ricerche, Via G. La Pira, 4, I-50121, Firenze, Italy

³Via V. Monti, 1R, I-50124, Firenze, Italy

⁴Dipartimento di Scienze della Terra, Università degli Studi di Ferrara, Corso Ercole I d'Este 32, I-44100, Ferrara, Italy

ABSTRACT

Two small outcrops of wollastonite- and melilite-bearing paralavas, with a pyrometamorphic genesis, have been found along the Apennine chain, in Central Italy, at the localities of Colle Fabbri and Ricetto. Recent papers added new data strengthening the hypothesis that the Ricetto wollastonite- and melilite-bearing rocks were produced by pyrometamorphism of carbonate-rich siliciclastic sedimentary rocks. In addition, these new papers depicted the Ricetto paralavas as having wide mineralogical and compositional variations due to liquid immiscibility and/or carbonate devolatilization, paralleling the trend observed for other paralavas (e.g., Colle Fabbri, Italy; British Columbia, Canada; Wyoming, U.S.A.; etc.). The source of heat for inducing pyrometamorphism was not investigated in the original paper, which was the subject of the comment. Capitanio et al. (2004), on the basis of ¹⁴C age determination and of a mineralogical study, argued convincingly that heat was supplied to the Ricetto rocks by wood-combustion for charcoal production.