

(3) The deuterite mineral sequence in the Enoggera granite, Queensland. By Miss MARJORIE J. WHITEHOUSE. (Communicated by the President.)

The minerals found in veins and vughs in this granite near Brisbane are described. The period of main magmatic consolidation was followed by pegmatite formation and the initiation of cavities in the rock. While the rock was still hot the deuterite period occurred beginning with the kaolinization of the feldspars and the chloritization of the ferromagnesian minerals. Then followed the deposition of chlorite and epidote, the pneumatolytic minerals, some calcite, the zeolites, and, finally, many vughs were completely filled with calcite.

(4) X-Ray data on rhodonite, pyroxmangite, and iron-rhodonite. By Mr. M. PERUTZ. (Communicated by Prof. C. E. TILLEY.)

CORRESPONDENCE.

THE GIRVAN-BALLANTRAE SERPENTINE.

SIR,—In the January issue of the *GEOLOGICAL MAGAZINE*, Mr. Balsillie restates with additional detail his hypothesis that the serpentine of the Girvan-Ballantrae district forms part of an ancient, probably pre-Cambrian, basement unconformably overlain by Arenig volcanics and subordinate sediments. I have already taken account of several points raised by Mr. Balsillie in a note (*GEOLOGICAL MAGAZINE*, December, 1936), furnishing unequivocal evidence in support of Peach and Horne's conclusion that the serpentine is intrusive into Arenig lava and forms, in fact, one of the plutonic members of the Arenig igneous suite. Mr. Balsillie, however, in an addendum to his paper, asks me to explain the high grade of metamorphism and the north-west foliation found in the serpentine and absent from adjacent Arenig lavas. I am entirely unconvinced that any part of the serpentine itself can be described as consisting of highly metamorphosed rocks, although these are admittedly found as associates. In particular hornblende and epidote schists marginal to the northern belt of serpentine have been considered in my December paper (pp. 539–542), and their significance as regards the question at issue between Mr. Balsillie and myself pointed out. As regards the north-west foliation, I have not been able on search to verify its existence. In this case I think Mr. Balsillie is attaching undue importance to something that must be rather difficult to observe. Furthermore, it may be mentioned that localization of dynamic structures in the serpentine is not in itself particularly strong evidence of age-relationship, if one bears in mind the much more resistant nature of the spilite as compared with the altered ultra-basic rock.

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28th January, 1937.