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[Manuscript received 7 December 1981]

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MINERALOGICAL MAGAZINE, DECEMBER 1982, VOL. 46, P. 512

## Variscite from Hensbarrow china clay works, St. Austell, Cornwall

HENSBARROW china clay works is situated in the Hensbarrow granite mass, and is approximately 1 km west of the village of Stenalees in the parish of St. Austell. The pit is traversed by several NNE-SSW trending quartz-tourmaline veins (known as stent by the quarrymen) carrying a little cassiterite and wolframite, and the well known Bunny tin mine is adjacent. Wavellite occurs in these veins as delicate creamy-white fibrous crystallized crusts lining cavities, together with local infillings of turquoise and varlamoffite. Pegmatite lenses and irregular veins also occur, and these are particularly common in the eastern part of the adjoining Gunheath china clay works, where they carry quartz, tourmaline, apatite, microcline, orthoclase, zinnwaldite, gilbertite, and topaz, with small amounts of wolframite, cassiterite, stannite, arsenopyrite, columbite, varlamoffite, opal, and torbernite.

The variscite was found as aggregates of sharp pale green transparent orthorhombic crystals to 3 mm in diameter, with individual crystals being

slightly less than 1 mm in size. It occurred implanted on the top of a large radiating spray of creamy-white wavellite crystals showing transparent terminations in a cavity in quartz, with large sheaves of zinnwaldite mica and fragments of partly kaolinized granite. It was not unfortunately found *in situ*, being in an irregular pegmatite lens in a large boulder of altered granite lying loose in the bottom of the pit. It is possible that the boulder derived from the neighbouring Gunheath pit, as much overburden had recently been bulldozed from there into Hensbarrow pit.

*Acknowledgements.* I would like to thank the Department of Mineralogy, British Museum (Natural History) for identifying the variscite by X-ray diffraction means. Also Mr D. Smith of Perranporth, Cornwall, for bringing the specimen to my attention.

[Revised manuscript received 12 March 1982]

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MINERALOGICAL MAGAZINE, DECEMBER 1982, VOL. 46, PP. 512-13

## The determination of ferrous and ferric iron in rocks and minerals: addendum

IN a contribution earlier in this volume (Hey, 1982) I referred (p. 115) to a discussion of the rate of breakdown of ferric *o*-phenanthroline solution. The relevant section was unfortunately omitted, but is appended here.

*The decay of the ferric o-phenanthroline complex.*  
 In view of the observation that, when a solution containing 2 mg Fe<sup>3+</sup> as *o*-phenanthroline complex was extracted repeatedly with 1% oxine in CHCl<sub>3</sub>, 125 µg Fe<sup>2+</sup> were found in the aqueous