

## NONTRONITE AND FERRUGINOUS OPAL FROM THE PEACE RIVER IRON DEPOSIT IN ALBERTA, CANADA: DISCUSSION

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Opal is listed in mineralogical textbooks (e.g., Fleischer 1975), because it is a useful waste-basket term (like limonite) for a hydrous silicate ( $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ ). Within opal, three varieties, including two of ill-defined structure, have been recognized in X-ray diffraction patterns by Jones & Segnit (1971): opal-A (amorphous), opal-CT (disordered tridymite-cristobalite), and opal-C (ordered low cristobalite). In addition, they also suggested that other varieties may yet be found. With this scheme they have been able to classify several hundred samples by X-ray diffraction patterns. A proposal to give these varieties a species status was rejected by the I.M.A. Commission, principally because of the lack of objective distinguishing criteria. A polytype nomenclature system may be more appropriate.

Opal-CT always has a very dominant broad reflection at about  $4.15\text{\AA}$ , and a fairly strong subsidiary reflection at about  $4.3\text{\AA}$ . The crystal structure has not yet been analyzed thoroughly, because of the substantial degree of disordered stacking.

The pattern of Petruk *et al.* (1977, Table 4) is remarkably complete, with the strongest reflection at  $4.32\text{\AA}$  and the second strongest reflection at  $2.50\text{\AA}$ . It differs from the powder X-ray diffraction data for opal-CT (Mitchell & Tufts 1973), opal-A (Bayliss & Males 1965) and opal-C (Jones & Segnit 1971). Therefore Table 4 of Petruk *et al.* (1977) should be entitled "X-ray diffraction pattern of disordered-tridymite

opal from Australia". If the existence of this variety of opal is confirmed, it could be called opal-T.

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## PLATINUM-GROUP MINERALS FROM ONVERWACHT. II. PLATARSITE, A NEW SULFARSENIDE OF PLATINUM: DISCUSSION

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In the Discussion section of the paper on platarsite (Cabri *et al.* 1977, *Can. Mineral.* 15, 385-388), sentences 5 and 6 should read: "Tarkain & Stumpfl (1975, Fig. 4) plotted 'mineral N' as a member of the  $\text{RhAsS}-\text{IrAsS}-\text{PtAsS}$  sys-

tem. 'Mineral N' has subequal atomic proportions of Pt, Rh and Ir; platarsite has subequal atomic proportions of Pt, Rh and Ru."

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