Pinguite collected from Borborema region of the North-East of Brazil has been taken for study and the results are given hereunder.

Greasy-green to oil-green in colour and massive in habit it has a soft soapy feel. Easily powdered by finger nail it is friable, has a low specific gravity of 1·8 ± variations due to the presence of magnetite specks and altered product-limonite, as patches. Earthy to dull in lustre with a greasy shine, it is fine clayey mass when seen under the microscope. Practically it is opaque though some grains are partly translucent.

Extreme care is exercised to get a pure sample for study by X-rays. The lines are seen somewhat diffused, though they permitted accurate measurements. After the necessary corrections the interplanar spacings are obtained. In Table I the three intense lines are compared with the values obtained for a chlorite and nontronite (variety of chloropal).

TABLE I

Pinguite Borborema	Nontronite (Urban)	Chlorite Simplon Tunnel
15·3	15·4	14·0
4·54	4·56	4·66
1·515	1·518	1·545

Generally classification of the clay minerals is made by the basal reflection. Considering the basal 14 KX of chlorites, obviously Pinguite cannot be classed as a member of the chlorite family. On the other hand, nontronite shows great similarities including the characteristic 15 Å reflection. Thus the pinguite could be classified as a variety of chloropal.

An attempt is made to observe the thermal behaviour of this mineral. Water is lost in stages, and the first 110° has recorded 12·66%, by 600° – 18·24%, and at 1000° the total has gone up to 19·54%. It is possible that the first loss is due to the interlayer water content and later the structure was broken down, similar to nontronite. The water content in Pinguite seems to be variable, and thus detailed thermal studies applying the DTA technique are under progress.

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QUARTZ VEINS IN THE YELLANDLAPAD ROCKS

IN an earlier paper the author[1] has described certain replacement granitic dykes in the migmatites of Yellandlapad. During a further investigation of the same area, the author noticed the occurrence of quartz veins in the country rocks which include granites, quartzo-felspathic gneisses, amphibolites, etc. In their field occurrence these veins present a number of characteristic features. They vary in size from a few inches to those which are tens of feet across. However, along the strike, some of the quartz veins can be followed for considerable distances. It is singularly interesting to note that wherever quartz veins occur, they are perfectly conformable with the foliation of the adjacent rocks. Two types of occurrence of quartz veins are found to be particularly interesting from the point of view of their origin. One is the occurrence of quartz veins in the granitic rocks of Yellandlapad and the other is their occurrence in the amphibolites of Bethampudi. These two types are shown in Figs. 1 and 2.

In the first type, the host rock is a porphyritic grey granite consisting of greyish white felspars (both oligoclase and microcline) white quartz and ferromagnesians (biotite and chlorite with some epidote). The vein is about a few inches in thickness and is identical in appearance to the quartz dispersed in the granite host. The contact between the veins and granite is not sharp but gradational and interlocking. Some of the minerals along the contact (felspars and ferromagnesians) are common both to the vein and granite. A few of the ferromagnesian mineral streaks in the granite having a particular trend continue absolutely undisturbed into the quartz veins. Within the vein itself there are mafic segregations. These streaks and segregations are an inherent part of the granite