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From Dr. F.D. Pooley

Department of Mineral Exploitation

FDP/JT

25th January 1977

Dr. F.R. Rolle,
36 Heather Drive,
Somerset,
New Jersey 08873 U.S.A.

Dear Bob,

Sorry to have been so long in replying to your request about chlorite but we have been side-tracked a little by some other material in the sample which you sent us. The X-ray data which we have taken from the composite sample we have compared with the 228 p and also the 6/30 sample which you sent us last year. We have also included another Vermont sample from Windsor Minerals for comparison labelled 'Cleaner Concentrate'. The variation in the chlorite content can be observed best from an examination of the talc and chlorite peaks occurring in the $24^{\circ} - 27^{\circ} 2\theta$ positions as illustrated by the accompanying figure. If we assume that the talc % is changing very little then the magnitude of the talc peak will also change very little. However large changes in the chlorite content i.e., doubling, will be reflected in large changes in the chlorite peak with respect to the talc peak. If we assume that the 228 p contains 2% chlorite then taking the talc to chlorite peak ratios for the other samples we obtain chlorite contents of approximately 3% for the 6/30 sample, 3 - 4% for the Vermont composite and 4% for the cleaner concentrate sample.

The 'cleaner concentrate' sample is one supplied to J and J Great Britain for consideration for use here. The general conclusion from X-ray data therefore is that the Vermont composite sample contains twice as much chlorite as the 228 p sample. The ratios also agree using the other chlorite peak at $12.5^{\circ} 2\theta$ for ratio purposes against the small talc reflection at $26^{\circ} 2\theta$.

I mentioned that we had been distracted by other material in the Vermont composite sample when we came to perform some confirmatory Edax and microscope work and before reporting the chlorite content this way I would be grateful if you could send me a much larger sample of Vermont composite and also a large sample of 228 p (about 100 grams of each will do). We have found in the V. composite fibres of Antigorite which I would like to confirm using another sample. Also if you could check with Windsor Minerals whether their talc ore source has changed over the past year or so. I will let you have data etc. on our findings when we have looked at another sample.

I will get this in the post now so that you can get material back to me as quickly as possible.

Yours sincerely,