Geol. Bull. Univ. Peshawar, 1984, *Vol.* 17, *pp.* 178—79

NOTE ON TREMOLITE ZONE FROM THE EXTENSION OF SKHAKOT-QILA ULTRAMAFIC COMPLEX IN UTMANKHEL, MOHMAND AGENCY.

Tremolite rock occurs along the northeast and northwest contact of the ultramafic complex, west of Jindai Khwar near Balola in Mohmand Agency. Tremolite is mostly found in association with actinolite, talc and chlorite along shear zones. Pale green to green and fibrous to blady tremolite crystals vary from 3 to 10mm in length. However, a greyish-green variety (about 2mm in length) intermixed with talc and chlorite is not uncommon. The blades are commonly broken, bent, and usually tailed out into finely fibrous bundles of asbestiform tremolite. It has large 2V with an extinction angle varying from 15° to 20°, and α and β refractive indices of 1.60 and 1.61 respectively.

Tremolite mineral from the tremolite rocks was analysed for major oxides by wet chemical methods. These oxides were used for the calculation of mineral formula $(Ca_{1\text{-}68}\ Na_{0\text{-}20})$ $(Mg_{4\text{-}58}\ Mn_{0\text{-}02}\ Fe_{0\text{-}21}\ Al_{0\text{-}30})$ $(Si_{7\text{-}83}\ Al_{0\text{-}16}\ O_{21})$ (OH_2) on the basis of 23 oxygens; water was

not included in the recalculation (Leake, 1978). The mineral was classified as tremolite. This analysis on comparison, has correlation with the tremolite from Feather River ultramafics (Ehrenberg, 1975) and also with tremolite from Ultimo, Italy (Pirani, 1951). Inspite of optical properties and chemical data, the presence of tremolite was also established by examination of X-Ray Diffractometer powder pattern. The powder pattern of charge contained 90% tremolite, the remainder being actinolite, talc, and chlorite. Field relationship of tremolite rock with the ultramafics suggests that it may probably be the product of secondary processes. However, more detailed work is required to ascertain the possible origin of this rock.

REFERENCES

Ehrenberg, S.N., 1975. Feather River ultramafic Body, Northern Sierra Nevada, California. Geol. Soc. America. Bull. 86, 1235—1243.

Leake, B.E., 1978. Nomenclature of Amphiboles. Min. Mag. 42, 533—563.

Pirani, R., 1951. I minerali del gruppo dell' order-11. Actinolite di Mont in val di Rabbi e di celledizzo in val di Peio. Atti (Rend) Accad. Naz Lincei, cl. sci. fis. mat. nat. 8, p. 315.

M. RAFIQ
M. TAHIR SHAH
IRSHAD AHMAD

NCE & Department of Geology,
University of Peshawar,
N.W.F.P., Pakistan.

MAJOR FAULTS AND LINEAMENTS OF THE SURROUNDINGS OF THE PESHAWAR PLAIN.