

STRUCTURAL CONTROL AND GENESIS OF THE FLUORSPAR DEPOSIT NEAR DILBAND AND THE SURROUNDING AREAS

COMMENT :

There is a great deal of contrast between my observations and the structural analyses and interpretations made by Durrani (1980). I think that in the light of regional structure, interpretations made by Durrani would hardly stand plausible.

I criticize the notion that the two sets of fractures (Durrani, 1980, Fig. 2) represent two different compressive phases. It seems more plausible that the two sets of fractures and faults represent a conjugate set of wrench faults with a maximum stress axis of roughly E-W orientation. This also coincides with the orientation suggested by the folding (Durrani, 1980, Fig. 3). I would like to bring the author's attention to the fact that the major faults also show a substantial amount of dip slip (normal) component (Durrani, 1980, Fig. 1). This normal component of the faults and the gentle nature of the folds suggest that the compressional phase responsible for the folding and presumably coeval wrench faults was followed by a tensional phase. This tensional phase caused reactivation of earlier faults, now with dip slip movements, and was also responsible for the gentleness (partial unfolding) of early tighter folds. Discordance of the strike of the strata (N-S trend from the rest of the axial belt (roughly NE-SW trend) suggests that these tensional structures are probably related to some sort of rotation of the Indian craton causing subsequently a tensional regime. In the light of above it is suggested that the tectonic history of the Dilband area occurred in following steps :

- (a) Folding and faulting due to compression (E-W trend).
- (b) Reactivation and dip-slip movements of the pre-existing faults and flattening of the original tighter folds due to tensional forces.

The fluor spar deposits are lacking elsewhere, including the type locality of the Chiltan Limestone (near Quetta). It seems that fluor spar deposits formed by late stage hydrothermal activity (Schcheglov, 1969), more likely in a tensional regime. Further study on the morphology and petrology of veins and, especially, new techniques in the field of fluid inclusions have substantial scope to determine the genesis of fluor spar deposits of Dilband area.

REFERENCES

- Durrani, N.A., 1980. Structural control and genesis of the fluor spar deposit near Dilband and the surrounding areas. *Spec. Issue, Geol. Bull. Univ. Peshawar* 13, 199—206.
- Schcheglov, A.D., 1969. Main features of endogenous metallogeny of southern part of West Pakistan. *G.S.P. Mem.* 7.