

DISCUSSION

IS JAMMU BAUXITE A REWORKED BASALT DERIVED BAUXITE?

by B.P. Singh, J.S. Pawar and Mithila, Jour. Geol. Soc. India, v.66, 2005, pp.157-160.

S.K. Acharyya, Dept Geol Sci, Jadavpur Univ, Kolkata
– 700032, *Email*: skacharyya@yahoo.com, comments

Singh et al (2005) postulate bauxite pockets at Salal, Mulal area, Jammu, to be derived from weathering of basalt based on their trace element and REE geochemical signatures. They have only provided average values of trace elements and REE from 9 samples. Details of samples and locations are not given. Basic data is thus not available to readers. Authors correlate parent basalt to the Deccan, which has been assigned Cretaceous age by them.

It is apparent that the authors are unaware of the presence of rhyolitic volcanic breccia reported by me from the bauxite unit of lower Subathu sequence at the Chenab river section, Kanthan bridge, Salal (Anon, 1979). Further, the presence of mainly basalt and minor rhyolite has been also recorded from the Eocene sediments from different sections of the Himalayan frontal belt extending from the east to the west (Acharyya, 1999a, b, 2000). The stratigraphic dating of these volcanics is well constrained for the early-mid Eocene Abor Volcanics, but others are broadly dated Eocene. The cited publications also mention the presence of rhyolite from Kanthan area, Salal. Ash beds also occur in association with mid Eocene vertebrate fossils in Sindkhatuti locality in Kalakot area (Sahni, 2002).

Thus the parentage of bauxite at Salal, Mulal area, Jammu, requires closer integrated study.

B.P. Singh, J.S. Pawar and Mithila, Postgraduate
Department of Geology, University of Jammu, Jammu -
180 006, *Email*: bpsingh_in@yahoo.com, reply

We are really happy to receive comments on our paper

by a well-known geologist, Dr S K Acharyya. His main objection is regarding the details of sampling locations and data sets. The main location of the bauxite is Salal village (Long 74°49'30" Lat 33°9'42") and another location is on the Mutal-Jangalgal road (Long 75°2'30" Lat 32°59'). Kanthan Bridge on Chenab River mentioned by Dr Acharyya is 2.5 km NE of Salal village on Riasi-Arnas-Mahore road and this place is 10 km away from Salal by road. Keeping in view the space limit of Short Communication, the individual data points were presented in the diagrams and averages were given for comparison avoiding separate chemical analyses data table of all the nine samples.

Regarding the presence of rhyolitic volcanic breccia, we are well aware of the rhyolitic intrusions occurring in Sirban Limestone (Jammu Limestone) and the associated quartz-arenite near the Kanthan Bridge (Anon, 1979) but its association with the bauxite is not seen at least at Salal and/or Mutal. If we presume that the Middle Eocene rhyolitic breccia originated the bauxite then the bauxite must be younger (post-Middle Eocene) than the volcanic breccia not older (pre-Eocene) than that and then the order of superposition of the bauxite will be changed which is not evident in the exposed sequences of the western Himalaya. The same holds true if one considers Middle Eocene ash bed reported by Sahni (2002) from Sindkhatuti (Kalakot) and the Eocene dated volcanics of the Himalaya including Abor Volcanics (Acharyya, 2000) as a source for the Jammu bauxite.

However, we also agree that a detailed study on these bauxites is required with an integrated approach.

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