

SHORTER COMMUNICATIONS

BEDDED BARYTES FROM THE PRECAMBRIAN OF KARNATAKA

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Sri Pitre of the Sandur Manganese and Iron Ore Ltd., brought to the Department a specimen of crystalline barytes stating that it was collected near Talya (Lat $14^{\circ}1'12''$ Long $76^{\circ}16'18''$) Chitradurga District. Since barytes had not been reported earlier from Karnataka, this occurrence was considered important justifying further investigation. The preliminary study has shown that barytes occurs as a bed interlayered with fuchsite quartzite. The bed has so far been traced from a point sw of Talya to NE of Janakal, a distance of 10 km.

Since this is the first record of barytes as a distinct bed in the Precambrian of Karnataka, it is proposed to record this occurrence in the form of a note, reserving a detailed description to a later date after collection of additional data.

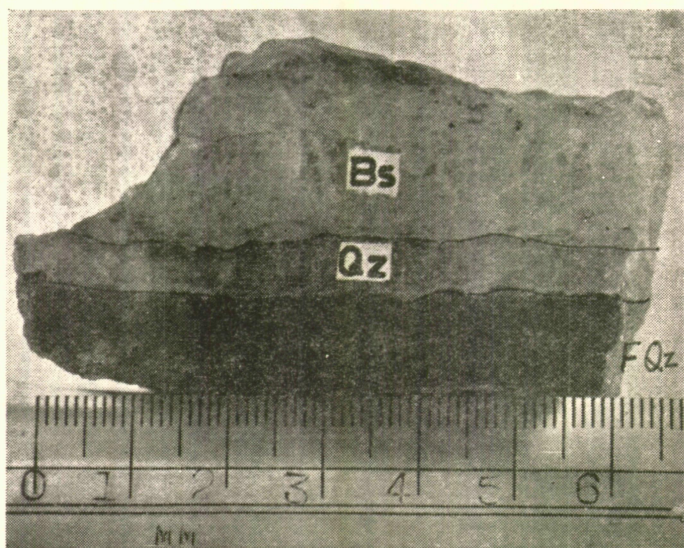


Figure 1. Specimen of bedded barytes, Ghattihoshalli.
F.Qz=Fuchsite Quartzite; Qz=Quartzite; Bs=Barytes.

The occurrence would have gone unnoticed but for the fact that several agencies have taken out licences for mining the bright green quartzite containing flakes of fuchsite mica and marketing it as an ornamental stone. A number of pits have been sunk near Gattihoshalli, Kummingshatta and Janakal. These pits have exposed a bed of barytes about a metre in thickness interlayered with beds of fuchsite quartzite and quartzite. Occurrence of bedded barytes is well seen at the following localities:

- 1) About a mile south of Gattihoshalli on the eastern flanks of the low lying hills (Lat $13^{\circ}59'3''$ Long $76^{\circ}17'20''$)

- 2) About 0.8 km WNW of Gattihoshalli forming the northern extension of occurrence No. 1 (Lat 13°59'45" Long 76°16'44")
- 3) About 3 km NE of Janakal and South of .3179 (Lat 13°55'57" Long 76°19'40")

All these occurrences fall along NW-SE direction which is the regional strike of the rock formations.

Nine samples of barytes were analysed and show the following range in chemical composition :

Sample	BaO	SO ₃
No. 1	59.13	31.07
No. 2	57.55	31.14
No. 3	58.47	32.34
No. 4	47.04	26.07
No. 5	54.66	30.46
No. 6	51.25	27.99
No. 7	58.22	31.89
No. 8	44.08	24.25
No. 9	40.34	21.60

Barytes is granular, white to greyish white in colour and coarsely crystalline. Specific gravity is 4.2. Under the microscope perfect basal (001) and prismatic (110) cleavages are seen. There are no structures resembling rosettes. Subhedral to rounded quartz is the only impurity. Flakes of muscovite and rounded flakes of fuchsite mica are occasionally seen. The baryte has a fresh recrystallised look.

Most of the barytes occurrences in India are described as either replacements or as fissure veins in limestone, associated with sills of basalt. Recently Karunakaran (1973) has described bedded barytes from near Mangampete, Cuddapah District. The barytes is stated to occur as a massive, fine grained chemical sediment as well as a pyroclastic sequence in the form of rosettes embedded in a tuff matrix. The formation of barytes is ascribed to devitrification of volcanic glass. This is the only recorded occurrence of bedded barytes from India so far.

Bedded deposits of barytes of commercial importance have been reported from Arkansas & Nevada, West Germany, Yugoslavia and Brazil. The barytes in these cases is stated to be fine grained and accompanied by chert, pyrite, secondary iron oxides and various carbonate and clay minerals. The bedded deposits described in literature are mostly of Palaeozoic and younger age. The authors are not aware of the occurrence of bedded barytes in the older metamorphics of Precambrian age.

So far no one has looked for barytes in Karnataka. The present record of the occurrence of barytes in close association with beds of fuchsite-bearing quartzite should enable further search to be directed to areas showing similar rock associations.

REFERENCE

- KARUNAKARAN, C., (1973) Acid volcanism and ore genesis. *Symposium on Peninsular shield—* Dec. 17 and 19 (Abstract).