DETAILED PROFILE OF KEY MINERALS OF ANDHRA PRADESH

I. BARYTES

Barytes (BaSO$_4$) is one of the chief sources of barium. It contains 65% of BaO and occurs either as crystalline or massive. It can be easily identified by its high specific gravity. Snowwhite/white barytes is generally used in chemical and paint industry and to a minor extent in rubber, textile, paper, cardboard, leather, oil, cloth, linoleum, plastic and ceramic industries. The off-coloured barytes is used as drilling mud in oil well drilling. The barytes deposits are classified into three main types: 1) vein and cavity filling, 2) bedded and 3) residual deposits. A majority of the deposits occurs veins or cavity fillings along fault zones. Barytes is known from several locations in Cuddapah, Kurnool, Anantapur and Nellore districts. The occurrences are mostly associated with the Vempalle Formation, Pulivendla Quartzite and Cumbum (Pullampet) Formation of the Cuddapah Supergroup, the Pakhalsediments and the Nellore Schist Belt. The Mangampeta and Vinjamur deposits are bedded type.

Anantapur District

Occurrence of barytes is known from Nerijampalle, Daditota, Ellutla, Rangarajukunta, Madugupalle, Venkatampalle, Muttsukota, Tabjula, Sanjeevapuram, Obalapuram, Chintalacheruvu, Konapuram, Kondamalla, Chandana, Lakshmapalle, and Krishnapad. All these occurrences are associated mostly with the Vempalle Dolomite and dolomitic limestone. The barytes mineralization is mainly vein type and the thickness of the veins varies between 30 cm and 3 m and length generally between 30 m and 90 m. However, at Nerijampalle, the barytes zone has been traced over more than 800 m. The barytes is white, off-white and yellow. A cumulative reserve of about 0.3 Mt of barytes was estimated up to a depth of 30 m.

Kadapa District

Most of the barytes deposits in the state, including the largest one in the world at Mangampeta, are located in this district. The important localities are Maddimadugu, Palatala, Koturu, Mittamidapalle, Chimalapenta, Kadirivaripalle, Midipenta, Uppalapalle, Rajupalem, Vempalle, Tallapalle, Kottapalle, Bakkanagaripalle, Nandipalle, Kuppalapalle, Vemula, Velpula, Bestavaripalle, Elamavaripalle, Ipptala, Karunapayapalle, Godumarrri, Mangampeta, Anantarajupeta and Turukapalle. Almost all these occurrences are localized within the Vempalle Dolomite and Pulivendla Quartzite and the one at Mangampeta with the Pullampet Shale. The vein type barytes, confined to the dolomite and quartzite, is generally of superior quality and grade. The veins are about 30 cm to 4 m thick and extend over a few hundred metres in length and up to 30 to 100 m in depth. A total reserve of about 0.7 Mt was estimated up to depths ranging from 15-30 m.

In the Mangampeta, barytes of volcanic origin occurs as thick bedded deposit within the Pullampet Shale. Four types of barytes are found viz., grey granular, lapilli/rosette, vein and replacement types. Of these, the first two types are of economic importance. The deposit occurs as two lenses, the northern lens is about 12.2 km long and 900 m wide and 40 m thick whereas the southern lens is about 300 m long and 80 m wide. A reserve of about 62 Mt (as on 1.04.2010, IBM) of barytes with percentage of BaO varying between 55.09 and 62.65 was estimated for this deposit. The Mangampeta deposit is an addition on the mineral map and one of the commandable contributions by GSI.

Nellore District
In Vinjamur area, barytes occurs as bedded deposits associated with the metavolcanics of the Nellore Schist Belt. There are two bands of barytes in the area. The main band near Vinjamur occurs in Kodandaram hill over a strike length of about 3.5 km with width ranging from 2.5 m. The other band occurring near Venkatayapalem has a strike length of 1600 m and width of 3-12 m. A total reserve of 2.15 Mt of barytes was estimated upto 30 m depth for the two bands.