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MINERAL RESOURCES OF CUDDAPAH DISTRICT

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Introduction

Minerals constitute for the economic growth of any country and India is one of the endowed with this gift of nature. The mineral industry place a very important role in any industrial development of the country. The cuddapah district forms a part of the south-western and southern part of Cuddapah basin which is named after the town Cuddapah where the cuddapah system of rocks well developed. The cuddapah basin has more than 6 kms thick sedimentary and rests over a granite gneiss and schist basement with a profound unconformity. The sedimentary pile is classified into lower cuddapah Super group and above Kurnool group. Studies on the geology and tectonics of the cuddapah basin were first carried out by king (1872). Statigraphically, the cuddapah basin is divided into Papagni, Chitravathi, Nallamalai groups and Srisailam quartzites. The basin comprises mainly ortho-quartzites-carbonate suit and basic to acid volcanic and sills in the lower part and siliceous sales with quartizes interbands in the upper part.(Nagarajarao et al 1987). In Andhra Pradesh the Rayalaseema region is highly rich endowed with many kinds of mineral deposits. The Cuddapah district in Rayalaseema region covering an area of 15,373 sq. km forms an important region within the basin which is named after the town cuddapah-cuddapah basin. This district is bounded on the north by Kurnool and Prakasam districts, on the east by Nellore district, on the west by Anantapur district and on the south by Chittoor district. This district is drained by the Pennar River and number of tributes. Among the tributaries present in this district, the important are Papapagni, Chitravathi, Kunderu, Sagileru and Cheyyuru.

Within these districts several unique geological features occur forming part of the one of the classical Proterozoic basins of the world. Apart from this, the geology of the district gains importance because of the second largest bedded barites deposit in the world at Mangampet and also because of the best grade asbestos near Pulivendula. In Andhra Pradesh it is the unique asbestos producing district. Recently Uranium mineralization is discovered over a long belt of few tens of kilometers. There are extensive limestone deposits based on which there are a number of cement factories. Other important mineral deposits are iron-ore, steatite, ochres, clays, dolomites, quartzites, lead, zinc, serpentine, napa slabs etc. A brief note on some of the minerals of this district is as follows:

Asbestos

In Cuddapah district this mineral occurs in Brahmanapalli, Velpula, Lingala in Pulivendula mandal. This mineral is confined to a 25 Km long belt between Pulivendula and Parnapalli. Asbestos of chrysotile variety occurs in association with serpentine developed at the contact of basic intrusive and the Vempalli dolomites.



Chrysotile variety of asbestos occurs in the form of fibers ranging in length from 0.5 cm to 6 cm. The estimated reserves of the asbestos in this district are placed out nearly 2,50,000 tones. This variety of asbestos at Brahmanapalli in Cuddapah district is one of the best varieties in India. High grade variety of asbestos is used mainly in the manufacture of brake lining of motor vehicles, in the manufacture of asbestos cloths and paper for insulation. Low grade variety is used in preparation of asbestos cement sheets for roofing.

Barites

Andhra Pradesh is the leading producer of Barytes and contributes about 90% of the total Indias production. Andhra Pradesh Mineral Development Corporation exploiting the Magampet deposit producing about 5-6 lakhs tones per annum and intend to increase the production level to 1 million tons in future. One of the largest barite deposits in the world occurs at angampet village with a resource of 37 Mt with an estimate reserve of 70 million tons (Neelakantam,(1987) .In Cuddapah district, barites1 occurs in Obulavaripalli, Cuddapah, Pulivendula, Badvel and Rajampet mandals. Baryte deposits are of two types namely bedded type and vein type. In Mangampeta area of Obulavaripalli mandal this mineral occurs as bedded. These deposits are of great significance because of being the largest world renowned deposit and also of unique nature of its formation. Mangampet deposits yields grey barytes. In other areas it occurs as veins and generally yields white barytes. Generally barytes is usually identified because of its heavy nature with a specific gravity of 4.3 The annual production of the mineral from Cuddapah is nearly 7 lakh metric tons and it contributes about 90% of barytes production in the state. The reserves of Mangampeta barytes deposit are estimated at about 74 million tones. Barytes is used in Paint, rubber, paper and oil cloth industries. It is mainly used for making drilling mud and for oil well drilling. It is used in makings barium salts also.

Limestone

In India cement grade limestones are largely present in Andhra Pradesh with a total reserves of about 20,0000 million tones. Among these reserves nearly half of the reserves are present in Cuddapah, Kunool and Ananthapur districts. In Cuddapah district, these deposits occur in Pulivendula, Cuddapah, Muddanur, Yerraguntla and Jammalamadugu formation of the Cuddapah Super group and Narji and Koilkuntla formation of Kurnool group. Average annual production of limestone in Cuddapah district is about 2.3 million tones and it contributes 3% to the states limestone production. The massive limestone deposits are used in the manufacture of cement. Whereas the flag stones are used for building material. The important cement grade limestone deposits are largely found in Yerraguntla of Cuddapah district.

Ochres

In Cuddapah district Red and Yelow ochres occur at Sidhout, Kodur, Proddatur and Cuddapah areas. These deposits occur in association with dolomites of the lower Cuddapah Super group. It is decomposed mineral formed from haematite or limonite.

Steatite

This mineral occurs at Pulivendula (Murarichintala, Velpula, Parnapalli & Lingala) area and Cuddapah (Thimmalur and Pathur) area. It occurs as an alteration product of dolomite associated with the basal



Cuddapah formation. Steatite is a hydrated magnesium silicate. It is massive talc. This mineral is used in paper, paint, rubber, pharmaceutical and ceramic industries. But the most important use of steatite is the manufacture of talcum powder.

Serpentine

Serpentine occurs at the contact of basic sills with the Vempalli dolomites. It occurs at Lopatnuthala, Lingala, Ramanuthala Palli, ChinnaKudala, Ippatla, Murarichintala and Brahmanapalli areas of Pulivendula mandal.

Lead – Zinc

Strictly speaking the important lead and zinc deposits are not present in Rayalaseema districts. However the well known occurrence is that of Jangamaraju palli and Varikunta area of Badvel. These deposits are associated with the dolomite limestone interaction intercalated with slates contain blue and white quartz reefs. Galena is disseminated in the blue quartz reefs.

Napa slabs

Napa slabs occur in association with Kurnool group of rocks. In Ciddapah district the deposits occur at Kamalapuram, Muddanur, Cuddapah and Jammalamadugu mandals.

Uranium

Atomic Mineral Division (AMD) of the Atomic Energy Department is carrying out quite a lot of Investigations in and around Lakkireddypalli area of Cuddapah districts. This department is already carried out investigations at Thummalapalli near Pulivendula.

Mineral based industries

Numbers of mineral based industries were established in Cuddapah district. The large mineral deposits of limestone causes to establish 3 major cement plants, viz., The India Cements Limited one at Chilamakur and another at Yerraguntla and Zuari Cements near Yerraguntla are established. Apart from the cement units, there are also pulverizing units for barytes and asbestos. There are a number of napa slab cutting and polishing units are located in Yerraguntla, Chilamakur and Cuddapah mandals. There are also many mosaic chip and stone crushing units in this district. Inspite of abundance and minerals, the resources have not been harnessed fully, and needs attention from the charm and dynamic Earth Scientists.

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