

STATE REVIEWS



# Indian Minerals Yearbook 2022

(Part- I)

61<sup>st</sup> Edition

STATE REVIEWS  
(Telangana)

(ADVANCE RELEASE)

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## TELANGANA

Telangana is the 29<sup>th</sup> State of India, formed on the 2<sup>nd</sup> of June 2014 with ten districts, namely; Hyderabad, Adilabad, Khammam, Karimnagar, Mahabubnagar, Medak, Nalgonda, Nizamabad, Rangareddy and Warangal. Telangana is surrounded by Maharashtra and Chhattisgarh in the North, Karnataka in the West and Andhra Pradesh in the South and East directions.

### Mineral Resources

Telangana is the leading producer of barytes, dolomite, feldspar, laterite, limestone, Quartz and Sand (others). It accounts for 47% kyanite, 29% corundum, 10% fuller's earth and 9% limestone resources of the country. Telangana is endowed with the internationally known black, pink, blue and multicoloured varieties of granites.

Important minerals occurring in Telangana are: **barytes** in Khammam, district; **china clay** in Adilabad, Mahabubnagar, Nalgonda, Rangareddy and Warangal districts; **coal** in Adilabad, Karimnagar, Khammam and Warangal districts; **corundum** in Khammam district; **dolomite** in Khammam and Warangal districts; **felspar** in Hyderabad, Khammam, Mahabubnagar, Medak and Rangareddy districts; **fireclay** in Adilabad and Nalgonda districts; **garnet** in Khammam district; **granite** in Karimnagar, Khammam, Mahabubnagar, Medak, Nalgonda, Rangareddy and Warangal districts; **iron ore (haematite)** in Khammam district; **iron ore**

**(magnetite)** in Adilabad and Warangal districts; **limestone** in Adilabad, Hyderabad, Karimnagar, Mahabub-nagar, Nalgonda, Rangareddy, districts; **manganese ore** in Adilabad district; **mica** in Khammam districts; **quartz/silica sand** in Hyderabad, Khammam, Mahabubnagar, Medak, Nalgonda, Rangareddy and Warangal districts; and **talc/soapstone/steatite** in Khammam district.

Other minerals that occur in the State are **chromite, copper, graphite and kyanite** in Khammam district; **fuller's earth** in Medak and Rangareddy districts; and **marble** in Khammam district (Tables - 1 and 2).

### Exploration & Development

The details of exploration activities conducted by GSI, base metal and REE during 2021-22 are furnished in Table - 3.

### Production

Production of minerals like Coal, Manganese ore, Limestone etc. were reported from Telangana. The value of minor minerals' production was estimated at Rs. 10728 crore for the year 2021-22. The number of reporting mines was 39 in 2021-22 in case of MCDR minerals. (Table-4).

### Mineral-based Industry

The present status of each mineral-based industry is not readily available. However, the important mineral based industries in the organised sector in the State are given in Table - 5.

**Table – 2: Reserves/Resources of Coal as on 1.4.2023 : Telangana**

(In million tonnes)				
Coalfield	Proved	Indicated	Inferred	Total
<b>Total/Godavari Valley</b>	11257	8497	3433	23186

*Source: Coal Directory of India, 2022-23.*

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Table -1: Reserves/Resources of Minerals as on 01.04.2020: Telangana

Mineral	Unit	Reserves				Remaining Resources				Total resources (A+B)	
		Proved STD 111	Probable STD121 STD122	Total (A) Feasibility STD211	Pre-feasibility STD221	Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334		Total (B)
Chromite	'000 tonnes	-	-	-	-	-	15	171	-	186	186
Copper											
Ore	'000 tonnes	-	-	-	666	-	-	-	-	666	666
Metal	'000 tonnes	-	-	-	9.12	-	-	-	-	9.12	9.12
Garnet	tonne	-	-	62187	42033	-	-	1855976	-	1960196	1960196
Graphite	tonne	-	-	-	-	-	123636	95818	-	219455	219455
Iron ore											
(Haematite)	'000 tonnes	-	-	-	1162	-	3370	73754	27240	105627	105627
Iron ore											
(Magnetite)	'000 tonnes	-	-	-	-	-	-	71500	15866	87366	87366
Kyanite	tonne	-	-	-	-	-	-	48350000	-	48350000	48350000
Limestone	'000 tonnes	984751	1450	227926	1214127	509737	142386	299243	118735	893077	11342869
Manganese ore	'000 tonnes	250	66	26	342	150	139	126	-	886	320
											2540
											4162
											4503

Figures rounded off.

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Table –3 : Details of Exploration Activities in Telangana, 2021-22

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b>							
<b>Basemetals</b>							
Nalgonda	Pedda Adisarlappalli block	1:12500	125	3	-	149	A total 125 sq. km area was mapped on 1:12,500 scale with collection of BRS (75), soil (23) Pitting/trenching (51) samples. Multiple fracture/shear zones are present in the area. Quartz veins and pegmatites are emplaced along these shear zones within granite of PGC-II. The surface indication of mineralisation in the form of malachite staining and dissemination of sulphide minerals within quartz vein, pegmatite and associated granites. The major sulphide minerals are chalcopyrite, pyrite, galena with minor amount of azurites besides sporadic occurrence of allanite and fluorite are observed in quartz-feldspathic vein and calcite vein. The analytical results of BRS, PT and soil samples does not show any significant mineralisation in the area.
<b>REE</b>							
Mancherial	Jaipuram area	1:12500	100	-	-	-	The Jaipuram area is a part of the NW-SE trending Pranhita-Godavari (PG) Basin, located in the Godavari Basin, and hosting arenaceous sediments of Kamthi Formation of Lower Gondwana Group. The REE search included LSM (1:12500) in 100 sq.km area and, collection of different sample media. The dominant lithounits of the Jaipuram area are feldspathic sandstone (Middle Kamthi Fm) and ferruginous sandstone belongs (Upper Kamthi Fm) and have gradational contact. Multiple deformation episodes viz., NNW-SSE, ENE-WNW and WNW-ESE observed in the area, which exhibited by joints and faults and, controls distribution of outcrops, shifting of rock, repetition of beds and, development of steps like cliff sections and erosional landforms. The REE mineralisation found as REE

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Table – 3 (contd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							bearing minerals associated with heavy minerals. Ilmenite, magnetite, monazite and zircon are the major heavies. The heavies are concentrated as thin laminations in pockets/patches within stream course. The visible high concentration of heavy minerals observed to be associated with Fe-soil areas, which dominantly developed from weathering of ferruginous sandstone. The available chemical analyses indicated that, in all media, Ti is the dominant element followed by Zr and TREE. The heavy minerals samples have 1.18-8.3% TREE (avg. 3.47%), 3.3-27.35% Ti (avg. 11.17%), 0.99-13.64% Zr (avg. 4.22%) and 0.18-1.16% Th (avg. 0.51%), especially in +85mesh size fraction. In bedrock samples, feldspathic sandstone contains average 0.05% TREE, 1% Ti and, 0.09% Zr, while the Fe-laminated feldspathic sandstone shown average values of 0.05% TREE, 0.66% Ti and, 0.06% Zr. The average 0.05% TREE, 0.75% Ti and 0.1% Zr are observed in ferruginous sandstone, which are comparable with analytical values of soil samples (wt. avg. 0.04% TREE, 0.9% Ti and, 0.2% Zr). Based on geological and geochemical parameters, two potential Fe-soil zones are identified namely Zone-1 and Zone-2.
Bhadradi- Kothagudem	Kamalapuram- Jagannadhapuram area	1:12500	135	-	-	-	G4-stage REE investigation item was carried out in an area of about 135 sq.km. The area forms part of the Chintalapudi sub-basin, southeast extension of Pranhita – Godavari Gondwana main basin and is situated northeastern side of Telangana state. Study reveals that ?REE value of HMS (heavy minerals) from stream sediment varies from 0.003 to 2.24 % with an average of 0.26% whereas SSS

(contd)

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Table – 3 (concl'd)

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							showing 0.248% to 3.118% with an average of 1.41%. On the other hand, ?REE value ranges between 126.88 and 3411.58 ppm (average 1214.0 ppm) in the heavy fraction separated from soil regolith sample and whereas it varies between 318.84 and 2602.19 ppm with an average of 893.27 ppm in clay fraction. However, it ranges between 126.88 and 13249.96 (average 2102.91 ppm) in soil regolith (raw). The ?REE values of BRS sample vary between 105.79 and 10216.57 ppm with an average of 787.07 ppm as well. In all the cases, ?LREE dominates over ?HREE. Study also reveals that Monazite is the main contributing mineral phase for high REE incidence. The analytical results signify that the REE bearing mineral phase is present in all the three mediums (bedrock, soil regolith and stream sediment) but the level of concentration varies significantly. The high values of REE in the stream sediments (HMS) are recorded in the peripheral zone particularly towards the south-eastern and southern part of the block.

Table – 4: Mineral Production in Telangana, 2019-20 to 2021-22  
(Excluding Atomic Minerals)

(Value in ₹'000)

Mineral	Unit	2019-20			2020-21			2021-22 (P)		
		No. of mines	Qty	Value <sup>§</sup>	No. of mines	Qty	Value <sup>§</sup>	No. of mines	Qty	Value <sup>§</sup>
<b>All Minerals</b>		<b>36</b>		<b>149069086</b>	<b>36</b>		<b>177329636</b>	<b>39</b>		<b>112966932</b>
Coal	'000t	-	65703	-	-	52603	-	-	67233	-
Manganese Ore	t	5	7770	51196	6	11097	67713	8	10435	62701
Limestone	'000t	31	26161	5249950	30	24493	4904676	31	28502	5620487
Minor Minerals		-	-	143767940	-	-	172357247	-	-	107283744

*Note:* The number of mines excludes Fuel and Minor minerals.*§* Excluding the value of Fuel minerals.

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**Table – 5 : Principal Mineral-based Industries**

Industry/plant	Capacity (‘000 tpy)
<b>Aluminium Foil</b>	
Hindalco, Kollur, Medak	4
<b>Asbestos Products</b>	
Bhagyanagar Wood Plast Ltd, Nandikandi, Distt. Medak	60
Hyderabad Industries Ltd, Sanathnagar, Distt. Rangareddy	160
Hyderabad Industries Ltd, Thimmapur	230
J.J. Spun Pipe Industries, Arsapalli, Distt. Nizamabad	4.5
Visaka Industries Ltd, Medak	36
<b>Bleaching Clay</b>	
Ashapura Clay Tech. Ltd, Dharur, Distt. Rangareddy	20 (Fuller's earth granules) 15 (Bentonite granules)
<b>Cement</b>	
Anjani Portland Cements Ltd (Subs. of Chettinad Cement), Anjanipuram, Distt.. Nalgonda	1200
CCI Ltd, Tandur, Distt. Rangareddy	1000
Bheema Cement Nalgonda	900
Greygold Cement Nalgonda	90
Deccan Cements Ltd, Bhavanipuram, Distt. Nalgonda	2300
India Cement Ltd, Malkapur Distt. Rangareddy	2400
India Cement (Raasi Cements), Vishnupuram Distt. Nalgonda	3500
Keerthi Industries Ltd, Mellacheruvu, Distt. Nalgonda	590
Kesoram Cement, Basantnagar, Distt. Karimnagar	6000
Mancherial Cement Co. (P) Ltd, Mancherial, Distt. Adilabad	330
My Home Cement Industries Ltd, Mellacheruvu, Distt. Nalgonda	3300
NCL Industries Ltd, Simhapuri, DisttSuryapet	2000
Orient Cement, Devapur, Distt. Adilabad	3000
Penna Cement Industries Ltd, Tandur, Distt. Rangareddy	2000
Penna Cement Industries Ltd, Ganeshpahad, Distt. Nalgonda	1200
Rain Commodities Ltd (Rain Cements), Ramapuram, Distt. Nalgonda	4000
Sagar Cements Ltd, Mattampally, Distt. Nalgonda	2650

(contd)

Table-5 (Contd.)

Industry/plant	Capacity (‘000 tpy)
Sri Lalita Cement, Mattampally, Distt. Nalgonda	1000
Zuari Cements Ltd (Sri Vishnu Cements Works), Dondapadu, Sitapuram, Distt. Nalgonda	1200
<b>Ceramic/Sanitaryware</b>	
Hindustan Sanitaryware & Industries Ltd, Bibinagar, Distt. Nalgonda	1.8
Montana International Ltd, Faralwadi, Distt. Medak	3.6
Restile Ceramics Ltd, Malkapur. Distt. Medak	1.4 (mill. sq m)
<b>Fertilizer</b>	
Chemtech Fertilizers Ltd, Kazipalli, Medak	33 (SSP)
<b>Sponge Iron</b>	
Ashirwad Steels & Ind. Ltd, Veliminedu, Distt. Nalgonda	60
Anand Metallics & Power Pvt. Ltd, Kodi Cherla, Distt. Mahabubnagar	24
Binjusaria Sponge & Power Pvt. Ltd, Farooq Nagar, Distt. Mahabubnagar	30
Lakshmi Gayatri Iron & Steel, Kethepally Distt. Nalgonda	60
NMDC (Sponge Iron Division), Paloncha, Khammam.	60
Reactive Metals of India Ltd, Appajipally Distt. Mahabubnagar.	36.5
Sunder Steels Ltd, S.D. Road, Secunderabad.	36
<b>Ferro-alloys</b>	
Nav Bharat Ferro Ventures Ltd, Paloncha, Distt. Khammam.	125
Shree Raghvendra Ferro alloys Pvt Ltd, Nalgonda.	15
VBC Ferro Alloys Ltd, Rudraram, Distt. Medak.	48 (silico- manganese) 32.4 (ferro manganese)
<b>Refractory</b>	
MPR Refractories Ltd, Medak.	9.5
Raasi Refractories, Narketapally, Distt. Nalgonda.	35

*Note: Data, not readily available for fertilizer and cement Industries on respective websites. Therefore, data sourced from FAI Statistics and Survey of Cement Industry & Directory, respectively.*