Indian Minerals Yearbook 2021

(Part- I)

60th Edition

STATE REVIEWS (Telangana)

(ADVANCE RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

Indira Bhavan, Civil Lines,
NAGPUR – 440 001

PHONE/FAX NO. (0712) 2565471
PBX : (0712) 2562649, 2560544, 2560648
E-MAIL : cme@ibm.gov.in
Website: www.ibm.gov.in

July, 2023

TELANGANA

Telangana is the 29th State of India, formed on the 2nd of June 2014 with ten districts, namely; Hyderabad, Adilabad, Khammam, Karimnagar, Mahbubnagar, 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, Rangareddi 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 (hematite)** 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, DMG Telangana and Telangan State Mineral Development Corporation Ltd. for Iron Ore, Chromite, REE and Limestone during 2020-21 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 ₹17236 crore for the year 2020-21. The number of reporting mines was 36 in 2020-21 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 1.4.2021 : Telangana

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total/Godavari Valley	11089	8328	3433	22851

Source: *Coal Directory of India, 2020-21.*

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		Total (A)	Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)	
			STD121	STD122			STD221	STD222						
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	102	-	-	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	3132280	16438327	17652454
Manganese ore	'000 tonnes	250	66	26	342	150	139	126	-	886	320	2540	4162	4503

Figures rounded off.

Table –3 : Details of Exploration Activities in Telangana, 2020-21

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI							
Iron Ore							
Nalgonda	Mallepalli-Chintakuntla block	1:12500	114	3	-	-	Reconnaissance survey (G4) in Mallepalli-Chintakuntla block, in parts of Nalgonda District. A total of 114 sq. km. area was mapped on 1:12500 scale and involved collection of different sample media. The block area was covered by granitoids of Peninsular Gneissic Complex (PGC)-II and younger acid and basic intrusives. The visible sulphide mineralisation was dominantly disseminated in nature, confined to second-generation quartz and pegmatite veins. In addition, fracture/cavity filling and interstitial growth of sulphide was also observed. The major sulphide minerals were chalcopyrite, pyrite and suspected molybdenite with minor azurite and malachite. Multiple old working with dumps and old pits, and gossanised bodies were other indicators of the sulphide mineralisation. The available analytical results of bedrock, soil and pit/-trench samples revealed sporadic anomalous Pb (up to 7.5%), followed by Cu (up to 0.25%) and Mo (up to 0.19%). However, relatively higher values of Zn (up to 235ppm) were observed in stream sediment samples. Based on the surface indication of mineralisation, two mineralised zone namely zone-I and II, separated by ~1km, were demarcated in the eastern part of the block.
Chromite							
Bhadradri Kothagudem & Khammam	Himmamnagar-Vinobhanagar blocks of the Chimalpahad mafic-ultramafic complex	-	-	3	605.2	-	Preliminary exploration (G3) for Chromite and PGE mineralisation, in Himmamnagar-Vinobhanagar block of the Chimalpahad mafic-ultramafic complex, in parts of Khammam and Bhadradri Kothagudem districts. Northern part of the block (Trench-1, 5 & 6) showed Cr values range from 424 ppm to 5690 ppm, Ni values ranges from 187 ppm to 2940 ppm and in the southern part of the block (Trench-3) records Cr values range from 128 ppm to 7888 ppm and Ni values range from 160 ppm to 855

(contd)

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		ppm whereas the central part of the block (Trench-2) showed less values of Cr ranges from 245 ppm to 1474 ppm and Ni values range from 90 to 461 ppm. Among these, only northern part of the area records (Trench-1) PGE values upto 104.21ppb wherein serpentinised dunite and pyroxenite is exposed. A total 6 nos. borehole had been drilled in the block, in which 3 nos. (TGNHV-1, 2 and 6) boreholes were drilled in the northern part of the block and rest 3 nos. (TGNHV-3, 4 and 5) drilled in the north-central and central part of the block where chromite and titano-vanadiferous magnetite float ore is abundant. Petrographic study reveals spatial distribution of chromite layers in respect of pyroxenite.
REE							
Bhadradri Kothagudem	Rachannagudem-Ankampalem block	1:12500	-	-	-	191	Reconnaissance survey (G4 stage) for REE in and around Rachannagudem-Ankampalem area, Bhadradri Kothagudem District. Large scale mapping (LSM) on 1: 12500 scale was carried out. Analytical results of 191 samples have received of different media [HMS, BRS & regolith (clay fraction)]. The HMS sample has high concentration of REE and other trace elements than the other media samples. The REE value of 45 nos. of HMS varies from 1.21 to 18.33%, average is 5.71%. A total of 34 nos. of regolith sample (clay fraction) showing the REE value ranges between 159.63 to 1603.47 ppm, average is 496.81 ppm. The REE values of BRS (73 nos.) sample ranges from 111.88 to 3811.66 ppm. Analysis of all the media showing LREE was higher than the HREE. Other than REE, Ti ranges from 482.21 to 34699.12 ppm, Zr varies between 75.92 to 82599.68 ppm and Th value varies from 5.19 to 32593.1 ppm from all the media. The above observations attest to the fact that the heavy fractions from stream sediments contain significantly high REE and monazite was the main contributing mineral phase for this high REE incidence

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		
Directorate of Mines & Geology / Telangana State Mineral Development Corporation Ltd. Telangana							
Limestone							
Suryapet,	Mellacheruvu village & Mandal (Mellacheruvu cluster-1)	1:12,500	57.77	6	314.00	417	G4 stage exploration led to estimation of about 367.72 million tonnes of cement grade limestone resources with an average CaO 48.01%. During reconnaissance survey, potential area of 41.45 sq.km of cement grade limestone had been identified within cluster for further G3/G2 stage exploration.
Suryapet	Mattampally village & Mandal (Mattampally cluster-2)	1:12,500	14.65	4	200.00	226	G4 stage exploration led to estimation of about 59.50 million tonnes of cement grade limestone resources with an average CaO 46.97%. During reconnaissance survey, potential area of 8.38 sq.km of cement grade limestone had been identified within cluster for further G3/G2 stage exploration.
Suryapet	Raghunath-apalem village, Mattampally Mandal (Mattampally cluster-3)	1:12,500	46.58	4	200.00	327	G4 stage exploration led to estimation of about 158.21 million tonnes of cement grade limestone resources with an average CaO 47.55%. During reconnaissance survey, potential area of 31.73 sq.km of cement grade limestone had been identified within cluster for further G3/G2 stage exploration.
Suryapet	Ramapuram village, Mellacheruvu Mandal (Ramapuram Cluster-5)	1:12,500	55.87	2	100.00	111	G4 stage exploration led to estimation of about 45.58 million tonnes of cement grade limestone resources with an average CaO 46.87%. During reconnaissance survey, potential area of 12.19 sq.km of cement grade limestone had been identified within cluster for further G3/G2 stage exploration.
Suryapet	Dondapadu village, Mellacheruvu Mandal (Dondapadu Cluster-6)	1:12,500	46.82	4	197.00	241	G4 stage exploration led to estimation of about 45.20 million tonnes of cement grade limestone resources with an average CaO 44.89%. Further, a G3/G2 level exploration work will be taken up in the delineated cement grade limestone block.

Table – 4: Mineral Production in Telangana, 2018-19 to 2020-21 (Excluding Atomic Minerals)

(Value in ₹'000)

Mineral	Unit	2018-19			2019-20			2020-21 (P)		
		No. of mines	Qty	Value$	No. of mines	Qty	Value$	No. of mines	Qty	Value$
All Minerals		**36**		**184264230**	**36**		**149069086**	**36**		**177166582**
Coal	'000t	-	65160	-	-	65703	-	-	52603	-
Iron Ore %	'000t	-	2	1290	-	-	-	-	-	-
Manganese Ore	t	6	10735	59666	5	7770	51196	5	11097	69120
Limestone	'000t	30	30895	6078898	31	26161	5249950	31	24498	4740215
Minor Minerals		-	-	178124376	-		-143767940	-		- 172357247

Note: *The number of mines excludes Fuel and Minor minerals.*

$ Excluding the value of Fuel minerals.

% Associated mines.

Table – 5 : Principal Mineral-based Industries

Industry/plant	Capacity ('000 tpy)
Aluminium Foil	
Hindalco, Kollur, Medak	4
Asbestos Products	
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
Bleaching Clay	
Ashapura Clay Tech. Ltd, Dharur, Distt Rangareddy	20 (Fuller's earth granules) 15 (Bentonite granules)
Cement	
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

(contd)

Table-5 (Contd.)

Industry/plant	Capacity ('000 tpy)
My Home Cement Industries Ltd, Mellacheruruvu, 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
Sri Lalita Cement, Mattampally, Distt Nalgonda	1000
Zuari Cements Ltd (Sri Vishnu Cements Works), Dondapadu, Sitapuram, Distt Nalgonda	1200
Ceramic/Sanitaryware	
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)
Fertilizer	
Chemtech Fertilizers Ltd, Kazipalli, Medak	33 (SSP)
Sponge Iron	
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

(contd)

Table - 5 (contd)

Industry/plant	Capacity ('000 tpy)
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
Ferro-alloys	
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)
Refractory	
MPR Refractories Ltd, Medak.	9.5
Raasi Refractories, Narketapally, Distt Nalgonda.	35

(contd)

Table - 5 (concld)

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