

STATE REVIEWS



Indian Minerals Yearbook 2019

(Part- I)

58th Edition

STATE REVIEWS
(Telangana)

(ADVANCE RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

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March, 2021

TELANGANA

The write up for this State is being presented for the first time in the Yearbook. The State is carved out of Andhra Pradesh and efforts have been made to give a clear picture about the areas/districts falling under the state; however, there are chances of intermixing of data between Andhra Pradesh and Telangana, it will be sorted out in next edition.

Telangana is the 29th State of India, formed on the 2nd 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, 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 for coal and other minerals during 2018-19 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 ₹ 10,774 crore for the year 2018-19.

The number of reporting mines was 36 in 2018-19 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 1.4.2019 : Telangana

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total/Godavari Valley	10622.32	8564.74	2651.88	21838.94

Source: Coal Directory of India, 2018-19

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Table-1: Reserves/Resources of Minerals as on 01.04.2015: Telangana

Mineral	Unit	Proved STD 111	Reserves		Total (A)	Feasibility STD211	Pre-feasibility STD221	Remaining Resources				Total resources (A+B)	
			Probable STD121	STD122				Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334		Total (B)
Barytes [#]	tonne	1324582	-	403420	1728002	112320	45400	130061	12940	711239	-	1011960	2739962
ChinaClay [#]	'000 tonnes	623	322	-	945	2902	1059	655	-	10602	132	15350	16295
Chromite	'000 tonnes	-	-	-	-	-	-	-	15	171	-	186	186
Copper	'000 tonnes	-	-	-	-	-	666	-	-	-	-	666	666
Ore	'000 tonnes	-	-	-	-	-	9.12	-	-	-	-	9.12	9.12
Metal	'000 tonnes	-	-	-	-	-	-	-	-	-	-	-	-
Corundum	tonne	-	-	-	-	5824	-	9282	-	62007	-	77113	77113
Dolomite [#]	'000 tonnes	42072	-	651	42723	2869	1594	1944	132511	6380	-	145298	188021
Feldspar [#]	tonne	8244089	526905	1231579	10002573	3163212	543605	1938177	3890572	3657219	57940	13385142	23387715
FireClay [#]	'000 tonnes	762	-	-	762	667	746	-	758	8514	-	10684	11446
Fuller's Earth [#]	tonne	-	-	-	-	-	-	-	-	25523983	-	25523983	25523983
Garnet	tonne	15097	-	-	15097	47090	42033	-	-	1855976	-	1945099	1960196
Granite													
(Dimension													
Stone) [#]	'000 cum	-	-	-	-	-	-	-	-	45494	-	45494	45494
Graphite	tonne	-	-	-	-	-	-	-	123636	95818	-	219455	219455
Iron ore													
(Haematite)	'000 tonnes	509	-	-	509	973	483	-	-	23977	27240	52673	53181
Iron ore													
(Magnetite)	'000 tonnes	-	-	-	-	-	-	-	-	71500	14	71514	71514
Kyanite	tonne	-	-	-	-	-	-	-	-	48350000	-	48350000	48350000
Laterite [#]	'000 tonnes	36471	8213	2426	47110	6439	828	2536	-	6483	305	16591	63701
Limestone	'000 tonnes	625569	195	400766	1026529	254912	28110	92020	113416	11710694	3038478	16159208	17185736
Manganese													
ore	'000 tonnes	156	3	196	355	2	-	46	-	203	76	1214	1568
Marble [#]	'000 tonnes	-	-	-	-	-	-	-	-	3	-	3	3
Mica [#]	kilograms	-	-	-	-	-	-	584885	-	-	-	584885	584885
Quartz &													
Silica Sand [#]	'000 tonnes	18541	1367	6916	26824	10334	2414	8365	159	28642	230	53250	80074
Shale [#]	'000 tonnes	13852	-	-	13852	-	-	-	-	-	-	-	13852
Talc -Steatite -													
Soapstone [#]	'000 tonnes	-	-	-	-	-	-	-	-	20	-	20	20

Figures rounded off.

Declared as Minor Minerals vide Gazette Notification dated 10.02.2015

Minor Minerals before Gazette Notification dated 10.02.2015.

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Table –3 : Details of Exploration Activities in Telangana, 2018-19

Agency/ Mineral/ District	Location Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI							
Coal							
Bhadradri- Kothagudem	Sambayagudem block, South- eastern part of Godavari Valley Coalfield,	1:10000	25.0	04	1954.70	-	G3 stage preliminary exploration for coal was carried out in Sambayagudem block, South-eastern part of Godavari Valley Coalfield, Bhadradri-Kothagudem district. An area of 25 sqkm was mapped on 1:10,000 scale and 1,954.70 m of drilling in four borehole were completed. Barakar and Lower Kamthi Formations are coal-bearing in the area. Five numbers of Lower Kamthi coal seams zone have been intersected in the boreholes between the depth range of 245.65 m and 470.40 m with individual coal thickness varying from 0.50 m to 1.45 m. The two Barakar coal seams zone have been intersected in the boreholes between the depth range of 475.11 m and 671.20 m with individual coal thickness varying from 0.50 m to 1.18 m. The quality of coal is mostly of power grade to superior-grade coal. The exploration will continue in field season 2019-20.
Iron Ore							
Karimnagar Peddapalli and Jagtial	Ragampet and Dumalkunta blocks	1:12500	5	-	-	-	Reconnaissance survey (G4) was taken up to explore iron ore potential in Ragampet and Dumalkunta blocks in Karimnagar, Peddapalli and Jagtial districts. In both the blocks, iron ore was found to occur as banded magnetite quartzite (BMQ) band(s) and was observed to be restricted to the top of the hills and mounds. The iron bands are found as bouldery outcrops and are discontinuous in nature. BMQ bands with variable width, length and strike were found to consist of micro to macrobands of magnetite. Iron to silica ratio showed variations from 1:2 to 1:5. Grunerite was found in variable proportion along with quartz and magnetite within BMQ. Disseminated magnetite grains

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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		
Karimnagar	Gollapalli block						<p>and magnetite inclusions were found within grunerite. A total of 15 hills bearing BMQ in Dumalkunta and Ragampet blocks were mapped on 1:12,500 scale. Length of iron bands showed range variations from 50 m to 850 m with average width of 15 m. Kammarikhanpet and Pattipaka Hill-I and Hill-2 were the major BMQ-bearing hills of Ragampet block. Kammarikhanpet Gutta (Hill) and Pattipaka Hill -1 was found to host a single linear BMQ band of strike length 950 m and 300 m respectively with average width of 25 m. In Pattipaka Hill-2, Band-II was observed as major band of 250 m length and 59 m width. The chemical analysis of BMQ samples showed Fe content in the range of 30-35% and silica from 40-50%. Five scout boreholes were drilled (two in Dumalkunta block and three in Ragampet block). Surface mineralised zones that were intersected in boreholes and in most of mineralised zones were found divided into number of smaller bands.</p> <p>Reconnaissance survey (G4) carried out for iron ore in Gollapalli block, Karimnagar district comprised Large-Scale Mapping of 100 sqkm area on 1:12,500 scale. A total of 26 BMQ bands having length varying from 70 to 600 m and width varying from 5 to 60 m were identified. Only 3 bands were with length more than 400 m and average width of 50 m. The BMQ bands were found to have alternate magnetite and silica-rich layers in 25:75. The petrographic study revealed the main ore as magnetite and associated gangue minerals were quartz, grunerite and orthopyroxene. The iron bearing silicates (grunerite, orthopyroxene) contributed less than 5% of the total iron content</p>

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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		
							in BMQ and up to 10% of the magnetite grains were found altered along the boundaries & fracture planes into martite. The analytical results of BRS samples showed Fe ₂ O ₃ value varying from 14.53% to 59.07% with an average of 44.34% Fe. The SiO ₂ was found to range from 28.58 to 82.84% and Al ₂ O ₃ from 0.05 to 7.68%. The average Fe ₂ O ₃ :SiO ₂ +Al ₂ O ₃ ratio is 44.35%:50.3%. The Fe values of the BMQ samples were found varying from 10.1% to 41.3% with an average of 31.03%. Considering the prognosticated depth of 10 m and average bulk density as 3.37, the inferred resource is expected to be estimated to the tune of 3.40 million tonnes with average Fe content of 31.03%. It is of low-grade iron ore with high silica and alumina. A carbonatite body about 1 km east of Village Rapalli of 200 m length and width varying from 2 to 3 m was identified. From the Scanning Electron Microscope study, different mineral phases like calcite, dolomite, magnetite and Ti-Y-rich REE phase were identified.
REE							
Nagarkurnool and Nalgonda	Around Chandampet and Kalwakurthy area	1:12500	100.0	-	-	-	Reconnaissance survey for REE mineralisation in granitoids of Peninsular Gneissic Complex around Chandampet, Kalwakurthy area in parts of Nagarkurnool and Nalgonda districts was taken up by covering an area of 100 sq. km by Large-Scale Mapping on 1:12,500 scale. SEM studies confirmed presence of REE-bearing trace minerals like sphene, apatite, epidote etc. in the granites and pegmatites of the area.
Diamond							
Mahabubnagar and Vikarabad	Kodangal-Parigi blocks	1:50000	750.0	-	-	443	A reconnaissance survey for primary source rocks of diamond was carried out in Kodangal-Parigi blocks, Mahabubnagar and Vikarabad districts. Aerial Reconnaissance and Satellite

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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		
							imagery study of 1,500 sqkm and field reconnaissance survey of 750 sqkm were carried out on 1:50,000 scale with collection of 206 stream sediment samples, 206 heavy mineral samples, 25 petrological samples and 5 petrochemical samples. Systematic orientation stream sediment sampling was carried out in Parigi block to narrow down the target area. Heavy mineral concentrates were prepared and picked for Kimberlite Indicator Minerals. The garnets recovered from the Parigi block were non-kimberlitic in nature. The study of clasts >1.25 mm size and heavy mineral studies of stream sediment samples did not yield any diamond. The primary source rocks of diamond or kimberlite clan rocks could not be located.
DGM Limestone							
Suryapet	Cluster -1, Mellacheruvu block	1:125000	63.51	-	-	157	G4 stage exploration in the area was taken up under NMET fund.
	Cluster -2, Mettampalli block	1:125000	16.07	-	-	60	G4 stage exploration in the area was taken up under NMET fund.
	Cluster -3, Raghunathpuram	1:125000	51.10	-	-	179	G4 stage exploration in the area was taken up under NMET fund.
	Cluster -5, Ramapuram	1:125000	61.37	-	-	36	G4 stage exploration in the area was taken up under NMET fund.
	Cluster -6, Dondapadu	1:125000	51.40	-	-	88	G4 stage exploration in the area was taken up under NMET fund.
Nalgonda	Cluster -4, Damarcherla	1:125000	19.86	-	-	52	G4 stage exploration in the area was taken up under NMET fund.
Vikarabad	Cluster -7, Jeewangi	1:125000	17.72	-	-	18	G4 stage exploration in the area was taken up under NMET fund.
	Cluster -8, Malkapur	1:125000	22.96	-	-	21	G4 stage exploration in the area was taken up under NMET fund.

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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		
Suryapet	Sultanpur RF block, Mattampalli Mandal	1:5000	1.36	3	130.00	142	During G3 level exploration, a net in-stu resources of 80.21 million tonnes were estimated under UNFC code 333.
	Pasupulabodu RF block, Nereducherlai Mandal	1:5000	1.39	3	108.00	95	During G3 level exploration, a net in-stu resources of 41.68 million tonnes were estimated under UNFC code 333.
	Siadulnama RF block, Palakeedu Mandal	1:5000	1.70	3	127.00	136	During G3 level exploration, a net in-stu resources of 71.86 million tonnes were estimated under UNFC code 333.
The Singareni Collieries Company Ltd. (SCCL)							
Coal							
Adilabad, Khammam, Karimnagar and Warangal	Lingala- Koyagudem, Anisettipalli- Monubothulagude, Sattupalli- Chintalapudi, Ramagundem, Mulug, Dorli- Belampalli, Somagudem- Indaram Kaghaznagar coal belts	-	11.50	326	99544.0	-	During 2018-19, SCCL explored the area to locate the presence of economic viable coal deposits and established its nature, shape and grade. An area of 11.50 sqkm was mapped in Lingala-Koyagudem coal belt, Kothagudem coal belt, Anisettipalli-Monubothulagude, Sattupalli-Chintalapudi coal belt, Manuguru-Cherla coal belt, Ramagundem coal belt, Mulug coal belt, Dorli-Belampalli coal belt, Somagudem-Indaram coal belt and Kaghaznagar coal belt. A total of 326 exploratory boreholes were drilled to a cumulative depth of 99,544.0 m and resources of 156.60 million tonnes with cumulative resources at the end of 2018-19 at 10,622.32 million tonnes were established. The exploration work was carried out in the SCCL command area situated in Adilabad, Khammam, Karimnagar and Warangal districts of Telangana State.
Rashtriya Ispat Nigam Ltd							
Dolomite							
Khammam	Madharam dolomite mine (384.46 ha), Madharam village, Karepally Taluka	-	-	20	1000.00	-	The tentative total geological resources has been estimated at about 80 million tonnes. The final reserves/resources estimation are in progress.

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**Table – 4: Mineral Production in Telangana, 2016-17 to 2018-19
(Excluding Atomic Minerals)**

(Value in ₹'000)

Mineral	Unit	2016-17			2017-18			2018-19 (P)		
		No. of mines	Qty	Value ^s	No. of mines	Qty	Value ^s	No. of mines	Qty	Value ^s
All Minerals		34		116783984	36		113287672	36		113877664
Coal	'000t	-	61336	-	-	62010	-	-	65160	-
Iron Ore	'000t	-	-	-	-	6	4514	-	2	1290
Manganese Ore	t	5	13262	66514	5	17373	80232	6	10295	57065
Limestone	'000t	29	24720	4959547	31	27367	5464824	30	30895	6081207
Minor Minerals @		-	-	111757923	-	-	107738102	-	-	107738102

*\$ Excluding fuel minerals.**@ Figures for earlier years have been repeated as estimates, wherever necessary because of non-receipt of data.***Table – 5 : Principal Mineral-based Industries**

Industry/plant	Capacity ('000 tpy)	Industry/plant	Capacity ('000 tpy)
Aluminium Foil			
Hindalco, Kollur, Medak	4	My Home Cement Industries Ltd, Mellacheruvu, Distt Nalgonda	3300
Asbestos Products			
Bhagyanagar Wood Plast Ltd, Nandikandi, Distt Medak	60	NCL Industries Ltd, Simhapuri, DisttSuryapet	2000
Hyderabad Industries Ltd, Sanathnagar, Distt Rangareddy	160	Orient Cement, Devapur, Distt Adilabad	3000
Hyderabad Industries Ltd, Thimmapur	230	Penna Cement Industries Ltd, Tandur, Distt Rangareddy	2000
J.J. Spun Pipe Industries, Arsapalli, Distt Nizamabad	4.5	Penna Cement Industries Ltd, Ganeshpahad, Distt Nalgonda	1200
Visaka Industries Ltd, Medak	36	Rain Commodities Ltd (Rain Cements), Ramapuram, Distt Nalgonda	4000
Bleaching Clay			
Ashapura Clay Tech. Ltd, Dharur, Distt Rangareddy	20 (Fuller's earth granules) 15 (Bentonite granules)	Sagar Cements Ltd, Mattampally, Distt Nalgonda	2650
Cement			
Anjani Portland Cements Ltd (Subs. of Chettinad Cement), Anjanipuram, Distt Nalgonda	1200	Sri Lalita Cement, Mattampally, Distt Nalgonda	1000
CCI Ltd, Tandur, Distt Rangareddy	1000	Zuari Cements Ltd (Sri Vishnu Cements Works), Dondapadu, Sitapuram, Distt Nalgonda	1200
Bheema Cement Nalgonda	900	Ceramic/Sanitaryware	
Greygold Cement Nalgonda	90	Hindustan Sanitaryware & Industries Ltd, Bibinagar, Distt Nalgonda	1.8
Deccan Cements Ltd, Bhavanipuram, Distt Nalgonda	2300	Montana International Ltd, Faralwadi, Distt Medak	3.6
India Cement Ltd, Malkapur Distt Rangareddy	2400	Restile Ceramics Ltd, Malkapur, Distt Medak	1.4 (mill. sq m)
India Cement (Raasi Cements), Vishnupuram Distt Nalgonda	3500	Fertilizer	
Keerthi Industries Ltd, Mellacheruvu, Distt Nalgonda	590	Chemtech Fertilizers Ltd, Kazipalli, Medak	33 (SSP)
Kesoram Cement, Basantnagar, Distt Karimnagar	6000	Sponge Iron	
Mancherial Cement Co. (P) Ltd, Mancherial, Distt Adilabad	330	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

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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

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Table - 5 (concl'd)

Industry/plant	Capacity ('000 tpy)
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

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.