

STATE REVIEWS



Indian Minerals Yearbook 2018

(Part- I)

57th Edition

STATE REVIEWS
(Chhattisgarh)

(FINAL 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

November, 2019

CHHATTISGARH

Mineral Resources

Chhattisgarh is the sole producer of tin concentrates and moulding sand. It is one of the leading producers of coal, dolomite, bauxite and iron ore. The State accounts for about 36% tin ore, 20% iron ore (haematite), 18% coal, 11% dolomite and 4% each diamond & marble resources of the country. Important mineral occurrences in the State are **bauxite** in Bastar, Bilaspur, Dantewada, Jashpur, Kanker, Kawardha (Kabirdham), Korba, Raigarh & Sarguja districts; **china clay** in Durg & Rajnandgaon districts; **coal** in Korea, Korba, Raigarh & Sarguja districts; **dolomite** in Bastar, Bilaspur, Durg, Janjgir-Champa, Raigarh & Raipur districts; and **iron ore (haematite)** in Bastar district, Dantewada district (Bailadila deposit), Kanker district (Chhote Dongar deposit), Rajnandgaon district (Rowghat, Chargaon, Metabodeli & Hahaladdi deposits) & Durg district (Boria Tibbu deposits in Dalli-Rajhara area). Bailadila-Rowghat hill ranges in the State are considered to be one of the biggest iron ore fields in India. **Limestone** occurs in Bastar, Bilaspur, Durg, Janjgir-Champa, Kawardha (Kabirdham), Raigarh, Raipur & Rajnandgaon districts; **quartzite** in Durg, Raipur, Rajnandgaon & Raigarh districts; and **talc/soapstone/steatite** in Durg & Kanker districts.

Other minerals found in the State are **corundum** in Dantewada district; **diamond** and other gemstones in Raipur, Mahasamund & Dhamtari districts; **fire clay** in Bilaspur, Raigarh & Rajnandgaon districts; **fluorite** in Rajnandgaon district; **garnet & marble** in Bastar district; **emerald & gold** in Raipur district; **granite** in Bastar, Kanker & Raipur districts; **quartz/silica sand** in Durg, Jashpur, Raigarh, Raipur & Rajnandgaon districts; and **tin** in Bastar & Dantewada districts (Table-1). The reserves/resources of coal are furnished in Table - 2.

Exploration & Development

The details of exploration activities conducted by GSI, NMDC and State DGM during 2017-18 are furnished in Table - 3.

Production

The important minerals produced in Chhattisgarh in 2017-18 were coal, bauxite iron ore, tin (conc.), limestone and moulding sand.

The value of minor minerals production was estimated at ₹ 634 crore for the year 2017-18.

There were 109 reporting mines reporting in 2017-18 in case of MCDR minerals. Details are furnished in Table - 4.

Table – 1 : Reserves/Resources of Minerals as on 1.4.2015: Chhattisgarh

Mineral	Unit	Reserves						Remaining Resources						Total resources (A+B)
		Proved STD 111	Probable		Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)		
			STD121	STD122		STD221	STD222							
		(A)												
Bauxite	'000 tonnes	12537	218	2313	15068	15341	46389	37264	12892	23483	18747	158687	173755	
China Clay [#]	'000 tonnes	107	-	22	130	1272	1412	-	-	11422	-	14871	15001	
Corundum [#]	tonne	-	-	-	-	100	188	-	-	288	-	885	885	
Diamond	carat	-	-	-	-	-	-	-	-	1304000	-	1304000	1304000	
Dolomite [#]	'000 tonnes	34465	48130	11623	94218	29294	80865	150795	24412	511610	1950	823439	917657	
Fire clay [#]	'000 tonnes	315	23	94	433	68	27	7180	3400	10435	-	21126	21558	
Fluorite	tonne	-	-	-	-	65889	153132	185485	5573	126088	-	545455	545455	
Garnet	tonne	-	-	-	-	-	-	-	-	28800	-	28800	28800	
Gold														
Ore (primary)	tonne	-	-	-	-	-	-	-	600000	4241033	-	4841033	4841033	
Metal (primary)	tonne	-	-	-	-	-	-	-	1.8	3.71	-	5.51	5.51	
Graphite	tonne	6111	-	-	6111	1230	-	-	-	-	-	1230	7341	
Granite [#] (Dim. stone)	'000 cu m	-	-	-	-	-	-	-	-	50057	-	50057	50057	
Iron ore (Haematite)	'000 tonnes	1067636	78071	241730	1387437	255074	61735	921139	613433	801086	770827	3470687	4858124	
Iron ore (Magnetite)	'000 tonnes	8087	-	3096	11183	-	-	42	-	-	-	42	11225	
Limestone	'000 tonnes	1025180	7128	145576	1177885	1071824	751825	1332250	485933	5558135	-	9627377	10805262	
Marble [#]	'000 tonnes	-	-	-	-	-	-	-	-	83000	-	83000	83000	
Ochre	tonne	-	-	-	-	-	142	-	-	-	-	142	142	
Quartzite [#]	'000 tonnes	605	1524	1567	3696	575	7035	1856	-	15404	-	24870	28566	
Quartz-silica sand [#]	'000 tonnes	501	479	800	1780	389	282	789	56	642	7672	9856	11636	
Talc/soapstone-seaite [#]	'000 tonnes	22	-	8	30	-	-	-	70	8	-	78	108	
Tin														
Ore	tonne	2067	897	1455	4419	1508	2017	168457	559914	29063288	-	29795255	29799674	
Metal	tonne	44.56	94.02	15.62	154.20	917.02	342.02	16.85	813.29	13172.34	-	15470.95	15625.15	

Figures rounded off
Declared as Minor Mineral vide Gazette Notification dated 10.02.2015
Declared as Minor Mineral before Gazette Notification dated 10.02.2015

STATE REVIEWS

Table – 2 : Reserves/Resources of Coal as on 1.4.2018 : Chhattisgarh

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total	20327.71	34576.36	2201.90	57205.65
Sohagpur	94.30	10.08	-	104.38
Sonhat	364.83	2303.81	1.89	2670.53
Jhilimili	228.20	38.90	-	267.10
Chirimiri	320.33	10.83	31.00	362.16
Bisrampur	1235.92	612.80	5.15	1953.65
Bisrampur (East)	-	164.82	-	164.82
Lakhanpur	455.88	3.35	-	459.23
Panchbahini	-	11.00	-	11.00
Hasdeo-Arand	2032.28	3273.42	223.12	5528.82
Sendurgarh	152.89	126.32	-	279.21
Korba	5877.26	5783.70	168.02	11828.98
Mand-Raigarh	9515.39	19170.98	1563.04	30249.41
Tatapani-Ramkola	50.43	3066.25	209.68	3326.36

*Source: Coal Directory of India, 2017-18***Table – 3: Details of Exploration Activities in Chhattisgarh, 2017-18**

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI Coal							
Surguja	Sendur block, Tatapani- (Ramkola Coalfield)	-	-	-	2026.10	-	Regional exploration for coal has been carried out in this block. The survey comprised drilling of 2,026.10 m alongwith collection of coal core samples of 52.85 m and geophysical logging of 1,224.65 m. Three regional Barakar coal seams (Seam-II to III & XIII in ascending order) and a few local seams with thickness ranging from less than a meter to 29.86 m (cumulative thickness of Seam Zone III) have been intersected between the depths of 299.66 m and 762.13 m. Seam Zone III was observed to be the thickest. Geophysical logging showed good correlation with coal seams recorded by core logging.
Raigarh	Tendumuri block, (Mand-Raigarh Coalfield)	1:10000	3	-	2306.85	-	Exploration for coal was carried out in this area. Exploration involved large-scale mapping of 3 cu m area on 1:10000 scale, drilling of 2,306.85 m, geophysical logging of 1,151.56 m and 169.84 m coal core sampling. Twelve regional Barakar

(Contd)

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							coal seams/ zones (Seam I to X, XII & XIII in ascending order) have been intersected between the depths of 16.26 m and 659.61 m. Thickness of individual coal seam/ zone varied from 0.75 m to 14.67 m. Seam IV was reported to be the thickest seam with cumulative thickness of 14.67 m (in 2 split sections). Borehole data indicated three normal faults in the area.
	Jobro (West)block, (Mand- Raigarh Coalfield)	1:10000	3.5	6	2766.50	-	Exploration carried out for coal in this block which comprised a total drilling of 2,766.50 m in six boreholes, geophysical logging of 1,694.59 m, large-scale mapping of 3.5 sq. km area on 1:10000 scale and 158.09 m coal core sampling. Seven regional Barakar coal seams/ zones (Seam III, IV, V, VI+VII, VIII, IX & X in ascending order) and a few local coal seams within Raniganj Formation and Barren Measure have been intersected between the depths of 8.30 m and 576.95 m. Thickness of individual regional coal seam/ zone varied from 0.53 m to 17.09 m. Seam zone VI+VII was reported to be the thickest seam. The cumulative coal thickness varies from 7.69 m to 17.09 m. Seam V is another important and thick seam zone intersected in the block with a maximum coal thickness of 16.88 m.
Bauxite Jashpur	Sardhapat block,	-	4	88	1336.00	470	General exploration for bauxite was carried out in this area. Detailed mapping of 4.0 sq. km area was completed. A total of 88 boreholes were drilled to a cumulative depth of 1,336.00 m and 435 core samples, 10 each of BRS, PCS, XRD and 5 ore petrography samples were collected. A total of 48 boreholes encountered bauxite of thickness varying from 30 cm to 3.00 m.

(Contd)

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
REE							
Gariaband	Gobra-Salebhat areas,	-	-	-	-	-	Reconnaissance survey for REE and associated minerals have been carried out in this area. The mapped area comprises granite, grey granite, biotite rich granite, brecciated quartz reef, quartzo-feldspathic vein/ reef and dolerite/ gabbro dykes. The maximum value of tREE received so far has been 879 ppm. LREE-bearing mineral called allanite was observed to be scattered all over the slide in good amount.
Tungsten							
Balrampur	Nawadih-Pendari- Uskoni-Atauri area	1:12500	100	-	-	109	Reconnaissance survey for tungsten and associated mineralisation have been carried out in this area. An area of 100 sq km was mapped on 1:12500 scale. The main lithologies observed are biotite granite, orthogneisses and meta-sedimentaries of Chhotanagpur Gneissic Complex. The meta-sedimentaries comprise mainly of massive & schistose quartzites, calc-silicate, garnet-quartz-mica schist and meta-conglomerate. The general trend of the rocks is NW-SE with moderate to steep dips toward SW and NE. A total of 109 BRS were collected. The results of chemical analyses reveal very low values of tungsten (W<20 ppm) except in three samples that analysed more than 20 ppm. The highest value of tungsten observed was 153.6 ppm from a sample of pegmatite from Pendari area. Monazite, xenotime and allanite grains were detected in augen gneiss and quartz-tourmaline vein. A few grains of xenotime have been identified to be present in association with rutile and th-silicate in a quartz-tourmaline vein sample. Zircon grains have been observed in granite, augen gneiss, pegmatite, quartz-tourmaline vein, tourmalinite and in calc-silicate samples. Pyrite, gold, copper, chalcopyrite grains were identified in calc-silicate samples.

(Contd)

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Diamond							
(Kimberlite clan rocks)							
Gariaband and Dhamtari	-	-	-	-	-	105	During reconnaissance survey for Kimberlite clan rocks (KCR) in Gariaband and Dhamtari districts, a total of 150 stream sediment samples were collected and processed. The petrochemical data of two samples showed SiO ₂ values present in the range from 46.91% to 50.65% with high alumina (9.27% to 10.56%), Fe ₂ O ₃ (11.3 % to 12%) and CaO (7.69% to 5.84%). These rocks are also composed of high MgO (12.41% to 15.4%), high Cr values (1500 ppm to 1100 ppm), Ni values (425 to 490 ppm) and Co values with low K ₂ O values (0.51% to 0.71%).
Chromite							
Gariaband and Dhamtari	Dhawalpur Girhola and Gaorghat areas	-	-	-	-	105	The area shows presence of chromite-bearing rocks in the vicinity due to the presence of high chromium and nickel. The samples of garnets in the termite hills near Dhawalpur Girhola and Gaorghat areas were collected for analysis.
KCR							
Mahasamund, Gariaband & Raipur	Four target T-1 to T-4 blocks	-	-	--	200		Reconnaissance survey for KCR was carried out over an area of 700 sq km. Four target blocks T-1 to T-4 were demarcated for detailed ground checks and systematic stream sediment sampling. A total of 20 PS, 20 PCS and 10 PTS from mafic and ultramafic rocks were collected. Besides, a total of 150 stream sediment samples were collected and processed for heavy minerals separation and a total of 450 heavy mineral were selected for SEM-EDX and EPMA studies. Glauconitic sandstone was observed to be sporadic in layered nature. Presence of KCr is suspected based upon recovered Cr- spinel, Ilmenite & Cr- diopside. Gold occurrence was reported from 2nd order nala, west of Rajpalpur.

(Contd)

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Gold Mahasamund	Dongripali, Jamjuri & Kurupali area	1:12500	100	-	-	210	Reconnaissance survey for gold and associated sulphide mineralisation in this area comprising large-scale mapping of 100 sq km on 1:12500 scale and ASTER data study were taken up. Gabbro dyke with sulphide mineralisation and quartz vein with pyrite, galena mineralisation were found in the area. It was predicted that rocks suffered three phases of deformation. S_1 and S_2 are at low angle in most of the area. The trend of schistosity varies from NNE-SSW to NNW-SSE, with steep westerly and easterly dips. The outcrop pattern is controlled by S_2 schistosity. The later dykes and most of the quartz veins were observed to intrude along S_2 planes. About 50 m ³ of trenching and sampling were carried out in 8 locations across the strike to expose BIF and quartz veins. A total of 50 BRS, 145 nos. of stream sediments and 15 soil samples were collected for analysis. Gold grains were retrieved from one location through panning and the heavies were sent to the laboratory for analysis. Beryl mineralisation is found in granite and the sample has been submitted for REE analysis.
Glauconite Mahasamund	Around Bhalukona, Khairmal area	1:12500	100.0	-	-	-	G4 stage reconnaissance survey for glauconite and associated mineralisation was taken up around Bhalukona, Khairmal area. The area is represented by reddish brown and greyish white glauconitic as well as non-glauconitic quartz arenite and green to reddish-brown shale. The strike length of glauconite-bearing sandstone extends for about 14 km with width of about 150 to 400 m. The glauconitic band shows glauconites of various sizes (1 mm to 4 mm) and shapes (mainly elliptical), colour of glauconite grains varies from pale green to dark green to greenish black. The K_2O percentage in the glauconitic sandstone varied from 0.35 to 1.08% in BRS, 0.56 to 1.15% in PTS and 0.54 to 0.95% in PCS.

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Graphite							
Surguja	Kennapara, Tolkipara and Manikpur area	1:12500	107.0	-	-	-	G4 level reconnaissance survey comprising mapping followed by 46.52 cu m trenching and 10 Lkm geophysical survey along with collection of bedrock samples, petrochemical samples and trench samples were carried out. The graphite schist occurs associated with quartz sericite schist, grey quartzite and calc silicates. The graphite schist was reported as small lenses in the area with inconsiderable strike continuity. The graphite schist varied in length from less than 3 m to 50 m with width from less than 50 cm to 1.5 m. Fixed carbon content in a few samples varied from 7.6 to 25.2%.
Limestone							
Raigarh	Laladhurwa- Jognipali block	1:4000	4.0	33	1301.5	1162	G2 stage exploration for limestone was carried out in Laladhurwa-Jognipali block. The area comprises of limestone, at places it is traversed by calcite veins. Limestone has been intersected at an average depth of 1 m to 6 m. Out of the 33 boreholes drilled, 22 boreholes were considered positive. Pyrite crystals and calcite veins have been noted in cores. The types of samples like core samples, BRS, PCS, XRD collected were sent for analysis. The analytical results of 3 BRS samples and 10 PCS samples showed CaO value up to 45.34%. Analytical results of 110 core samples reported CaO value up to 51.43%.
DGM, Limestone							
Bhatapara- Balodabazar	Sarseni- Guma area	1:4000	2.70	35	1014.50	920	In one borehole presence of limestone up to a depth of 47.50 m was recorded. Resources estimated were at about 135.00 million tonnes.
Raipur	Kathia- Pachri, Bharuadih area	1:4000	3.61	46	1619.80	1585	Presence of limestone in one borehole up to a depth of 60.40 m from surface was recorded. Resources were estimated at about 180.00 million tonnes.
Jangir- Champa	Ghutia block, Tehsil Nawagarh	1:50000 1:4000	95.00 1.08		19	406.00	Limestone in this block was observed to occur from surface to 35.00 m below the ground. Resources were estimated at about 16.35 million tonnes under Indicated Category.
Bilaspur	Rahtator- Manwa block, Tehsil Masturi	1:50000 1:4000	95.00 0.36	6	135.50	160	Limestone of this block was recorded to occur from surface to a depth of 31.00 m. Resources were estimated at 13.33 million tonnes under Inferred Category.

(Contd)

STATE REVIEWS

Table - 3 (Contd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Raigarh	Kutela- Durgapali block, Tehsil Sarangarh	1:50000 1:4000	100.00 1.16	20	459.00	386	Limestone presence from surface to a depth of 32.00 m was recorded. Resources were estimated at 34.70 million tonnes under Indicated Category.
Bastar	Ichhapur area area	1:4000	3.51	35	1113.15	981	Resources were estimated at about 105.00 million tonnes.
MECL Bauxite Kabirdham	Saraipani Dadar, & Sendurkhar	1:2000	0.80	5	146.00	118	G4 stage exploration in this block was carried out with the objectives i)to prove existence of bauxite both along the longer axis and shorter axis of the plateau and ii)to know the quality and the thickness of bauxite horizons to assess the bauxite resources in the blocks both quantitatively and qualitatively etc. During exploration in Saripani Dadar block, MECL carried out mapping of 0.80 sq km area on 1:2000 scale; drilling of 5 boreholes for cumulative meterage of 146.00 m; sampling and analysis of 10 outcrops & 118 primary core samples for Al ₂ O ₃ , SiO ₂ , Fe ₂ O ₃ , TiO ₂ , LOI; 6 composite samples were analysed for CaO, MgO, Al ₂ O ₃ , SiO ₂ , Fe ₂ O ₃ , TiO ₂ , SO ₃ , P ₂ O ₅ , V ₂ O ₅ , Na ₂ O, K ₂ O & LOI; and 18 samples were sent for REE analysis. Estimated about i) 1.29 million tonnes net insitu bauxite resources with an average grade of 43.89% Al ₂ O ₃ , 6.86% SiO ₂ , 18.53% Fe ₂ O ₃ , 5.62% TiO ₂ and 24.00% LIO at 40% Al ₂ O ₃ and 8% SiO ₂ cut-off under reconnaissance category, ii) 1.55 million tonnes net in situ bauxite resources with an average grade of 34.45% Al ₂ O ₃ , 6.47% SiO ₂ , 27.44% Fe ₂ O ₃ , 4.69% TiO ₂ and 18.58% LOI at 30% Al ₂ O ₃ (Threshold value) under reconnaissance category. In Sendurkhar block, exploration work comprised 133.00 m drilling in 5 boreholes; 0.80 sq km area mapping on 1:2000 scale; sampling & analysis of 30 outcrops and 90 primary core samples for Al ₂ O ₃ , SiO ₂ , Fe ₂ O ₃ , TiO ₂ & LOI; analysis of 10 composite samples were analysed for CaO, MgO, Al ₂ O ₃ , SiO ₂ , Fe ₂ O ₃ , TiO ₂ , SO ₃ , P ₂ O ₅ , V ₂ O ₅ , Na ₂ O, K ₂ O and LOI. Besides, 25 samples were sent for REE

(Contd)

STATE REVIEWS

Table - 3 (Concl'd)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							analysis. About 32.00 million tonnes net insitu resources of reconnaissance categories at +30% Al ₂ O ₃ (Threshold value) have been estimated with average grade of 16.27% SiO ₂ and 34.35% Al ₂ O ₃ . The exploration in these two blocks was funded by NMET.
Bilaspur	Ranigaon Gondaiya block Kota Tehsil	1:10000	6.5	15	492.5	167	G3 level exploration was carried out with an objective i) to demarcate the limestone occurrence in the area by drilling boreholes at 400x400 m grid interval and ii) to find out quantity and quality of limestone, etc. The exploration was funded by NMET. The major rock formations of the area are dolomite, shaly limestone/dolomitic limestone and limestone of Raipur Group. Resources were estimated at 43.65 million tonnes of limestone with an average grade of CaO 44.54%, MgO 1.41%, SiO ₂ 8.18%, Al ₂ O ₃ 1.05%, Fe ₂ O ₃ 1.53% and LOI 38.16% under Inferred Category.
NMDC							
Iron Ore							
Chattisgarh							
Dantewada							
(South Baster)	Bailadile Iron ore Mines Bachel D-5	-	-	52	5451	-	-
	D-10	-	-	14	1010.5	-	-
	Kirandu complex Deposit-11 ML (11B,11C)	-	-	24	2079	-	-
	Kirandu complex Deposit-14 (Area 322.368H)	-	-	9	992	-	-
	Kirandu complex Deposit-14 NMZ (Area 506.742H)	-	-	10	727	-	-

STATE REVIEWS

**Table –4 : Mineral Production in Chhattisgarh, 2015-16 to 2017-18
(Excluding Atomic Minerals)**

(Value in `000)

Mineral	Unit	2015-16			2016-17			2017-18 (P)		
		No. of mines	Quantity	Value	No. of mines	Quantity	Value	No. of mines	Quantity	Value ⁵
All Minerals		104		67466692	117		77023499	109		98183494
Coal	'000 t	-	130605	-	-	138525	-	-	142546	-
Bauxite	t	11	1991455	1314345	13	1954234	1365345	13	2558453	2053953
Iron Ore	'000 t	15	26718	52780037	17	33285	60676299	17	34546	81490207
Tin Conc.	kg	6	13541	9231	6	12121	8736	6	16758	10139
Graphite (r.o.m.)	t	1	-	-	-	-	-	-	-	-
Limestone	'000 t	68	27667	7013331	77	32156	8622865	69	36352	8283771
Moulding Sand	t	3	26042	6117	4	27685	6623	4	7097	1793
Minor Minerals [@]		-	-	6343631	-	-	6343631	-	-	6343631

*Note : The number of mines excludes Fuel Minerals & Minor Minerals.**\$ Excluding Fuel Minerals.**@ Figures for earlier years have been repeated as estimates, wherever necessary, because of non-receipt of data.***Mineral-based Industry**

The present status of each Mineral-based Industry is not readily available. However, the principal mineral-based industries in the organised sector in the State are furnished in Table - 5.

Table – 5 : Principal Mineral-based Industries in Chhattisgarh

Industry/plant	Capacity ('000 tpy)
Aluminium	
Bharat Aluminium Co. Ltd (Unit I & II), Korba.	200 [#] (Alumina) 570 (Aluminium)
(#Plants remained non-operational during the year).	
Cement	
ACC Ltd, Jamul, Distt Durg.	2400
Ambuja Cements Ltd, Bhatapara, Distt Raipur.	3500
Bhilai Jaypee Cement Ltd, Bhilai, Distt. Durg (G).	2200
CCI Ltd, Akaltara, Distt Janjgir-Champa.	400
CCI Ltd, Mandhar, Distt Raipur.	380
Century Cement, Baikunth, Distt Raipur.	2100
J.K. Laxmi, Durg.	2.7
Fertilizer	
BEC Fertilizers, Sirgitti, Distt Bilaspur.	135 (SSP)
Dharamsi Morarji Chemical Co. Ltd, Kumhari, Distt Durg.	183 (SSP & H ₂ SO ₄)
Khaitan Chemicals & Fertilizers Ltd, Distt Rajnandgaon.	66 (SSP) 49.5 (H ₂ SO ₄)
Iron & Steel	
Bhilai Steel Plant, Bhilai.	8350 (Sinters) 4700 (Pig iron) 3925 (crude/liquid steel) 30 (Refractory bricks)
Jindal Steel & Power Ltd, Raigarh.	2300 (Sinters) 1370 (Sponge iron) 4000 (Crude/liquid steel)
Jayaswal NECO Industries Ltd, Siltara, Distt Raipur.	750 (Pig iron) 250 (Sponge iron) 1200 (Sinter) 400 (Steel) 792 (Pellets)

(Contd)

(Contd)

STATE REVIEWS

Table - 5 (Contd)

Industry/plant	Capacity ('000 tpy)
Sarda Energy & Minerals Ltd, (formerly Raipur Alloys & Steel Ltd), IGC, Siltara, Distt Raipur.	600 (Pellets) 210 (Sponge iron) 240 (Finished steel)
Shri Bajrang Power & Ispat Ltd, Borjhara, Distt Raipur.	210 (Sponge iron) 130 (Steel) 1200 (pellets)
Sponge Iron	
A.P.I. Ispat & Power Tech. Pvt. Ltd, Siltara Billets, Raipur	105
Alliance Integrated Metallics Ltd, Bemta, Distt Raipur.	500
Anjani Steel Ltd, Ujalpur, Distt Raigarh.	102
Arti Sponge & Power Ltd, Siltara, Distt Raipur.	45
Ambika Ispat (I) Pvt Ltd, Tarainal, Distt Raigarh.	30
Baldev Alloys Pvt. Ltd, Siltara, Raipur.	30
Bhagavati Power & Steel Pvt Ltd, Siltara, Distt Raipur.	60
B.S. Sponge Pvt Ltd, Taraimal, Raigarh.	30
Crest Steel & Power Pvt. Ltd, IGC Borai, Distt Durg.	115
Devi Iron & Power Pvt Ltd, Tandira, Distt Raipur.	30
Drolia Electro Steel Pvt Ltd, Siltara, Raipur.	66
Euro Pratik Ispat Pvt Ltd, Charoda, Distt Raipur.	30
Gravity Treksim Pvt Ltd, Siltara, Distt Raipur.	30
Godavari Power & Ispat Ltd, Siltara, Distt Raipur.	495 2100 (pellets)
Gopal Sponge & Power Pvt Ltd, Siltara, Distt Raipur.	30
Gitanjali Ispat & Power Pvt Ltd, Sirginiti, Distt Bilaspur.	30
GR Sponge & Power Ltd, Siltara, Distt Raipur.	37
Shree Hare Krishna Sponge Iron Ltd, Siltara, Distt Raipur.	210
Jai Shree Balaji Steel Pvt Ltd (HEG Ltd), Borai, Distt Durg.	120 (Sponge iron)
Hi-Tech Power & Steel Ltd, Parsada, Distt Raipur.	30

(Contd)

11-13

Table - 5 (Contd)

Industry/plant	Capacity ('000 tpy)
Ind Synergy Ltd, Kotmar, Distt Raigarh.	300
Indian Ispat & Power, Siltara, Distt Raipur.	30
Kalindi Ispat Pvt. Ltd, Belpan, Distt Bilaspur.	60
Khetan Sponge & Infrastructure Pvt. Ltd, Sarora, Distt Raipur.	30
Maa Kali Alloys (Ind.) Pvt Ltd, Pali, Distt Raigarh.	30
Mangal Sponge & Steel Pvt Ltd, Bilha, Bilaspur.	30
Mangala Ispat Pvt Ltd, Natvarpur, Distt Raigarh.	30
Millennium High-Tech Industries Ltd, Parsada, Distt Raipur.	30
MSP Steel & Power Ltd, Raigarh.	192 900 (pellets)
Monnet Ispat & Energy Ltd, Hasaud, Raipur.	300
Monnet Ispat & Energy Ltd, Naharpalli, Raigarh.	500
NR Sponge Pvt. Ltd, Raipur.	60
Nalwa Steel & Power Ltd, Taraimal, Raigarh.	198
Nakoda Ispat Ltd, Siltara, Raipur.	66
Navdurga Fuse Pvt. Ltd, Raigarh.	60
Nova Iron & Steel Ltd, Dagori, Bilaspur.	150
Nutan Ispat & Power Ltd, Jaroda, Raipur.	30
PD Industries Pvt. Ltd, Siltara, Raipur.	30
Prakash Industries Ltd, Hathenwra, Janjgir-Champa.	450
Raigarh Ispat & Power Ltd, Delari, Distt Raigarh.	30
Rameswaram Steel & Power Ltd, Gharghoda, Distt Raigarh.	30
Salasar Sponge & Power Pvt Ltd, Gerwani, Distt Raigarh	30
Shakambri Steel & Power Pvt Ltd, Raigarh.	30
Shakun Sponge Iron Pvt Ltd, Shirgitti, Distt Bilaspur.	30
Shivalaya Ispat & Power Pvt Ltd, Guma, Distt Raipur.	30
Shivshakti Steel Pvt. Ltd, Chakradharpur, Distt Raigarh.	100

(Contd)

STATE REVIEWS

Table - 5 (Contd)

Industry/plant	Capacity ('000 tpy)
Shri Sita Ispat & Power Pvt. Ltd, Borjhara, Distt Raipur.	30
Shree Radhe Industries Ltd, Silpahari, Bilaspur.	60
Shree Shyam Sponge & Power Ltd, Bachera, Distt Raipur.	30
Sidhi Vinayak Sponge Iron Pvt Ltd, Raigarh.	30
S.K. Sarawagi & Co. Pvt. Ltd, Siltara, Distt Raipur.	60
SKS Ispat & Power Ltd, Siltara, Distt Raipur.	270
Singhal Enterprises Pvt. Ltd, Taraimal, Distt Raigarh	156
Sree Nakoda Ispat Ltd, Siltara, Distt Raipur.	66
Sunil Ispat & Power Ltd, IGC Siltara, Distt Raipur.	115
Sunil Sponge Iron Ltd, Chiraipani, Distt Raigarh. Topworth Steel Pvt. Ltd, Rasmada, Distt Durg.	105 60
Trimula Sponge Iron Pvt. Ltd, Siltara, Raipur.	30
Vandana Global Ltd, Siltara, Distt Raipur.	231
Vasvani Industries Ltd, Siltara, Distt Raipur.	30
Vidhyan Minerals India Pvt. Ltd, Bilaspur.	30
Ferro Alloys	
Alok Ferro Alloys Ltd, Urla, Raipur.	18
Deepak Ferro Alloys Ltd, Urla, Distt Raipur.	5

(Contd)

Table - 5 (Concl'd)

Industry/plant	Capacity ('000 tpy)
Indsil Energy & Electro Chemical Ltd, Urla, Distt Raipur.	19.2
Hira Ferro alloys Ltd, Urla, Distt Raipur.	61.5
Jindal Steel & Power Ltd, Kharsia, Distt Raigarh.	36
Sarda Energy & Minerals Ltd, (merged Chhattisgarh Electricity Co. Ltd) Siltara, Distt Raipur.	45 MVA
Monnet Ispat Ltd, Hasaud, Raipur.	80
Nav-chrome Ltd, Urla, Distt Raipur.	50
Standard Chrome Ltd, Barmuda, Distt Raigarh.	15
Tirumala Balaji Alloys Pvt. Ltd, Raigarh.	21
Refractory	
SAIL Refractory Unit (formerly Bharat Refractories Ltd), Bhilai, Distt Durg.	60
Vishva Vishal Engineering Ltd, Bhilai, Distt Durg.	8.2
Silicon Carbide Crucible	
M.P. Carbon (Pvt) Ltd, Raipur.	NA

(G); Grinding Unit

Note: Data, not readily available for fertilizer and cement industries on respective websites, is taken from Indian Fertilizer Scenario, 2015/FAI Statistics, 2015-16 and Survey of Cement Industry & Directory, 2016 respectively.