

STATE REVIEWS



# Indian Minerals Yearbook 2015

(Part- I)

54<sup>th</sup> Edition

STATE REVIEWS  
(Chhattisgarh)

(FINAL RELEASE)

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## 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 and 11% dolomite 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 Korba, Korba, Raigarh & Sarguja districts; **dolomite** in Bastar, Bilaspur, Durg, Janjgir-Champa, Raigarh & Raipur districts; and **iron ore (haematite)** in Bastar district, Bailadila deposit in Dantewada district, Chhote Dongar deposit in Kanker district, Rowghat, Chargaon, Metabodeli & Hahaladdi deposits in Rajnandgaon district, Boria Tibbu deposits in Dalli-Rajhara area, Durg district. 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 **talcs/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 2014-15 are furnished in Table - 3.

### Production

The value of mineral production (excludes atomic mineral and value for February and March in respect of 31 minerals declared as minor mineral vide Gazette notification dated 10.02.2015) in Chhattisgarh at ₹ 24,588 crore in 2014-15, increased by about 29% as compared to that in the previous year. The State is ranked fourth in the country and accounted for about 9% of the total value of mineral production. The important minerals produced in the State in 2014-15 were coal, iron ore, limestone, bauxite, dolomite, quartzite, tin (concentrate) and quartz which together accounted for about 97% of the total value of mineral production in the State.

Chhattisgarh was the leading producer of coal and dolomite contributing 22% and 39%, respectively to the total production of the country. It was also second largest producer of iron ore with contribution of 23% to the total production. During the year under review, production of bauxite increased by 19%, limestone by 11% and coal by 6% whereas in tin concentrates, the production declined by 29% as compared to that of the previous year (Table-4).

The value of production of minor minerals was estimated at ₹ 627 crore for the year 2014-15.

The number of reporting mines in Chhattisgarh was 215 in both the year 2013-14 and 2014-15.

**Table – 1 : Reserves/Resources of Minerals as on 1.4.2010/1.4.2013\* : Chhattisgarh**

Mineral	Unit	Reserves					Remaining Resources					Total Resources (A+B)		
		Proved STD111	Probable STD121	Total (A)	Feasibility STD211	Pre-feasibility STD221	Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)			
													STD122	STD222
Bauxite*	'000 tonnes	12594	2958	4793	20344	9796	4511	45865	33764	11792	23041	18747	147516	167860
China Clay#	'000 tonnes	834	-	344	1178	480	765	1076	-	-	11512	-	13832	15009
Corundum**	tonne	-	310	288	597	-	-	-	-	-	288	-	288	885
Diamond*	carat	-	-	-	-	-	-	-	-	-	1304000	-	1304000	1304000
Dolomite**	'000 tonnes	42255	47293	12341	101889	26119	77833	21170	150795	24412	514437	1950	816716	918604
Fireclay#	'000 tonnes	-	23	12	35	-	27	-	7180	3400	10336	-	20943	20978
Fluorite*	tonne	-	-	-	-	65889	153132	9288	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
Granite (Dim. stone)	'000 cu m	-	-	-	-	-	-	-	-	-	50057	-	50057	50057
Iron ore*														
(Haematite)	'000 tonnes	1091050	52350	215600	1359000	247902	16700	81970	175945	527563	873508	748715	2672303	4031303
Limestone	'000 tonnes	856930	10962	30004	897896	46468	742220	80465	1331984	480812	5379600	-	8061550	8959446
Marble	'000 tonnes	-	-	-	-	-	-	-	-	-	83000	-	83000	83000
Quartz-silica sand#	'000 tonnes	141	-	46	187	385	-	620	56	-	191	7672	8924	9111
Quartzite*	'000 tonnes	1404	-	1267	2672	3086	3926	2195	-	-	14706	-	23913	26584
Talc/soapstone														
steatite#	'000 tonnes	22	-	8	30	-	-	-	-	70	8	-	78	108
Tin*														
Ore	tonne	4288	976	1709	6973	168	1736	38	168457	559914	29063387	-	29793700	29800703
Metal	tonne	958.26	189.56	33.37	1181.19	8.3	156.06	0.2	813.29	209.43	13118.16	-	14305.44	15486.63

Figures rounded off.

\* Reserves/Resources as on 1.4.2013.

# Declared as minor mineral vide Gazette notification dated 10.02.2015.

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**Table – 2 : Reserves/Resources of Coal as on 1.4.2015 : Chhattisgarh**

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
<b>Total</b>	<b>18237.00</b>	<b>34390.09</b>	<b>2285.11</b>	<b>54912.20</b>
Sohagpur	94.30	10.08	-	104.38
Sonhat	199.49	2463.86	1.89	2665.24
Jhilimili	228.20	38.90	-	267.10
Chirimiri	320.33	10.83	31.00	362.16
Bisrampur	1141.94	487.98	-	1629.92
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	5651.14	5936.50	168.02	11755.66
Mand-Raigarh	7910.12	19036.75	1651.40	28598.27
Tatapani-Ramkola	50.43	2826.28	209.68	3086.39

*Source: Coal Directory of India, 2014-15.***Table – 3: Details of Exploration Activities in Chhattisgarh, 2014-15**

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b>							
<b>Coal</b>							
Raigarh (Mahanadi Valley Coalfield)	Samarsingha block, Mand- Raigarh Coalfield	-	-	3	789.8	-	A total of 789.80 m was drilled in three boreholes, namely, MRSS-12 to 14 during Regional exploration for coal. Surface and sub-surface data accrued through investigation during the period reveal that the strike of the beds is NW-SE with 2° to 4° dipping towards south-west. A total of nine regional Barakar coal seams (I, II, IV to IX & XIII in ascending order) have been intersected between depths of 106.68 m (MRSS-14) and 668.55 m (MRSS-14). Thickness of coal seams varies from 1.94 m (Seam VIII; MRSS-14) to 8.38 m (Seam IV; MRSS-14). Seam I is an important seam with thickness varying from 5.65 m (cumulative, MRSS-13) to 7.81 m (cumulative, MRSS-14) and has been intersected in the depth range of 450.72 m (MRSS-13) to 668.55 m (MRSS-14). The continuity of the coal seam has been established along dip direction towards south-west for about 5 km. Coal seams are inter-banded in nature and quality-wise are of power grade.
Raigarh (Mahanadi Valley Coalfield)	Purunga Block, Mand-Raigarh Coalfield	1:10000	4	9	4472.4	-	A total of 4,472.40 m drilling was achieved during Regional exploration (Contd.)

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Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							for coal in nine boreholes. Among these six boreholes have been completed (MRPR-1 to MRPR- 6) and three boreholes are in progress (MRPR-7, MRPR-8 and MRPR-9). Altogether, twelve regional Barakar coal seams (I to X, XII & XIII in ascending order) were intersected. Thickness of individual coal seam varies from 0.53 m (Seam no. X in borehole MRPR-1) to 10.74 m (Seam no. IV in borehole MRPR-2). The block area is covered by Lithounits of Barren Measures and Barakar Formation. A total of 1,581.85 m geophysical logging and a total of 4 sq km large-scale mapping (RF 1:10000) has been carried out.
<b>Coal</b>							
Raigarh (Mahanadi Valley Coalfield)	Amlidhonda block, Mand- Raigarh Coalfield	-	-	2	541.75	-	During regional exploration for coal, a meterage of 541.75 m was drilled in two boreholes during this period viz. MRA- 15 (in part) & 17. The strike of beds is NW- SE with 2° to 4° south-westerly dip. The area of investigation is covered with rocks of Barren Measures. During this period, the maximum intersected thickness of Barren Measures of 105.05 m have been recorded in borehole MRA-17 located at the western part. This litho-sequence is marked by dominance of argillaceous facies represented by grey shale, siltstone and ironstone shale bands, interspersed with a few arenaceous units of fine to medium-grained, cross laminated sandstone. The contact between the Barren Measures and Barakar Formations is gradational in nature. A total of five regional coal seams (Seam- IV, VI+VII combined, IX and X in ascending order) and a few local seams have been intersected between the depths of 170.65 m and 318.84 m. Thickness of individual coal section varies from 0.69 m to 2.56 m. The coal seams have been traced for nearly 4 km in strike and 4 km in dip direction within the block. Most of the seams, particularly the thicker seams, are interbanded in nature and are of power grade.
Raigarh (Mahanadi Valley Coalfield)	Gare (South) block, Mand- Raigarh Coalfield	1:10000	-	12	5171	-	The regional exploration for coal was commenced in June 2014 with initiation of large-scale mapping on RF: 1:10000. Sub-surface probing by drilling was undertaken on 1 <sup>st</sup> September 2014 with deployment of two drill rigs from an outsourced agency. The area exposed argillaceous rocks of Barren Measures

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Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							conformably overlying the arenaceous rocks of Barakar Formation. During this period, 5,171.00 m drilling has been achieved in twelve boreholes, viz., MRGS-1 to MRGS-12 (all completed). Seven regional Barakar coal seams / zones (Seam nos. III, IV, V, VI+VII, IX & X in ascending order) have been intersected between the depths of 166.15 m (Seam X, MRGS-5) and 516.87 m (Seam III, MRGS-12). Thickness of individual coal seam/zone varies from 0.51 m (Seam V, MRGS-12) to 13.24 m (Seam VI + VII in four split sections, MRGS-9). A total of 3,307.62 m geophysical logging was carried out in this block.
<b>Coal</b>							
Surguja (Son Valley Coalfield)	Pipraul block, Tatapani- Ramkola Coalfield	1:10000	4	6	3346.6	-	Regional exploration for coal under G2 stage was continued. Coal exploration was commenced in November 2013 under promotional programme. During the period, a total of 3,346.60 m drilling was achieved in six boreholes namely TRP-3 to 8. Large-scale geological mapping of 4 sq km area was carried out on 1:10000 scales. One East-West trending fault, identified in the north central part of the block has been found passing just south of borehole TRP-1 separating the exploration area in two lithologically distinct zones in north and south. Eleven regional Barakar coal seams (Seam-I to IX, XII, XIII in ascending order) and a few local seams with thickness ranging from 0.50 m to 17.17 m (cumulative) have been intersected between the depths of 8.94 m and 757.15 m. During this period, Seam-III Top & Bottom occurs as the thickest seam in the studied area which is interbanded in nature and generally occurs in two split sections. The investigation is under progress.
<b>Bauxite</b>							
Kabirdham	Chilpi area	-	2.5	-	-	12	G4 stage investigation for bauxite was carried out. A base map was prepared for 2.5 sq km and a total of 4 nos. of BRS, 2 nos. of PCS, 6 no. of samples for chemical analysis were collected. Due to non-availability of forest clearance of this project, a new item was taken up in Jawaharnagar-Khajri-Barpat-Chandadarhi area, Balrampur district, Chhattisgarh for bauxite ore investigation.
Balrampur	Jawaharnagar- Khajri-Barpat- Chandadarhi area	1:12500 1:5000	50 2	-	-	145	G4 stage investigation was carried out for bauxite ore. A total of 50 sq km area was covered by LSM (1:12500 scale), 2 (Contd.)

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Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							<p>sq km by DM of on 1:5000 scale and PT of 159.462 cu m. Collection of 25 BRS, 10 each of for PCS &amp; SEM studies, 50 each from PTS and channel samples was carried out. A total of 135 samples were processed for chemical analysis. The area mainly comprises Precambrian metasediments and metabasics, Deccan trap rocks and laterite of recent Age. Main lithologies encountered in the area are banded gneiss near Jawaharnagar, augen gneiss and amphibolite near Surbena. Aplite and quartz veins are intrusive in the banded gneiss. Foliation trend in augen gneiss varies from N75°E/27°SE to N50°W/15°SW. The laterite is characteristically red, yellow and brown in colour. It is pisolitic to massive type, porous and sparsely oolitic. Aluminous laterite occurs as irregular pockets and lenses throughout the mapped area. In the west of Village Karundha pockets of massive bauxite extends up to 200-300 m. In the east of Village Damchuan in a scarp section massive bauxite of 200 m length and 2 to 3.5 m thickness has been observed. Pisolitic/oolitic bauxite has also been observed in the Damchuan plateau. The size of the pisolites varies from 2 mm to 1 cm. In the south of Village Chandadarhi, pocket types of ore body that extend up to 1.5 km underlain by laterite have been observed with thickness varying from 0.5 to 1 m. About 15 pits have been excavated and results show the pocket nature of bauxites in Chandadarhi plateau. Laterite was also observed to the east of the Villages Premnagar, Bijatoli and Mahuatoli which reportedly also contains a few lenses of bauxite at places. The laterite is characteristically red, yellow and brown in colour. It is pisolitic to massive type, porous and sparsely oolitic. Aluminous laterite was observed in the south of Village Damchuan. A pit size of 97.61 m<sup>3</sup> volume was excavated which showed the presence of pocketed nature of bauxite. Detailed mapping was carried out in Damchuan Block. Aluminous laterite was observed in and around Village Damchuan. Massive and pisolitic bauxite occurs between 1,020 m to 1,040 m above msl in Damchuan, between 980 m and 1,100 m above msl in Chandadarhi and 1,100 m above on the surface as pockets in north of Village Khajri. In the west of Village</p>

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Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							Karundha, pockets of bauxite extend laterally for 200 metres. Chemical analytical data for 22 BRS, 34 channel, 20 Pit and 03 PCS samples was received from Chemical Division, GSI Nagpur. $Al_2O_3$ values ranged from 47.81 to 54.17% in BRS, 30.31 to 58.42% in channel sample, 30.75 to 58.27% in pit sample for bauxite and 24.46 to 37.98% for laterite in BRS. $SiO_2$ ranged from 1.21 to 4.95% for bauxite and 6.59 to 10.85% for laterite in BRS.
<b>Diamond</b>							
Gariaband	Mainpur Kimberlite Field	1:50000 1:5000	700 5	-	-	380	G4 stage investigation to locate kimberlite/lamproite bodies was taken up. Photogeology and Remote Sensing and Aeromagnetic studies of 700 sq km area on 1:50000 scale were completed and base map was prepared. Reconnaissance mapping was carried out in toposheet No. 64 L/2 covering 700 sq km area and DM of 5 sq km area on 1:5000 scale was completed. About 162 stream sediment samples, 24 PCS, 32 PS and 162 samples for HMS were collected. The area constitutes granites of Bundeli granitoids, sandstone of Chhattisgarh Supergroup and intrusive mafic dykes. Three dykes have been observed in the area, which are hard, compact, fine to medium-grained and are trending N35°W-S35°E. A volcanic rock having 40 m × 30 m dimension is found to be present in the vicinity of the newly found ultramafic and mafic dyke. The investigation has been completed.
Gariaband	Mainpur Kimberlite Field	1:50000	700	-	-	410	G4 stage investigation was taken up in the Mainpur Kimberlite Field to search for kimberlite clan rocks. A base map was prepared with inputs from PGRS studies. An area of 700 sq km was covered by reconnaissance mapping on 1:50000 scale and 180 SSS, 20 of PCS, 30 PS, and 180 HMS were collected. Field work was also carried out around Kodomali, Dhawalpur, Behradih and Parkom lamprophyre field in Gariaband area to study the known kimberlites/lamprophyres/lamproites. The investigation has been completed.

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Table - 3 (Contd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>Gypsum</b>							
Bemetara	Akola-Patora- Bhusandi-Karesara area	-	2	3	730.5	-	G4 stage investigation for gypsum was taken up. An area of 2 sq km (DM) was investigated for gypsum by surface sampling and drilling. A total of 730.5 m drilling has been carried out in three boreholes and the 4 <sup>th</sup> borehole is in progress. Gypsiferous shale is the major lithounit intersected in the BH No. CBA-1, 2 & 3. In CBA-1, bedded gypsum with 1 mm to 6 cm thickness and small pockets of gypsum have been intersected at the depth of 33.5 m and further in depth. In CBA-2, gypsum bands of 1 mm to 2.07 m thickness have been intersected at the depth of 6.5 m and below. About 2.07 m thick massive type gypsum has been intersected at 166.85 to 168.92 m depth. In CBA-3, gypsum of 1 mm - 4 cm thickness was intersected at a depth of 81.4 m and below at Village Dudhia. Gypsiferous shale is the major lithounit intersected in the CBA-3, where gypsum horizon with varying thickness from 1 mm to 3 cm has been intersected from 5.85 m depth onwards. CBA-4 located at Village Khursbod has been drilled to a depth of 100.5 m so far. Gypsum bands with 1 mm to 1.5 cm thickness have been intersected in this borehole at a depth of 42.6 m and below.
<b>REE</b>							
Gariaband	Gobra-Pendra area	-	-	-	-	-	G4 stage investigation for REE was taken up. The area is covered by granitoids (Dongargarh Granitoids) exposed in the low lying area as well as in the high hills. Aplites (microgranite), quartz veins, quartz reefs and epidote veins occur within the granitoids. Numerous mafic dykes trending NW-SE are found as intrusions in the area. Intersection of two major faults (Gadchiroli and Sondur faults) has been noticed in the area. The granitoids of Dongargarh Granite Formation is the major lithounit of the area. The area exposed coarse-grained granite, coarse-grained porphyritic granite, medium-grained pink/grey granitoids, biotite granite and patches of Older Bengal Group of rocks. REE values of 4 BRS samples have been received and plotted in La/Gd vs Eu/Eu* plot. BRS-1 is falling

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Table - 3 (Concl'd.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							in Placer Monazite field. Plotting study reveals that LREE is enriched along with 'negative europium' anomaly which is comparable with the granitoids of the area. High CeN/YbN and LaN/YbN ratios of BRS-1 and BRS- 3 represent more evolved/fractionated magma compared to the others. Thorium shows high values of 414 ppm & 389 ppm in SS samples and 166 ppm in BRS-1 sample. The investigation has been completed.
<b>NMDC</b>							
<b>Iron ore</b>							
Dantewada	Bailadila Iron ore deposit, South Bastar	-	-	25	2135.5	-	NMDC carried out exploration for iron ore in Bailadila Iron Ore deposit (Deposit nos. 14 & 11 C: 1943.5 m drilling in 23 boreholes with 100 m grid and Deposit no. 10/11 A: 192 m drilling in 02 boreholes).
<b>State Directorate of Geology &amp; Mining</b>							
<b>Coal</b>							
Surguja	Ghatun-Birjupali area	1:50000 1:4000	20 1.1	-	-	-	Survey work was carried out.
-do-	Tara area	1:50000 1:4000	25 0.5	01	214.5	-	A total of 19.08 m core and 05 rock sampling along with 5 lakh tonnes coal resources estimation have been done.
<b>Bauxite</b>							
Kabirdham	Darai area	1:50000 1:4000	153 1.79	174	1594	969	Exploration conducted in the area estimated about 5 lakh tonnes of bauxite.
Raigarh & Surguja	Kindha area, Dandkeshra block	1:50000 1:4000	128 2.11	137	1483.6	1098	Exploration conducted in the area estimated about 6 lakh tonnes of metal-grade bauxite.
<b>Dolomite</b>							
Bastar	Bamhani area	1:50000 1:4000	305 1.01	-	504.4	264	A total of 10 lakh tonnes of dolomite resources has been estimated.
Janjgir-Champa	Pachri-Bhalwahi	1:50000 1:4000	20 0.40	-	31	39	A total of 50 lakh tonnes of BF-grade dolomite resources has been estimated.
<b>Granite</b>							
Bastar/Kanker	Mudpar-Bundeli-Bhanbhera area	1:50000	30	-	-	-	About 54,000 cu m resources of granite have been inferred.
<b>Limestone</b>							
Janjgir-Champa	Dhabadih area	1:50000 1:4000	408 2.06	42	1317.7	1121	A total of 450 lakh tonnes of limestone resources has been estimated.
Raipur	Kesla area	1:50000 1:4000	77 1.598	37	1111.55	1056	A total of 514.68 lakh tonnes of limestone resources has been estimated.
Rajnandgaon	Tekapur-Kalkasa	1:50000 1:4000	29.6 01	34	1015.15	951	A total of 589.70 lakh tonnes of limestone resources has been inferred.

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**Table – 4 : Mineral Production in Chhattisgarh, 2012-13 to 2014-15  
(Excluding Atomic Minerals)**

(Value in ₹ '000)

Mineral	Unit	2012-13			2013-14			2014-15 (P)		
		No. of mines	Quantity	Value	No. of mines	Quantity	Value	No. of mines	Quantity	Value
<b>All Minerals</b>		<b>196</b>		<b>188400750</b>	<b>215</b>		<b>190922002</b>	<b>215</b>		<b>245884613</b>
Coal	'000t	60	117900	90750800	61	127200	89275000	61	134800	139855400
Bauxite	t	12	1818169	1117536	12	1314129	859657	13	1565562	1048811
Iron Ore	'000t	11	27963	87739541	11	29250	89293192	14	29418	92958372
Tin Conc.	kg	6	47774	24962	6	34862	22791	6	24689	15198
Dolomite <sup>#</sup>	t	40	1970136	573523	42	2637734	903121	43	2437702	825904
Fireclay <sup>#</sup>	t	1	2570	643	-	-	-	-	-	-
Graphite (r.o.m.)	t	-	-	-	1	1403	631	1	-	-
Limestone	'000t	53	20172	3752473	67	21217	4249587	62	23505	4882559
Quartz <sup>#</sup>	t	5	17009	6804	6	14784	5845	5	4705	2113
Quartzite <sup>#</sup>	t	6	42524	43514	6	31119	33732	7	19696	20813
Moulding Sand	t	1	2613	392	3	29323	4675	3	6383	1672
Talc/soapstone/ steatite <sup>#</sup>	t	1	440	132	-	-	-	-	-	-
Minor Minerals <sup>@</sup>		-	-	4390430	-	-	6273771	-	-	6273771

*Note : The number of mines excludes minor minerals.*

*@ Figures for earlier years have been repeated as estimates, wherever necessary, because of non-receipt of data.*

*# Declared as minor mineral vide Gazette notification dated 10.02.2015.*

**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)
<b>Aluminium</b>	
Bharat Aluminium Co. Ltd (Unit I & II), Korba.	200* (Alumina) 570* (Aluminium)
(*excludes 100 thousand tonnes of Unit I as non operational; 325 thousand tonnes of Unit II is under trial run; # Plants remained non-operational during the year.)	
<b>Cement</b>	
ACC Ltd, Jamul, Distt. Durg.	1580
Ambuja Cements Ltd, Bhatapara, Distt. Raipur.	2900
Bhilai Jaypee Cement Ltd, Bhilai, Distt. Durg (G).	2200

(Contd.)

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
CCI Ltd, Akaltara, Distt. Janjgir-Champa.	400
CCI Ltd, Mandhar, Distt. Raipur.	380
Century Cement, Baikunth, Distt. Raipur.	2100
J. K. Laxmi, Durg.	1700
Lafarge India Pvt. Ltd, Arasmeta, Distt. Janjgir-Champa.	1600
Lafarge India Pvt. Ltd, Sonadih, Distt. Raipur.	550
Shree Cement, Baloda Bazar, Distt. Raipur	2600
UltraTech Cement Ltd, Hirni, Distt. Raipur.	1900
UltraTech Cement Ltd, Rawan, Distt. Raipur.	2500
<b>Fertilizer</b>	
BEC Fertilizers, Sirgitti, Distt. Bilaspur.	135 (SSP)
Dharamsi Morarji Chemical Co. Ltd, Kumhari, Distt. Durg.	183 (SSP & H <sub>2</sub> SO <sub>4</sub> )

(Contd.)

## STATE REVIEWS

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
Khaitan Chemicals & Fertilizers Ltd., Distt. Rajnandgaon.	66 (SSP) 49.5 (H <sub>2</sub> SO <sub>4</sub> )
<b>Iron &amp; Steel</b>	
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)
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)
<b>Sponge Iron</b>	
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

(Contd.)

Table - 5 (Concl.)

Industry/plant	Capacity ('000 tpy)
Godavari Power & Ispat Ltd, Siltara, Distt. Raipur.	495 2100 (pellets)
Gopal Sponge & Power Pvt Ltd, Siltara, Distt. Raipur.	30
Gitanjali Ispat & Power Pvt Ltd, Sirgitti, 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
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

(Contd.)

## STATE REVIEWS

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
PD Industries Pvt Ltd, Siltara, Raipur.	30
Prakash Industries Ltd, Hathenewra, 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
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.	105
Topworth Steel Pvt Ltd, Rasmada, Distt. Durg.	60

(Contd.)

Table - 5 (Concl.)

Industry/plant	Capacity ('000 tpy)
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
<b>Ferro Alloys</b>	
Alok Ferro Alloys Ltd, Urla, Raipur.	18
Deepak Ferro Alloys Ltd, Urla, Distt. Raipur.	5
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 Chhatisgarh 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
<b>Refractory</b>	
SAIL Refractory Unit (formerly Bharat Refractories Ltd), Bhilai, Distt. Durg.	60
Vishva Vishal Engineering Ltd, Bhilai, Distt. Durg.	8.2
<b>Silicon Carbide Crucible</b>	
M.P. Carbon (Pvt) Ltd, Raipur.	NA

*(G); Grinding Unit*

*Note: Data, not readily available for fertilizer and cement industries on respective websites, hence it has been taken from Indian Fertilizer Scenario, 2015/FAI Statistics, 2014-15 and Survey of Cement Industry & Directory, 2015 respectively.*