

STATE REVIEWS



# Indian Minerals Yearbook 2015

(Part- I)

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STATE REVIEWS  
(Andhra Pradesh)

(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](mailto:cme@ibm.gov.in)  
Website: [www.ibm.gov.in](http://www.ibm.gov.in)

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## ANDHRA PRADESH

### Mineral Resources

Andhra Pradesh is the sole producer of apatite and mica (crude). The State is the leading producer of barytes, ball clay, dolomite, garnet (abrasive), laterite, limestone, quartz, quartzite, silica sand and vermiculite. The State is the sole holder of the country's slate and shale resources. It accounts for 90% barytes, 61% ball clay, 42% calcite, 41% mica, 31% kyanite, 30% garnet, 19% titanium minerals, 16% bauxite, 14% vermiculite, 13% dolomite & iron ore (magnetite) each and 11% limestone resources of the country. Andhra Pradesh is endowed with the internationally known black, pink, blue and multicoloured varieties of granites. Krishna-Godavari basin areas in this State have emerged as new promising areas for hydrocarbons, especially natural gas.

Important minerals occurring in Andhra Pradesh are: **apatite** in Visakhapatnam district; **asbestos** in Cuddapah district; **ball clay** in West Godavari district; **barytes** in Anantapur, Cuddapah, Krishna, Kurnool, Nellore and Prakasam districts; **calcite** in Anantapur, Cuddapah, Kurnool and Visakhapatnam districts; **china clay** in Anantapur, Chittoor, Cuddapah, East Godavari, West Godavari, Guntur, Kurnool, Nellore and Visakhapatnam districts; **coal** in Godavari Valley Coalfield; **corundum** in Anantapur district; **dolomite** in Anantapur and Kurnool districts; **felspar** in Anantapur, Cuddapah, West Godavari, Nellore and Vizianagaram districts; **fireclay** in Chittoor, Cuddapah, East Godavari, West Godavari, Kurnool and Srikakulam districts; **garnet** in East Godavari and Nellore districts; **granite** in Anantapur, Chittoor, Cuddapah, Guntur, Krishna, Nellore, Prakasam, Srikakulam and Vizianagaram districts; **iron ore (haematite)** in Anantapur, Cuddapah, Guntur, Krishna, Kurnool and Nellore districts; **iron ore (magnetite)** in Prakasam district; **lead-zinc** in Cuddapah, Guntur and Prakasam districts; **limestone** in Anantapur,

Cuddapah, East Godavari, West Godavari, Guntur, Krishna, Kurnool, Nellore, Srikakulam, Visakhapatnam and Vizianagaram districts; **manganese ore** in Srikakulam and Vizianagaram districts; **mica** in Nellore district; **ochre** in Cuddapah, West Godavari, Guntur, Kurnool and Visakhapatnam districts; **pyrophyllite** in Anantapur district; **quartz/silica sand** in Anantapur, Chittoor, Cuddapah, West Godavari, Guntur, Krishna, Kurnool, Nellore, Prakasam, Srikakulam, Visakhapatnam and Vizianagaram districts; **quartzite** in Kurnool, Srikakulam, Visakhapatnam and Vizianagaram districts; **talc/soapstone/steatite** in Anantapur, Chittoor, Cuddapah and Kurnool districts and **vermiculite** in Nellore and Visakhapatnam districts. **Petroleum & natural gas** deposits of importance are located in the onshore and offshore areas of Krishna-Godavari basin of the State.

Other minerals that occur in the State are **bauxite** in East Godavari and Visakhapatnam districts; **chromite** in Krishna district; **copper** in Guntur, Kurnool and Prakasam districts; **diamond** in Anantapur, Krishna and Kurnool districts; **gold** in Anantapur, Chittoor and Kurnool districts; **graphite** in East Godavari, West Godavari, Srikakulam, Visakhapatnam and Vizianagaram districts; **gypsum** in Guntur, Nellore and Prakasam districts; **kyanite** in Nellore and Prakasam districts; **magnesite** in Cuddapah district; **pyrite** in Kurnool district; **sillimanite** in West Godavari district; **silver** in Guntur district; **titanium minerals** in East Godavari, Krishna, Nellore, Srikakulam and Visakhapatnam districts; and **tungsten** in East Godavari district (Tables-1 & 2).

### Exploration & Development

The details of exploration activities conducted by various agencies for coal and other minerals during 2014-15 are furnished in Table - 3.

During 2014-15, National Oil Companies (NOC) continued their operations for exploration of oil and gas in the State.

**Table -1: Reserves/Resources of Minerals as on 01.04.2010/01.04.2013\* : Andhra Pradesh**

Mineral	Unit	Reserves										Remaining Resources					Total Resources (A+B)
		Proved STD111	Probable		Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)	Total (A+B)				
			STD121	STD122		STD221	STD222										
Apatite*	tonnes	29112	-	1680	30792	-	-	-	-	200163	-	200163	230955				
Asbestos	tonnes	5754	-	9028	14782	856	3117	9191	1500	27085	-	41749	56531				
Ball clay#	tonnes	6017412	-	1288720	7306132	1821233	2806267	9512513	2279330	27555824	-	43975167	51281299				
Barytes#	tonnes	28010116	79736	1400265	29490117	173429	4206661	2411683	374454	28921318	105721	36299138	65789255				
Bauxite*	'000 tonnes	-	-	-	-	-	-	-	188971	138120	288176	-	615267				
Calcite#	tonnes	3267	500	-	3767	-	-	104970	8562700	5200	122148	-	8795018				
China clay#	'000 tonnes	2285	339	2205	4828	286	790	996	126	669	51378	3088	57333				
Chromite*	'000 tonnes	-	-	-	-	-	-	-	-	-	0.4	-	0.4				
Copper*																	
Ore	'000 tonnes	-	-	-	-	686	-	105	-	5791	1000	-	7582				
Metal	'000 tonnes	-	-	-	-	6.88	-	1.05	-	97.45	8.32	-	113.70				
Corundum**	tonnes	-	-	-	-	-	7	-	-	-	-	-	7				
Diamond*	carat	-	-	-	-	-	-	-	200483	1524317	98155	-	1822955				
Dolomite**	'000 tonnes	65062	2845	19360	87267	39106	7652	27935	554	77	881409	2238	958972				
Felspar#	tonnes	4350209	293117	1878807	6522132	527528	17739	701284	60776	1644301	1364199	-	4315827				
Fireclay#	'000 tonnes	434	-	381	815	7	656	1259	56	-	9878	132	11988				
Garnet	tonnes	2911387	4500	710000	3625887	-	-	-	-	8800000	4731800	-	13531800				

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Table - 1 (contd.)

Mineral	Unit	Reserves					Remaining Resources					Total Resources (A+B)	
		Proved STD 111	Probable STD121	Total (A)	Feasibility STD211	Pre-feasibility STD221	Measured STD331	Indicated STD332	Inferred STD333	Reconnaissance STD334	Total (B)		
													STD122
Gold*													
Ore (primary)	tonnes	-	-	-	655133	-	889515	8059000	55000	2616699	-	12275347	12275347
Metal(primary)	tonnes	-	-	-	2.45	-	3.57	16.93	0.17	12.60	-	35.72	35.72
Granite (Dim. stone)	'000 cu m	-	-	-	-	-	-	-	-	2360396	-	2360396	2360396
Graphite*	tonnes	-	-	-	-	-	1135	-	1122	205487	-	207744	207744
Gypsum*	'000 tonnes	-	-	-	-	-	-	-	-	404	-	404	404
Iron ore*													
(hematite)	'000 tonnes	14886	680	8206	46153	49641	66485	377	4666	148384	506	316212	339984
Iron ore* (magnetite)	'000 tonnes	-	-	-	43034	-	-	13800	1266666	68527	-	1392027	1392027
Kyanite	tonnes	-	-	-	-	-	399	-	-	32003829	-	32004228	32004228
Laterite**	'000 tonnes	7628	510	1276	20579	4033	1379	24	1107	458	-	27580	36994
Lead-zinc*													
Ore	'000 tonnes	-	-	-	-	-	-	1000	4159	17530	-	22689	22689
Lead metal	'000 tonnes	-	-	-	-	-	-	28.70	119.53	688.65	-	836.88	836.88
Zinc metal	'000 tonnes	-	-	-	-	-	-	12.40	43.57	7.19	-	63.16	63.16
Limestone	'000 tonnes	1426745	235126	590969	171812	53170	386526	58874	189657	16967376	122648	17950064	20202904
Magnesite*	'000 tonnes	-	-	-	-	-	-	-	-	80	-	80	80
Manganese													
ore*	'000 tonnes	3582	660	484	4726	373	256	188	3220	9010	12	13473	18199
Marble	'000 tonnes	-	-	-	-	-	-	-	-	3	-	3	3
Mica	tonnes	162325	15247	2205	7794	5101	-	3750	5502	18277	-	40424	220201

(Contd.)

Table - 1 (concl.d.)

Mineral	Unit	Reserves						Remaining Resources						Total Resources (A+B)			
		Proved		Probable		Total (A)		Measured		Indicated		Inferred			Reconnaissance		Total (B)
		STD111	STD121	STD122	STD121	STD122	STD211	STD221	STD222	STD331	STD332	STD333	STD334		STD334		
Ochre#	tonnes	1692839	344121	631277	2668237	-	97810	1199762	347681	-	6569575	-	8214828	10883065			
Pyrite	'000 tonnes	-	-	-	-	-	-	-	-	-	880	-	880	880			
Pyrophyllite#	tonnes	245019	41841	171143	458003	121475	33360	-	-	75201	662193	-	8922229	1350232			
Quartz-silica sand#	'000 tonnes	28196	2975	29607	60778	9493	1778	15299	5245	8314	35515	5732	81376	142154			
Quartzite#	'000 tonnes	2114	406	2131	4651	548	1009	7481	-	4390	5209	295	18931	23583			
Sillimanite	tonnes	518000	-	170000	688000	-	-	-	-	7430300	1526200	-	8956500	9644500			
Shale#	'000 tonnes	14992	76	263	15331	-	-	245	-	-	252	83	580	15911			
Slate#	'000 tonnes	-	-	-	-	-	113	1187	-	-	1069	-	2369	2369			
Silver*																	
Ore	tonnes	-	-	-	-	-	-	-	-	-	16950000	-	16950000	16950000			
Metal	tonnes	-	-	-	-	-	-	-	-	-	128.13	-	128.13	128.13			
Talc/soapstone/steatite#	'000 tonnes	1031	1044	3060	5135	71	168	1187	-	369	3757	537	6088	11223			
Titanium** minerals	tonnes	-	-	-	-	-	-	-	-	-	76702509	-	76702509	76702509			
Tungsten* Ore Contained	tonnes	-	-	-	-	-	-	-	3640000	4700800	5952500	509000	14802300	14802300			
WO <sub>3</sub>	tonnes	-	-	-	-	-	-	-	5096.00	6574.64	8273.65	318.28	20262.57	20262.57			
Vermiculite	tonnes	102058	24593	50939	177590	1912	3981	2750	35195	9878	119270	3600	176586	354176			

Figures rounded off.

\* Reserves/Resources as on 1.4.2013.

\*\* Resources of ilmenite, rutile, leucosene and zircon as per Department of Atomic Energy are provided in the respective Mineral Reviews.

# Declared as minor mineral vide Gazette notification dated 10.02.2015.

Note: The proved and indicated balance recoverable reserves of crude oil and natural gas as on 1.4.2015 in the State are 13.19 million tonnes and 48.44 billion cu m, respectively.

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

(In million tonnes)

Coalfield	Proved	Indicated	Inferred	Total
Total/Godavari Valley	-	1149.05	431.65	1580.70

*Source: Coal Directory of India, 2014-15.***Table – 3 : Details of Exploration Activities in Andhra Pradesh, 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>Base metal</b>							
	Western and central part of Karempudi blocks	-	-	-	-	-	In the western and central part of the Karempudi blocks, E-W trending dolomite band having about 24 m strike length and width up to 5 m having specs of chalcopyrite and galena has been mapped at about 30 m SSW of proposed borehole KD-1. The Karempudi drilling block lies in the eastern part of the ENE-WSW trending Karempudi-Papayapalem mineralised dolomite band having 6.5 km strike length which is located in the extreme northern part of the 50 km long Agnigundla mineralised belt of Cuddapah basin. The ENE-WSW trending northern limb of anticline of the dolomite band extends about 700 m long having 12 m thickness shows gradational contact with phyllite hosts base metal mineralisation (mainly galena) within a 4.5 m zone in central part. The central part of the dolomite is massive and has galena mineralisation in them. AAS analysis of dolomite from central part of the Trench-1 samples show up to a maximum of 1.9% Pb and 5804 ppm Zn. Pitting and trenching across an E-W trending dolomite band of about 24 m strike length and width up to 5 m shows incidence of disseminated chalcopyrite, galena and bornite which is about 30 m. XRD analyses of dolomite samples (Nos. KD-1/5X & K9/x) from Trench-1 in general inferred 67%-90% dolomite, 7-17% quartz, 1-6% muscovite etc. with ~1% Owyheeite ( $Pb_7Ag_2(Sb,Bi)_8S_{20}$ ), 2% cerrusite ( $PbCO_3$ ) & 1% galena.
Cuddapah	Mangampeta	-	52	2	1600	-	A deep lithostratigraphic-cum-structural drilling of 1600 m (two bore holes) and large scale mapping of 52 sq km was carried out. Drilling of 1600 m was carried out in two boreholes M/01 of depth 873 m with RL 84 m and M/02 of depth 727 m with RL 260 m. The first borehole was drilled in the hinge of the synform of F1 fold in Mangampeta (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		
							Barytes Mine near the old GSI Borehole MGP 29 where the maximum thickness of barytes was recorded. The objectives were to check the occurrence of base metal below the bedded barytes horizon as likelihood to find such occurrence is high in this type of deposit (Missisipian Valley Type deposits) and also to check for any other barytes bed other than the existing baryte bed. The second borehole was drilled 470 m due east of first borehole along the dip direction to check the continuity of barytes bed which pinches out around 250 m due east of first borehole.
<b>Base metal</b>							
Guntur	West of Karempudi to east of Khandrika area	1:2000	-	-	-	-	In the preliminary investigation for base metal and other associated mineralisation west of Karempudi to east of Khandrika area of Agnigundala mineral belt, a few gossanised bands in association with grey to black dolomite and chert have been reported in the area at 4 km NW of Remedicherla. The gossan is highly silicified and contains sulphide disseminations such as sphalerite, pyrite, chalcopyrite etc. A potential block of about 1 sq km (1.75 km × 0.6 km) is identified and mapped on 1:2000 scale with the help of GPS and tape. A few silicified, brecciated and gossanised lensoidal chert bands have also been reported in the area. The silicified and brecciated lensoidal chert bands occur along the eastern margin of the purple dolomite which is in contact with shaly dolomite and are noticed at 2 km east of Domalugundam. These bands extend over a cumulative strike length of about 1 km having a maximum width up to 15 m. They are gossanised at a few places containing disseminated sulphides such as sphalerite, pyrite etc. Two potential zones for mineralisation are worked out in the area. First is a gossanised zone (1.75 km × 0.6 km) 4 km NW of Remedicherla. A detailed map of this has also been prepared on 1:2000 scale. The chert lenses occur within the purple dolomite 2 km east of Domalugundam. These chert lenses having a maximum thickness of about 15 m are highly silicified and gossanised. Mineralisation is mostly observed in the chert bands associated with the dolomites. The chert bands are full of pyrite disseminations but a few specs of galena or chalcopyrite are also common. Apart from this the cherty dolomite is also seen to contain mineralisation at a few places as disseminations of galena. Analytical results are awaited.

(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		
<b>Gold</b>							
Kurnool	Gani-Kalava area	-	-	-	-	-	G4 stage investigation was carried out in the western part of the Proterozoic Cuddapah Basin. In Kalava South Block the quartz veins have been found to be trending in NE-SW and ENE-WSW directions. They are intruded in gabbroic sills with cumulative strike extension of about 700 m with width varying from a few centimeter to 2.5 m. This quartz veins show sulphide mineralisation in the form of chalcopyrite disseminations and malachite staining. In the Kalava block, two old workings of copper were noticed which are surrounded by the dump material consisting of quartz vein, basic sill and ferruginous shale fragments. Quartz vein rubble shows incidence of sulphides mainly pyrite and chalcopyrite with malachite staining. Sulphidic quartz vein (chalcopyrite, pyrite and chalcocite has been noticed after a gap of 500 m from the old workings along the same trend of the mineralised quartz vein. The old workings in the Gani blocks extend for a strike length of about 2.4 km in an en-echelon pattern in NW-SE direction and are situated generally at the shale/sill contacts. The Gani block is devoid of any gossan and wall rock alteration characteristics. However, chloritisation, silicification and introduction of carbonate are noticed. In the Kalava south block, 1 km SW of Gudembai Tanda, two quartz veins trending NE-SW and ENE-WSW direction are noticed within the gabbroic sills. They show indications of Cu mineralisation in the form of malachite staining and occasional chalcopyrite, pyrite disseminations. A total of 25 cu m trenching was carried out in the Kalava east block. Trench KT-1 was excavated in the old working which exposed quartz-carbonate vein with sulphides in the form of disseminations and malachite staining. Trench KT-3 excavated in the further east of the Kalava east block exposed quartz vein with chalcopyrite specks and malachite staining. Eight (08) bed rock samples analysed 60 ppb to 9 ppm Au. Out of the 04 samples collected from the NE-SW trending quartz vein in Kalava south block, 2 samples analysed 9 ppm and 1.5 ppm Au. Out of 25 trench samples from the Kalava east block submitted so far, results of 10 samples have been received. The Au values range from <25 ppb to 85 ppb. The quartz-carbonate vein exposed in the Trench KT-1 analysed 85 ppb Au. IP/ Res/SP surveys have been carried out in the Kalava east and south block. The investigation will be continued.

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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>Graphite</b>							
East Godavari	Burugubanda area	1:2000	-	5	-	-	G3 stage investigation for graphite and tungsten mineralisation was carried out. The mineralisation is confined to the E-W trending with two isolated eastern and western graphite gneiss lenses occurring within the porphyritic charnockite that belong to Eastern Ghat Mobile Belt (EGMB). These graphite gneiss lenses extend over a strike length of about 180 m having a width up to 12 m each are separated apart by 180 m in the Burugubanda area. These graphite gneiss lenses are encircled by garnetiferous pegmatites in the area. Thin quartz-rich pegmatite veins are seen emplaced along the foliation planes of the graphite gneiss which appears to be the carriers of the tungsten mineralisation in the area. Concentration of graphite mineralisation is nearer to the quartz-rich pegmatite vein. Drilling has been taken up both in the eastern and western graphite old working lenses to intersect the mineralisation at 60 m vertical depth to test the depth persistence as well as grade of the mineralisation. Out of the five boreholes drilled till date, three boreholes in the western lense and two boreholes in the eastern lense were completed. The borehole data indicated depth persistence as well as strike continuity of the mineralisation. The mineralisation is associated with garnetiferous quartz-pegmatite. Core samples studied under UV-lamp indicated the presence of disseminated scheelite mineralisation in quartz-rich pegmatite portions. One core sample of borehole BBD-1 analysed 13.9% of fixed carbon and 750 ppm of tungsten. Drilling of Borehole BBD-6 in the eastern lense is yet to commence. Another two more boreholes (BBD-7 & 8) have also been planned in the area; the BBD-7 is in between the two lenses to test the strike continuity of the mineralisation whereas BBD-8 will aim to test the depth persistence of the mineralisation at 90 m vertical depth. Due to non availability of laboratory facility in GSI, SR, 50 core samples have been submitted for analysing fixed carbon to Ore Dressing Division, IBM, Nagpur.
<b>Iron ore</b>							
Chittoor	Vedullacheruvu- Krishnapuram, Chandragiri and Srikalahasti Taluk	1:2000	-	-	-	-	G4 stage investigation for iron and manganese ore was carried out with an objective to delineate the iron ore bands along with manganese ore. The study area exposed quartzite and phyllite of Bairenkonda Formation and phyllite of Cumbum Formation & Cuddapah Supergroup. The intercalated sequence of quartzite and phyllite is found to host iron and manganese bands. The band very close

(Contd.)

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Table – 3 ( Concl.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
							to the contact with massive quartzite is the thickest with width ranging from 8-12 m for a strike length of around 1.5 km. Another significant band is in the east central part of the intercalated sequence of quartzite and phyllite with average thickness of 8 m. The work will continue in FS 2015-16.
<b>REE</b>							
Chittoor	Chetlamalla- puram	1:2000	-	-	-	-	In the REE investigation, seven major pegmatite bodies have been mapped out of which one is emplaced in agglomerate, another in the leucogranite and the rest in actinolite-chlorite schist. All the quartz and pegmatite bodies are emplaced along major fault planes. The pegmatites are intruded by multiple quartz and haematite veins. Mainly two varieties of pegmatites have been identified (i) K-feldspar-rich pink pegmatite with multiple quartz and haematite injections and (ii) quartz, feldspar and tourmaline bearing white pegmatite. Trenching in the west of Chetlamallapuram helped in identification of a zoned pegmatite body. A major tourmaline bearing leucogranite unit has been mapped which was earlier mapped as grey biotite granite. Around Basitipadu zone pegmatite intrudes the leucogranite as horizontal sheets, both containing tourmaline. Outliers of Gulcheru quartzite that have been mapped were recorded as Narji limestone in earlier maps. A Nb-Ta mineral (Euxenite) grain has been identified through EPMA which is found to be enclosed within a feldspar grain from the main pegmatite of Chetlamallapuram. All the pink feldspar bearing pegmatites emplaced along WNW-ESE trending fault planes bear multiple injections of specular haematite. Malachite stains are also recorded in this zone. An old working is located in this zone. Euxenite (Nb-Ta <sub>2</sub> U) mineral has been identified with the help of BSE studies of pink pegmatite from Chetlamallapuram. The analytical results are awaited.

**Production**

Andhra Pradesh was bifurcated into two States on 02.06.2014 and the new State 'Telangana' was formed with ten districts of the erstwhile State. The data for previous years have been analysed by considering the districts of the newly formed State. 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 Andhra Pradesh (newly formed) at ₹ 15,158 crore in 2014-15 decreased by 4% as compared to that in the previous year. Most of the important minerals are produced in Andhra Pradesh. The principal minerals produced in the State were limestone,

petroleum (crude), natural gas (utilised) and barytes.

Andhra Pradesh contributed about 5% to the total value of the mineral production in the country. It was the sole producer of apatite and mica (crude) and also contributes almost the entire output of barytes in India. It was the leading producer of vermiculite, garnet (abrasive) and sillimanite with a share of 86%, 71%, and 51% in the total production of the respective minerals in the country.

Among the minerals produced in the State, the output of vermiculite increased 36%, iron ore 28% and limestone 3 percent. However, a decline in production was observed in petroleum

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(crude) (14%), sillimanite 23%, manganese ore (24%), garnet (abrasive) (49%) and natural gas (utilised) (54%) as compared to the production of previous year (Table - 4).

The value of production of minor minerals was estimated at ₹ 13,108 crore for the year 2014-15 (since information of value of minor minerals for Telangana is not available separately the figures of minor minerals are shown against Andhra Pradesh).

The number of reporting mines in the State was 421 in 2014-15 as against 492 in the previous year.

**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 provided in Table-5.

**Table – 4 : Mineral Production in Andhra Pradesh, 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>536</b>	<b>167703097</b>		<b>492</b>	<b>158660646</b>		<b>421</b>	<b>151576048</b>	
Natural Gas (utilised)	m c m	-	1249	10329390	-	1171	9684320	-	541	4474139
Petroleum (crude)	'000t	-	295	5361853	-	297	5398204	-	254	4616646
Gold	kg							1	-	-
Iron ore	'000t	38	1149	588352	33	709	403897	25	908	491871
Manganese ore	t	32	353302	503713	31	334265	716420	27	253675	470420
Apatite	t	1	572	1208	1	1300	2768	1	930	2021
Asbestos	t	3	389	17057	3	172	7271	-	-	-
Ball Clay <sup>#</sup>	t	13	184345	99828	13	143430	75352	9	148774	77414
Barytes <sup>#</sup>	t	18	1769940	5291524	26	1149081	3520639	18	886929	2639622
Calcite <sup>#</sup>	t	1	1790	895	1	1960	980	1	4100	1702
Clay (others) <sup>#</sup>	t	10	76574	9648	9	63622	7806	5	50920	7264
Dolomite <sup>#</sup>	t	37	856330	185332	42	747409	152244	33	698273	162891
Felspar <sup>#</sup>	t	15	73007	23925	9	100276	34209	7	100930	28500
Fireclay <sup>#</sup>	t	15	49478	10512	11	32061	7366	9	27286	6788
Garnet (abrasive)	t	2	83683	497499	2	108409	831543	2	55803	564497
Kaolin <sup>#</sup>	t	11	53057	8945	8	58516	11183	6	45857	8487
Sillimanite	t	-	23896	205289	-	43705	277396	-	33801	265716
Laterite <sup>#</sup>	t	11	1661825	262353	9	795729	211244	13	1760358	400194
Limestone	'000t	81	36544	5565061	74	34331	5495772	70	35435	5623833
Lime kankar <sup>#</sup>	t	2	275	138	-	-	-	-	-	-
Mica <sup>#</sup> (crude)	t	31	1177	37988	33	1660	47838	25	636	21892
Mica <sup>#</sup> (waste & scrap)*	t	-	7415	-	-	7626	-	-	7644	-
Ochre <sup>#</sup>	t	12	97581	21953	17	130901	23136	11	155723	23188
Pyrophyllite <sup>#</sup>	t	1	176	141	2	1980	1584	2	1603	1122
Quartz <sup>#</sup>	t	61	515353	104788	52	522446	127727	49	508179	110151
Quartzite <sup>#</sup>	t	18	221885	96019	16	389984	194956	17	456494	220509
Silica sand <sup>#</sup>	t	74	2128989	325572	60	1693844	294559	54	1242041	223500
Sand (others) <sup>#</sup>	t	1	9349	1356	1	7788	1246	1	7197	1089
Shale <sup>#</sup>	t	3	53617	6407	4	104309	12922	4	102331	13422
Talc/soapstone/steatite <sup>#</sup>	t	39	85117	30980	29	62214	31203	25	57752	30679
Vermiculite	t	6	6474	1885	6	9650	4542	6	13126	6172
Minor Minerals <sup>@</sup>		-	-	138113486	-	-	131082319	-	-	131082319

\* Includes mine waste obtained while dressing of crude mica.

@ 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.

**Note:** The number of mines excludes petroleum (crude), natural gas (utilised) and minor minerals.

(1) The figures reported for 2012-13 & 2013-14 are for comparative purpose only by considering the corresponding districts under the newly formed states.

(2) Due to non-availability of district-wise minor mineral data the figures reported against Andhra Pradesh includes that of districts falling under Telangana for 2012-13 to 2014-15.

## STATE REVIEWS

**Table – 5 : Principal Mineral-based Industries in Andhra Pradesh**

Industry/plant	Capacity ('000 tpy)
<b>Abrasives</b>	
Grindwell Norton Ltd, Renigunta, Distt. Chittoor.	5
<b>Asbestos Products</b>	
Hyderabad Industries Ltd, Ibrahimpatnam, Distt. Krishna.	45
Ramco Industries, Ibrahimpatnam, Distt. Krishna.	225
<b>Cement</b>	
ACC Ltd (formerly Encore cement), Vishakhapatnam (G).	400
Andhra Cements Ltd (Visaka Cement Works), Durga Nagar, Distt. Visakhapatnam (G).	620
Andhra Cements Ltd, Durga Cement Works, Dachehalli, Distt. Guntur.	2000
Bharthi Cement Corp. Pvt. Ltd, Nallingayapalli, Distt. Cuddapah.	5000
Bhavya Cement, Thangeda, Distt. Guntur.	1400
Dalmia Cement (Bharat) Ltd, Cuddapah.	2500
India Cements Ltd, Chilamkur, Distt. Cuddapah.	1460
India Cements Ltd, Yeraguntla, Distt. Cuddapah.	730
Jaypee Balaji Cement, Budawada, Distt. Krishna.	5000
JSW Cement Ltd, Nandyal, Distt. Kurnool.	4800
KCP Ltd, Macherla, Distt. Guntur.	830
KCP Ltd, Muktyala, Distt. Krishna.	1520
My Home Cement Industries Ltd, Mulakapalli, Distt. Visakhapatnam (G).	2000
NCL Industries Ltd, Kondapalli, Distt. Krishna (G).	990
Panyam Cements & Mineral Industries Ltd, Cement Nagar, Distt. Kurnool.	3000 (tpd)
Parashakti Cement, Jettipalem, Distt. Guntur.	1260
Penna Cement Industries Ltd, Talaricheruvu, Tadipatri, Distt. Anantapur.	1800
Penna Cement Industries Ltd, Boyareddypalli, Distt. Anantapur.	2000
Rain Commodities Ltd (Rain Cements), Boincheruvupalli, Distt. Kurnool.	2160

(Contd.)

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
Ramco Cement Ltd (formerly Madras Cements), Jayantipuram, K.S. Rajanagar, Distt. Krishna.	3600
Ramco Cement Ltd, Vizag Grinding Unit, Distt. Visakhapatnam.	950
Sree Jayajothi (Subs. of Myhome Cement Ind.) Yanakandala, Distt. Kurnool.	1800
Sri Chakra Cements Ltd, Alamada, Distt. Vizianagaram (G).	300
Sri Chakra Cements Ltd, Karampudi, Distt. Guntur.	700
Toshali Cement Ltd, Bayyavaram, Distt. Visakhapatnam (G).	200
Ultra-Tech Cements Ltd (APCW), Tadipatri, Distt. Anantapur.	5600
Zuari Cement, Krishnanagar, Yerranguntala, Distt. Cuddapah.	4600
<b>Chemical</b>	
A.P. Carbides Ltd, Kurnool.	23 (calcium carbide)
Andhra Sugars Ltd, Saggonda, Distt. West Godavari.	132 (caustic soda) 99 (H <sub>2</sub> SO <sub>4</sub> )
Shree Rayalseema Alkalies & Allied Chem. Ltd, Gondiparla, Distt. Kurnool.	69.5 (caustic soda) 49.8 (Cl) 24.7 (HCl) 23.1 (KOH)
Shree Rayalseema High Strength Hypo Ltd, Gondiparla, Distt. Kurnool.	9 (bleaching powder) 45 (H <sub>2</sub> SO <sub>4</sub> ) 15 (Oleum)
<b>Ceramic</b>	
RAK Ceramics India Pvt Ltd, Samalkot, Distt. East Godavari.	30000 (Vitrified tiles sq m/day) 1500 (sanitary ware pc/day)
Sentini Ceramica Pvt Ltd, Kanukollu, Distt. Krishna (JV with H R Johnson (I) Ltd).	75
Spartek Ceramics India Ltd, Narsingapuram, Distt. Chittoor.	NA
Kajaria Ceramics Ltd, Vijaywada.	2.3 (mill. sq m)
<b>Fertilizer</b>	
Agri Green Fertilizers & Chemicals Pvt Ltd, Cuddapah.	30 (SSP)
Bhaskar Fertiliser (P) Ltd., Anantpur	45 (SSP)
Coromandel International Ltd, Visakhapatnam.	1300 (NP/ NPKs)

(Contd.)

## STATE REVIEWS

Table - 5 (Contd.)

Industry/plant	Capacity ('000 tpy)
Coromandel International Ltd, Kakinada, Distt. East Godavari.	1925 (DAP)
GDS Chemicals & Fertilizer Pvt Ltd., Anakapalli, Visakhapatnam	36 (SSP)
K. P. R. Fertilizers Ltd. Biccavolu, E. Godavari	90 (SSP)
Krishna Industrial Corpn. Ltd, Nidadavole, Distt. West Godavari.	45 (SSP) 33.5 (H <sub>2</sub> SO <sub>4</sub> )
Nagarjuna Fertilizers & Chemicals Ltd, Kakinada, Distt. East Godavari. (Unit I & II)	1520 (Urea)
NG Fertilizers & Chemicals Pvt. Ltd., Kodurupadu, Distt. Krishna	200 (SSP)
Prathyusha Chemicals and Fertilisers Ltd., Parwada, Visakhapatnam	100 (SSP)
Subhodaya Chemicals Ltd, Gauripatnam, Distt. West Godavari.	42.9 (SSP)
The Andhra Sugars Ltd, Tanuku, Kovvur, Distt. West Godavari.	66 (SSP) 45 (H <sub>2</sub> SO <sub>4</sub> )
<b>Pesticides</b>	
Jayalakshmi Fertilizers, Tanuku, Distt. West Godavari.	2.4
<b>Glass</b>	
Triveni Glass Ltd, Kondagudem, Distt. West Godavari.	10 (mill. sq m)
<b>Iron &amp; Steel</b>	
Visakhapatnam Steel Plant, Visakhapatnam.	8856 (sinter) 3400 (pig iron) 2910 (crude/liquid steel)
<b>Pig Iron</b>	
Lanco Industries Ltd, Rachaguneri, Distt. Chittoor.	225
Mid-west Iron & Steel Co Ltd, Dusi, Distt. Srikakulam.	90
Sathavahana Ispat Ltd, Haresamudram, Distt. Anantapur.	210
<b>Pellets</b>	
Essar Steel Ltd, Visakhapatnam.	8000

(Contd.)

Table - 5 (Concl.)

Industry/plant	Capacity ('000 tpy)
Sponge Iron	
GSAL (India) Ltd, Srirampuram, Distt. Vizianagaram.	220
Sree Rayalseema Green Steloy Ltd, Gooty, Distt. Anantapur.	36
Sri Venkateshwara Sponge & Power Pvt Ltd, Merlapaka, Distt. Chittoor.	90
Maa Mahamaya Industries Pvt Ltd, Relligaurammappeta, Distt. Vizianagaram.	NA
<b>Ferro-alloys</b>	
Andhra Ferro Alloys Ltd, Kothavalasa, Distt. Vizianagaram.	20
Deccan Ferro Alloys (P) Ltd, Pendurthi, Visakhapatnam.	13
FACOR Alloys Ltd, Shreeramnagar, Distt. Vizianagaram.	72
Jindal Stainless (Hisar) Ltd, Kothavalasa, Distt. Vizianagaram.	40
Metkore Alloys & Ind. Ltd (GMR Ferro Alloys & Ind. Ltd) Ravivalasa, Distt. Srikakulam.	25
Shree Sarda Alloys Ltd, Ravivalasa, Distt. Srikakulam.	6
<b>Refractory</b>	
Carborandum Universal Ltd, Visakhapatnam.	3.6
RHI Clasil Ltd, Venkatapuram, Visakhapatnam.	50
Vesuviusindia Ltd, Visakhapatnam.	24
<b>Lead-zinc</b>	
HZL, Zinc Smelter, Visakhapatnam.	56 (Zn)*
<b>Petroleum Refinery</b>	
HPCL, Vizag.	8300
ONGC, Tatipaka, Distt. East Godavari	66
<i>* Operation have been discontinued.</i>	
<i>Note: Data, not readily available for fertilizer and cement Industries on respective website, hence it has been taken from Indian Fertilizer Scenario, 2015/FAI Statistics, 2014-15 and Survey of Cement Industry &amp; Directory, 2015 respectively.</i>	