

STATE REVIEWS



Indian Minerals Yearbook 2012

(Part- I)

51st Edition

**STATE REVIEWS
(Uttar Pradesh)**

(FINAL RELEASE)

**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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UTTAR PRADESH

Mineral Resources

The State is the principal holder of country's andalusite & diaspore resources and is said to possess 78% andalusite, 37% diaspore and 10% pyrophyllite. Important minerals occurring in the State are **coal** in Singrauli coalfields, Sonbhadra district; and **diaspore & pyrophyllite** in Hamirpur, Jhansi, Lalitpur and Mahoba districts. Naini area of Allahabad district contains high quality **silica sand**, an important source of glass sand, containing 98% SiO₂ and a very low Fe₂O₃. It is found in Shankargarh, Lohargarh in Allahabad district and also Bargarh in Banda district. It is also found in Aligarh and Chitrakoot districts.

Other minerals that occur in the State are **andalusite** and **calcite** in Mirzapur district; **bauxite** in Banda, Varanasi & Lalitpur districts; **china clay & dolomite** in Banda and Sonbhadra districts; **felspar** in Jhansi district; **fireclay**, **limestone**, **potash & sillimanite** in Sonbhadra district; **ochre** in Banda district; **granite** in Banda, Hamirpur, Lalitpur & Mahoba districts; **iron ore (hematite)** and **rock phosphate** in Lalitpur district (Table -1). The reserves/resources of coal along with details of coalfield are provided in Table-2.

Exploration & Development

GSI carried out exploration for gold in Chakariy Charka area, District Sonbhadra. ONGC pursued their seismic survey and drilling for exploration for petroleum & natural gas. In 2011-12, ONGC covered 20.21 sq km area for 3D geophysical data and 363.26 for 2D (GLK/LK) data. Details of exploration for gold and other minerals are furnished in Table-3.

Production

The value of mineral production in Uttar Pradesh at ₹ 6,693 crore in 2011-12 increased 40% as compared to previous year. Coal alone accounted for 51% of the total value of mineral production in the State. Uttar Pradesh was the second leading producer of diaspore and pyrophyllite with 49% and 12% contribution in the total production of respective minerals in the country. Among the important minerals, production of coal increased by 4% whereas it decreased for pyrophyllite by 6%, sulphur by 7%, diaspore by 21% and for silica sand by 65% during the year under review.

The production value of minor minerals was estimated at ₹ 3,209 crore for the year 2011-12 (Table- 4).

The number of reporting mines in Uttar Pradesh was 23 as against 24 in the previous year.

The index of mineral production in Uttar Pradesh for 2011-12 (base 2004-05 = 100) was 96.05 as compared to 92.43 in the previous year.

Table –2 : Reserves/Resources of Coal as on 1.4.2012 : Uttar Pradesh

(In million tonnes)				
Coalfield	Proved	Indicated	Inferred	Total
Total/Singrauli	884.04	177.76	-	1061.80

Source: Coal Directory of India, 2011-12.

Table – 1 : Reserves/Resources of Minerals as on 1.4.2010 : Uttar Pradesh

Mineral	Unit	Reserves				Remaining resources				Total resources (A+B)		
		Proved STD 111	Probable STD121	Total (A) STD122	Feasibility STD211	Pre-feasibility STD221	Measured STD331	Indicated STD332	Inferred STD333		Reconnaissance STD334	Total (B)
Andalusite	'000 tonnes	-	-	-	-	-	-	14450	-	-	14450	14450
Bauxite	'000 tonnes	-	-	-	-	-	10390	500	8018	-	18908	18908
Calcite	tonne	-	-	-	-	-	-	-	11000	-	11000	11000
China clay	'000 tonnes	-	-	-	-	-	11600	3447	10018	-	25065	25065
Diaspore	tonne	750078	543478	109215	1402771	136057	328230	138907	224183	-	827921	2230692
Dolomite	'000 tonnes	-	-	-	-	-	12622	-	66230	-	82352	82352
Felspar	tonne	-	-	-	-	-	-	-	200000	-	200000	200000
Fireclay	'000 tonnes	-	-	-	-	-	-	-	3221	-	3221	3221
Granite (Dim. stone)	'000 cu m	-	-	-	-	-	-	-	494819	-	494819	494819
Iron ore (Hematite)	'000 tonnes	-	-	-	-	-	-	-	38000	-	38000	38000
Limestone	'000 tonnes	-	-	-	45130	135590	21050	142763	40000	31200	415733	415733
Ochre	tonne	-	-	-	-	-	-	25000	35000	10000	70000	70000
Potash million tonnes		-	-	-	-	-	-	-	-	190	190	190
Pyrophyllite	tonne	948617	605071	454154	2007842	522104	1201221	502246	66512	911508	43200	3625241
Quartz- silica sand	'000 tonnes	8042	14530	3977	26549	1946	15482	3071	6290	51590	-	79337
Phosphorite/Rock phosphate	tonne	-	-	-	-	-	432898	3118586	740000	21481960	-	25773444
Sillimanite	tonne	-	-	-	-	-	-	2100000	9350000	-	-	11450000

Figures rounded off.

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Table – 3: Details of Exploration Activities in Uttar Pradesh, 2011-12

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Metreage		
GSI Gold Sonbharda	Chakoriya- Charka	-	-	-	-	19	Reconnaissance stage investigation (G-4 stage) was taken up during FS 2010-12, for search of gold and associated mineralisation. During the course of large scale mapping east of Village Chakoriya. 17 old workings of a strike length of 700 m have been located which are elliptical to rounded. 3 m to 70 m long, 2 m to 3 m wide and 3 m deep. The samples from Chakoriya - Charka and Machohi area have yielded Au values from <20 ppb to <50 ppb and trench samples have yielded <20 ppb to 90 ppb. A discontinuous auriferous mineralised zone has been located in Parsoi area. The surface manifestations of mineralisation are marked by scorodite, (FeAsO ₄ .2H ₂ O) which is formed after alteration of arsenopyrite. The mineralised zone extends up to a strike length of about 800 m, intermittently, and width varies from 1.5 m to 4 m. 19 grab spot samples, so far, have given more than 1 ppm Au value. The maximum Au value is 16.8 ppm from the scorodite lump in quartz vein from Parsoi mineralised zone. From the available analyses the average grades of the gold mineralised zone (over cut off of 65 ppb) in three trenches are 0.278 ppm X 1.5 m, 0.357 ppm X 1.5 m and 1.017 ppm X 2 m. In addition to this, two more sulphide mineralised zones have been located in Phaphrakund and Arangi area, running parallel to each other. There is a parting of phyllite of 3 m thickness in between these zones. The strike length of the zone is about 500 m. The grab samples have yielded <50 ppb to 14.8g/t Au, with 09 samples having more than 1 ppm Au. The work has been completed.

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**Table - 4 : Mineral Production in Uttar Pradesh, 2009-10 to 2011-12
(Excluding Atomic Minerals)**

(Value in ₹'000)

Mineral	Unit	2009-10			2010-11			2011-12 (P)		
		No. of mines	Qty	Value	No. of mines	Qty	Value	No. of mines	Qty	Value
All Minerals		25		42973146	24		47781553	23		66928948
Coal	'000t	5	13968	15067800	5	15526	15122300	4*	16178	34369500
Diaspore**	t	-	14527	18882	-	14917	22752	-	11725	16859
Limestone	'000t	1	2455	353545	1	3312	500514	1	3330	432928
Pyrophyllite	t	8	17215	3475	10	31076	8810	13	29336	6999
Silica Sand	t	11	183367	34444	8	167109	36486	5	58596	11971
Sulphur#	t	-	36130	-	-	38856	-	-	36005	-
Minor Minerals@		-	-	27495000	-	-	32090691	-	-	32090691

Note: The number of mines excludes minor minerals.

* *Relates to coal mines as on 31.03.2011.*

** *Associated with pyrophyllite.*

Recovered as by-product from oil refinery.

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

Mineral-based Industry

The important large and medium-scale mineral-based industries in the organised sector in the State are given in Table - 5.

Table -5 : Principal Mineral-based Industries in Uttar Pradesh

Industry/plant	Capacity ('000 tpy)
Abrasives	
John Oakey and Mohan Ltd, Gaziabad.	NA
Aluminium	700 (alumina)
Hindalco Industries Ltd, Renukoot.	345 (aluminium)
Cement	
ACC Ltd, Tikaria, Dist.Sultanpur (G).	2000
Ambuja Cement, Dadri, Gautam Budh Nagar.	1500
Birla Cement, Raibareli (G).	630
Diamond Cement, Jhansi (G).	500
Jaypee Cement, Sadvakhurd (G).	600
Jaypee Cement, Churk, Dist. Sonbhadra.	475
Jaypee Cement, Dalla, Dist. Sonbhadra.	432
Jaypee Cement, Chunar, Dist. Sonbhadra (G).	1680
Jaypee Cement, Ayodhya, Dist. Faizabad (G).	1000
Ceramics	
BHEL, Porcelain Insulator Division, Sultanpur.	NA
Kajaria Ceramics Ltd, Sikandrabad, Dist. Bulandsahar.	9.7 (million sq m)
Orients Ceramics & Industry Ltd, Sikandrabad.	95
UP Ceramics & Potteries Ltd, Gaziabad.	4.8
Chemical	
Kanoriya Chemicals Ltd, Renukoot.	48 (caustic soda)

(Contd.)

Table - 5 (Concl'd.)

Industry/plant	Capacity ('000 tpy)
Fertilizer	
Duncan Industries Ltd, Kanpur.	722 (urea)
IFFCO-Phulpur, Dist. Allahabad.	1687.90 (urea)
IFFCO, Aonla.	795.40 (N ₂)
IGCL-Jagdishpur.	397.70 (N ₂)
Khaitan Chemical & Fertilizers Ltd, Gora Machia, Dist. Jhansi.	132 (SSP) 52.8 (H ₂ SO ₄)
Malwan, Dist. Fatehpur.	113.5 (SSP) 52.8 (H ₂ SO ₄)
Mahadeo Fertilizers Ltd, Fatehpur.	113.5 (SSP) 52.8 (H ₂ SO ₄)
OCF-Shahajahapur.	397.70 (N ₂)
Tata Fertilizer Works, Babrala, Dist. Badaun.	864.6 (urea)
Ferro Alloys	
Hindustan Ferro Alloys, Hamirpur.	3.2
The India Thermit Corpn. Ltd, Kanpur.	0.3
Iron & Steel	
Malvika Steel Ltd, Jagdishpur.	511 (pig iron) 600 (saleable steel)
Glass	
Hind Lamps Ltd, Shikohabad.	NA
Mohan Crystal Glass Works, Mohan Nagar Dist. Gaziabad.	40.9
Universal Glass Co., Gaziabad.	60
Petroleum Refinery	
IOCL, Mathura.	8000