

STATE REVIEWS



Indian Minerals Yearbook 2017

(Part- I)

56th Edition

**STATE REVIEWS
(Uttarakhand)**

(FINAL RELEASE)

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

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UTTARAKHAND

Mineral Resources

Important minerals that are found to occur in the State are high-grade **limestone** in Almora, Bageshwar, Dehradun, Nainital, Pauri-Garhwal, Pithoragarh & Tehri-Garhwal districts; **magnesite** and **steatite** in Almora, Bageshwar, Chamoli & Pithoragarh districts; and **tungsten** in Almora district.

Other minerals that occur in the State are: **asbestos** in Chamoli district; **barytes** and **marble** in Dehradun district; **copper** in Almora, Dehradun & Pithoragarh districts; **dolomite** in Dehradun, Nainital and Tehri-Garhwal districts; **graphite** in Almora district; **gypsum** in Dehradun, Pauri-Garhwal & Tehri-Garhwal districts; **lead-zinc** and **silver** in Dehradun & Pithoragarh districts; and **rock phosphate** in Dehradun & Tehri-Garhwal districts (Table - 1).

Exploration and Development

GSI carried out exploration for Rare Earth Element (REE) in District Chamoli in the State of Uttarakhand during 2016-17. Details of exploration are furnished in Table-2.

Production

The only important mineral item produced in Uttarakhand during 2016-17, was magnesite.

The value of production of minor minerals was estimated at ` 64 crore for the year 2016-17 (Table-3).

Mineral-based Industry

The present status of each Mineral-based Industry is not readily available. However, the important medium and large-scale mineral-based industries in the organised sector in the State are given in Table - 4.

Table – 2 : Details of Exploration Activities in Uttarakhand, 2016-17

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
GSI							
Limestone & Magnesite							
Almora and Pithoragarh	Agalgarh Dhar-Chahaj area	1:12500	130.0	-	-	-	G4 stage reconnaissance survey was carried out in the area for limestone and magnesite. During large-scale Mapping three limestone bands i) About 15 km strike length with width varying from 50-300 m. ii) About 400 m thick folded band (3 km unfolded strike length) at the eastern part of the block, at the base of Gangolihat Member iii) 3 km strike length with maximum thickness of 600 m of Gangolihat member were delineated. The XRD analysis of limestone samples from Pabhen area suggests the rock type to be dolomitic limestone.

(contd.)

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Table-2 (concl.)

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
Pithoragarh	Gangolihat area	1:12500	150	-	-	-	G4 stage reconnaissance survey was carried out in the area for limestone, magnesite and basemetal. During LSM, two bands of limestone are found to be of promising nature. One is exposed near Rol in the Gangolihat-Rol road section and the second as folded thin band surrounding the slates of Rauthgara formation. The band near Rol extends for a strike length of 4 to 4.5 km, having a thickness of 250 to 300 m. The other band is 15 to 50 m thick with average thickness of around 30 m and extends for a strike length of around 11 km. The malachite stains near Kothera, Bora agar and Gharmata show small patches of mineralised zones with pyrite and chalcopyrite occurrences. Besides, soapstone/talc occurrences have also been observed. Near Bora agar and Gangolihat sporadic, patches of magnesite bands have been seen.
Pithoragarh	Pithoragarh area	1:12500	-	-	-	-	G4 stage reconnaissance survey was carried out in the area for limestone and magnesite around Pithoragarh area. Large-scale mapping has brought out that litho-unit comprising dolomite with interbedded phyllite, limestone and magnesite. One limestone band is delineated having strike extension of about 5 km with thickness ranging from 50 to more than 400 m. Magnesite bodies are present as patches and pockets within dolomite. The XRD analysis of limestone samples from Bisar area suggests that the rock type to be dolomitic limestone.
Pithoragarh & Bageshwar	Berinag area	1:12500	-	-	-	-	G4 stage reconnaissance survey was carried out in Berinag area in parts of Toposheet No.62C/01 for limestone and magnesite. A dolomite band was delineated from Dharichurra to Nargoli which stretches for a strike length of about 6 km with limited exposures and shows variable thickness from 200 m to a maximum width of 700 m. Limestone and magnesite bands were not observed in the mapped area. Bed rock, channel and trench samples were collected from the dolomite body for chemical analysis. The results of the chemical analysis are awaited.

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

Mineral	Unit	Reserves				Remaining Resources					Total resources (A+B)	
		Proved STD 111	Probable		Total (A)	Feasibility STD211	Pre-feasibility		Inferred STD333	Reconnaissance STD334		Total (B)
			STD121	STD122			STD221	STD222				
Asbestos [#]	tonne	-	-	-	-	-	-	-	-	311	311	
Barytes [#]	tonne	-	-	-	-	-	-	25000	-	25000	25000	
Copper												
Ore	'000 tonnes	-	-	-	-	-	-	660	-	4220	4220	
Metal	'000 tonnes	-	-	-	-	-	-	5.15	-	60.04	60.04	
Dolomite [#]	'000 tonnes	1570	594	2165	36	721	371	199834	-	203888	206053	
Graphite	tonne	-	-	-	-	-	-	-	-	10700	10700	
Gypsum [#]	'000 tonnes	-	-	-	-	-	35	2012	-	2047	2047	
Lead-Zinc												
Ore	'000 tonnes	-	-	-	-	-	-	660	-	5620	5620	
Lead metal	'000 tonnes	-	-	-	-	-	-	9.5	-	182.60	182.60	
Zinc metal	'000 tonnes	-	-	-	-	-	-	27.63	-	266.83	266.83	
Limestone	'000 tonnes	-	-	-	5035	91872	60429	1191059	-	1542760	1542760	
Magnesite	'000 tonnes	3104	-	4206	1023	602	31534	73287	-	224103	231413	
Marble [#]	'000 tonnes	-	-	-	-	-	-	6000	-	6000	6000	
Rock												
Phosphate	tonne	-	-	-	3063503	-	1734370	16620513	-	24178386	24178386	
Silver												
Ore	tonne	-	-	-	-	-	-	390000	-	3390000	3390000	
Metal	tonne	-	-	-	-	-	134	0.39	-	138.59	138.59	
Talc-Steatite-												
Soapstone [#]	'000 tonnes	16896	4521	2698	5831	5353	8982	24388	5860	53765	77881	
Tungsten												
Ore	tonne	-	-	-	-	-	-	138000	-	658000	658000	
Contained												
WO ₃	tonne	-	-	-	-	-	-	25	680	705	705	

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

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**Table-3 : Mineral Production in Uttarakhand, 2014-15 to 2016-17
(Excluding Atomic Minerals)**

(Value in ` '000)

Mineral	Unit	2014-15			2015-16			2016-17 (p)		
		No. of mines	Qty	Value	No. of mines	Qty	Value	No. of mines	Qty	Value
All Minerals		16		857043	3		718159	3		723896
Dolomite	t	-	5342	3900	-	-	-	-	-	-
Magnesite	t	3	50186	69944	3	54589	81792	3	67352	87529
Steatite	t	13	78735	146832	-	-	-	-	-	-
Minor Minerals [@]		-	-	636367	-	-	636367	-	-	636367

*Note: The number of mines excludes minor minerals**@ Figures for earlier years have been repeated as estimates, because of non-receipt of data***Table – 4 : Principal Mineral-based Industries in Uttarakhand**

Industry/plant	Capacity ('000 tpy)
Cement	
Ultratech Cement, Roorkee, Dist. Haridwar (G). (erstwhile Jaypee group)	1100
Ambuja Cement, Roorkee, Dist. Haridwar (G).	1000
Shree Cement, Roorkee, Dist. Haridwar (G).	1800
DBM	
Almora Magnesite Ltd, Village-Matela Dist. Bageshwar.	24 (DBM, calcined & semi calcined magnesite)
Minerals & Refractories. Haldwani Pithoragarh.	3 (DBM)
Glass	
Hindustan National Glass & Industries Ltd, Rishikesh.	4395 TPD

G: Grinding Unit