

STATE REVIEWS



# Indian Minerals Yearbook 2018

(Part- I)

57<sup>th</sup> Edition

STATE REVIEWS  
(Sikkim)

(FINAL RELEASE)

GOVERNMENT OF INDIA  
MINISTRY OF MINES  
INDIAN BUREAU OF MINES

Indira Bhavan, Civil Lines,  
NAGPUR – 440 001

PHONE/FAX NO. (071 2) 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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## SIKKIM

### Mineral Resources

The important mineral resources of the State are **copper-lead-zinc** and **silver**, reported in Bhotang, Rangpo and Dikchu in East Sikkim districts. Occurrences of other minerals reported in the State include **dolomite, quartzite** and **talc/steatite/soapstone** in West Sikkim district; **limestone** in North Sikkim district and **marble** in East Sikkim and North Sikkim districts Table -1. The reserves/resources of coal and the coalfield located in Sikkim are reflected in Table-2.

### Exploration & Development

Details of exploration activities conducted by GSI for base metal (Cu,Pb, & Zn) in the Sikkim State are furnished in Table-3.

### Production

No mineral production (except minor minerals) was reported in 2017-18. The value of minor minerals production was estimated at ` 188 lakh for the year 2017-18.

### Mineral-based Industry

SMC, a joint venture of Government of Sikkim and Government of India was established for the purpose of development of Bhotang polymetallic ore deposit at Rangpo. Sikkim's Mines & Geology Department had set up a pilot dimension rock cutting unit and pilot lime making unit to ascertain the feasibility of setting up of commercial lime plant and dimension rock cutting plant in the State. A ferro alloys plant, namely, Akshay Ispat & Ferro Alloys Ltd with an installed capacity of 6,000 tpy is located at Mamring, South Sikkim district. The present status of these industries is not available.

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

(In million tonnes)				
Coalfield	Proved	Indicated	Inferred	Total
<b>Total/Rangit Valley</b>	-	58.25	42.98	101.23

*Source: Coal Directory of India, 2017-18*

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**Table – 3 : Details of Exploration Activities in Sikkim, 2017-18**

Agency/ Mineral/ District	Location	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>GSI</b>							
<b>Basemetal</b>							
Sikkim	Aho-Yangtam, Andheri Khola sections	1:12500	50	-	-	-	A reconnaissance survey for Base metals was taken up in this area by large scale mapping of 50 sq. km on 1:12500 scale. Visible metallic lustre (pyrite) specks are seen in mica schist/ phyllitic rocks along with quartz veins at Aho-Yangtam, Andheri Khola sections. Quartz veins within the amphibolite bands exposed in Selele khola section show specks of pyrite. Malachite, azurite stains were observed within garnetiferous mica schist of Gorubathan Formation at Kadamtam, Assam and Samdur areas. Intense leaching within the mica schist and phyllitic rocks was observed at Adampul and Lower Shari areas.
	Rolep-Chuzachen, Barapathang area	1:12500	50	-	-	-	Reconnaissance survey for Base metal mineralisation in this area, by mapping 50 sq. km on 1:12500 scale was carried out. The signature of mineralisation i.e. sulphide mineralisation in the form of leaching effects, visible metallic luster and specks of pyrite and chalcopyrite was seen within Darjeeling Gneiss at North Rigu area, Dokchin, Subeni Dara and Lingtam-Kuikhola road section. In the area around Dokchin, sulphide mineralisation is observed within Darjeeling gneiss, whereas around South Rigu, leaching effect is observed in calc-silicate rocks associated with amphibolites. Leaching effect is also observed at the contact between Lingtse Granite Gneiss and phyllite at Dalapchand - Arithar - Rhenock road junction area.

**Table – 1: Reserves/Resources of Minerals as on 1-04-2015 : Sikkim**

Mineral	Unit	Reserves										Total resources (A+B)	
		Proved					Remaining Resources						
		STD 111	Probable	Total (A)	Feasibility	Pre-feasibility	Measured	Indicated	Inferred	Reconnaissance	Total (B)		
	STD121	STD122	STD211	STD221	STD222	STD331	STD332	STD333	STD334				
Copper													
Ore	'000 tonnes	-	-	-	-	445	63	300	-	150	-	958	958
Metal	'000 tonnes	-	-	-	-	7.86	0.91	8.47	-	4.23	-	21.47	21.47
Dolomite#	'000 tonnes	-	-	-	-	-	-	-	-	2756	-	2756	2756
Lead-Zinc													
Ore	'000 tonnes	-	-	-	-	436	64	300	-	150	-	950	950
Lead metal	'000 tonnes	-	-	-	-	6.9	1.68	-	-	-	-	8.58	8.58
Zinc metal	'000 tonnes	-	-	-	-	12.88	3.14	3	-	1.05	-	20.07	20.07
Limestone	'000 tonnes	-	-	-	-	-	-	-	-	2380	-	2380	2380
Marble##	'000 tonnes	-	-	-	-	-	-	-	-	2382	-	2382	2382
Quartzite#	'000 tonnes	-	-	-	-	-	-	-	675	16444	-	17119	17119
Silver													
Ore	tonne	-	-	-	-	435843	63780	300000	-	150000	-	949623	949623
Metal	tonne	-	-	-	-	15.25	0.04	27.6	-	13.8	-	56.69	56.69
Talc/Steatite/ Soapstone#	'000 tonnes	-	-	-	-	-	60	-	-	-	-	60	60

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