

STATE REVIEWS



Indian Minerals Yearbook 2020

(Part-I)

59th Edition

**STATE REVIEWS
(Jammu & Kashmir)**

(ADVANCE RELEASE)

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

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February, 2023

JAMMU & KASHMIR

Mineral Resources

Jammu & Kashmir is the sole holder of country's borax, sapphire, and sulphur (native) resources and possesses 33% graphite, 23% marble and 14% of gypsum. Coal, gypsum and limestone are the important minerals produced in the State. **Coal** occurs in Kupwara district; **gypsum** in Baramulla & Doda districts; **limestone** in Anantnag, Baramulla, Kathua, Leh, Poonch, Pulwama, Rajauri, Srinagar & Udhampur districts; and **magnesite** in Leh & Udhampur districts.

Other minerals that occur in the State are **bauxite & china clay** in Udhampur district; **bentonite** in Jammu district; **borax & sulphur** in Leh district; **diaspore** in Rajouri & Udhampur districts; **graphite** in Baramulla district; **lignite & marble** in Kupwara district; **quartz & silica sand** in Anantnag, Doda & Udhampur districts; **quartzite** in Anantnag district; and **sapphire** in Doda district (Tables - 1 and 2).

Exploration & Development

The details of exploration carried out by GSI in the State during 2019-20 are furnished in Table - 3.

Production

Coal and Limestone were the principal mineral items reporting production in the State. The value of minor mineral's production is estimated as ₹ 174 crores for the year 2019-20. There were 17 reporting mines in 2019-20 in case of MCDR of minerals (Table-4).

Mineral-based Industry

Jammu & Kashmir Cements Ltd, a State Government Undertaking, operates a cement plant of 4.00 lakh tpy capacity at Khrew in Pulwama district and 1.00 lakh tpy capacity at Samba Jammu. The Company also owns a small cement plant of 20,000 tpy capacity located at Wuyan in Srinagar district, besides two other tiny cement plants that have a total capacity of 5,20,000 tpy. Khyber Indus. (P) Ltd operates a cement plant of 3,30,000 tpy in the State. The State also has a 1,800 tpy capacity Unit that manufactures ceramic and refractory products in District Kathua. A 3,000 tpy capacity calcium carbide plant is situated at District Pulwama. J. K. Minerals Ltd has a plant of 30,000 tpy of DBM and 75,000 tpy of sized magnesite at Chipprian deposit near Village Panthal in Udhampur district in the State (Table-5).

Table – 2 : Reserve/Resource of Lignite as on 1.4.2020: Jammu & Kashmir

| (In million tonnes) | | | | |
|----------------------|--------|--------------|-------------|--------------|
| District | Proved | Indicated | Inferred | Total |
| Total/Kupwara | – | 20.25 | 7.30 | 27.55 |

Source: Coal Directory of India, 2019-20.

Table – 1 : Reserves/Resources of Minerals as on 1.4.2015 : Jammu & Kashmir

| Mineral | Unit | Reserves | | | | Remaining Resources | | | | | Total resources (A+B) | |
|---------------------------------|-------------|-------------------|----------|--------|-----------------------|---------------------|---------------------|--------------------|--------------------------|--------------|-----------------------|--|
| | | Proved STD 111 | Probable | | Feasibility STD211 | Measured STD331 | Indicated STD332 | Inferred STD333 | Reconnaissance STD334 | Total (B) | | |
| | | | STD121 | STD122 | | | | | | | | |
| | | | | | | | | | | | | |
| Bauxite | '000 tonnes | - | - | - | - | 1323 | 182 | 1220 | - | 2725 | 2725 | |
| Bentonite ^{##} | tonne | - | - | - | - | - | - | 147400 | - | 147400 | 147400 | |
| Borax | tonne | - | - | - | - | - | - | - | 74204 | 74204 | 74204 | |
| China clay [#] | '000 tonnes | - | - | - | - | - | 2 | 28122 | - | 28124 | 28124 | |
| Diaspore [#] | tonne | - | - | - | - | - | 566 | 711 | - | 1277 | 1277 | |
| Fire clay [#] | '000 tonnes | - | - | - | - | - | - | - | 4914 | 4914 | 4914 | |
| Granite | | | | | | | | | | | | |
| (Dimension Stone) ^{##} | '000 cu. m | - | - | - | - | - | - | - | - | - | - | |
| Graphite | tonne | - | - | - | - | - | - | 44570 | 40000 | 84570 | 84570 | |
| Gypsum [#] | '000 tonnes | 11383 | 153 | 442 | 11977 | 4602 | 2673 | 1059520 | 61681035 | 62740555 | 62740555 | |
| Limestone | '000 tonnes | 443339 | 31917 | 79147 | 554404 | 54863 | 9008 | 146914 | 2328 | 180610 | 192588 | |
| Magnesite | '000 tonnes | - | - | - | - | 3210 | 740 | 1752569 | 207283 | 2088214 | 2642618 | |
| Marble ^{##} | '000 tonnes | - | - | - | - | - | - | 150 | 45 | 4145 | 4145 | |
| Quartzite [#] | '000 tonnes | 1500 | 58 | - | 1558 | - | - | 412381 | 2200 | 414581 | 414581 | |
| Quartz- | | | | | | | | 9100 | 7380 | 16600 | 18158 | |
| Silica sand [#] | '000 tonnes | - | - | - | - | - | - | 3110 | - | 3110 | 3110 | |
| Sapphire | kg | - | - | - | - | - | - | 450 | - | 450 | 450 | |
| Sulphur | | | | | | | | | | | | |
| (Native) | '000 tonnes | - | - | - | - | - | - | 210 | - | 210 | 210 | |

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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 : Details of Exploration Activities in Jammu & Kashmir, 2019-20

| Agency/ Mineral/ District | Location Area/ Block | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|---------------------------------|---|---------|------------------|---------------------|----------|-------------------|--|
| | | Scale | Area (sq. km) | No. of boreholes | Meterage | | |
| GSI | | | | | | | |
| Base Metals | | | | | | | |
| (Lead, Copper, Zinc) | | | | | | | |
| Baramulla | Darakanjan- Bela Salamabad - Uri area | 1:12500 | 101 | - | - | - | Reconnaissance survey (G4) was carried out that involved Large-scale mapping of 101.0 sq km area on 1:12500 scale. Objective of exploration was to delineate the potentia zones of base metal mineralisation. Mineralisation was noticed in Baren Formation, Parautochthonous & Salkhalas. A five meter wide zone with a strike length of 15 m comprising sulphide mineralisation (Sphalerite) was noticed in phyllite of Baren Formation at Kanderwan. A zone of sphalerite mineralisation also in the form of veins & stringers was noticed within Baren Phyllite with a dimension of 3 m width & 25 m length at north of Datta Mandir. At Sillipathri, about 3 m wide & 12 m long zone comprising chalcocite & bornite was observed. Besides sulphide mineralisation, impersistent bands of gypsum & graphite were observed at places viz. Bagna, Salamabad, Bijhama, Moriyani and Limber. Chemical analysis results showed significant values of Pb-Zn mineralisation. |
| Nickel XPGE | | | | | | | |
| Leh | Shurok-sumdo area | - | - | - | - | 110 | Reconnaissance survey for Ni-PGE was carried out in this area. One band of chromite, having thickness of 1 m and length 30 m and three bands of 30 cm, 15 cm and 75 cm thickness and 6 m, 8 m and 10 m in length, respectively were observed in the area. Nickel value in 19 samples varied from 3,000-4,000 ppm and 11 samples showed value ranging from 4,000-5,325 ppm with highest value recorded as 5,325 ppm in dunite body. The average Ni value was 1,915.1 ppm. The |

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Table –3 (concl'd)

| Agency/ Mineral/ District | Location Area/ Block | Mapping | | Drilling | | Sampling (No.) | Remarks Reserves/Resources estimated |
|---------------------------------|---|---------|------------------|---------------------|----------|-------------------|--|
| | | Scale | Area (sq. km) | No. of boreholes | Meterage | | |
| | | | | | | | average value of Cr was 48,401.78 ppm in 110 collected samples. The highest value of Cr was 40.62% while the lowest value was 204 ppm. Besides, Co value was found to range from 2 ppm to 139 ppm. Only two values of Pd were analysed above 10 ppb and Pt in 7 samples ranged from 10.2 ppb to 18.2 ppb. The average MgO content of the area was 33.43 %. In case of vanadium, the appreciable values were noticed in the chromite, dolerite dykes. |
| Marble Kupwara | In parts of Kupwara Trehgam Areas | 1:12500 | 50.0 | - | - | - | Reconnaissance survey (G4) of marble and calc-silicate occurrences for decorative and dimension stone was taken up in the area. Presence of 16 marble occurrences were observed and were delineated in the area. The approximate strike length of the marble occurrences varied from 0.08 to 2.5 km. and width ranged from 20 to 600 m, respectively. The marble bands were dense (2.55 to 2.7 kg/cu. m) with very low water absorption (0.09% to 0.43%), porosity (2.73 to 2.76) and specific gravity (0.23% to 1.13%). The tiles and slabs can be produced for decoration and dimensional use locally. More than 75% of the samples reported CaO% concentration of more than 48%. The concentration was SiO ₂ , Al ₂ O ₃ , MgO was also of appreciable levels. More than 84% of the marble were observed to be good for manufacturing of Portland, Blendable and Beneficiation, White cement and could also be suitable for SMS (OH) and Fertilizer Industry. |

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**Table – 4 : Mineral Production in Jammu & Kashmir, 2017-18 to 2019-20
(Excluding Atomic Minerals)**

(Value in ₹'000)

| Mineral | Unit | 2017-18 | | | 2018-19 | | | 2019-20 (P) | | |
|---------------------|-------|--------------|----------|---------------------|--------------|----------|---------------------|--------------|----------|---------------------|
| | | No. of mines | Quantity | Value ^{\$} | No. of mines | Quantity | Value ^{\$} | No. of mines | Quantity | Value ^{\$} |
| All Minerals | | 13 | | 1791480 | 22 | | 2102405 | 17 | | 2015886 |
| Coal | '000t | - | 14 | - | - | 13 | - | - | 14 | - |
| Limestone | '000t | 13 | 1225 | 282232 | 22 | 1228 | 359423 | 17 | 936 | 272904 |
| Minor Minerals @ | | - | - | 1509248 | - | - | 1742982 | - | - | 1742982 |

*Note : The number of mines excludes Fuels and Minor minerals.**\$ Excludes the value of Fuel minerals.**@ Figures for earlier years have been repeated as estimates because of non-receipt of data for 2019-20.***Table – 5: Principal Mineral-based Industries**

| Industry/plant | Capacity ('000 tpy) |
|--|---------------------|
| Jammu & Kashmir Cement Ltd, Khrew, Pulwama | 400 |
| Jammu & Kashmir Cement Ltd, Samba, Jammu. | 100 |
| Jammu & Kashmir Cement Ltd, Wuyan, Srinagar. | 200 |
| Khyber Indus (P) Ltd | 330 |
| (contd) | |

Table-5 (concl'd)

| Industry/plant | Capacity ('000 tpy) |
|---|----------------------------|
| Ceramic & Refractory Product, Kathua. | 1.8 |
| Calcium Carbide Plant, Pulwama | 3 |
| J. K. Mineral Ltd, Chipprian, Panthal, Udhampur | 30 (DBM) 75 (Magnesite) |
| Nayyar Electrode Pvt. Ltd, Barri Brahmana | 4.45 |