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Jharkhand State Mineral Policy 2017

Department of Industries, Mines and Geology

Government of Jharkhand

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JHARKHAND STATE MINERAL POLICY-2017
DEPARTMENT OF INDUSTRIES, MINES AND GEOLOGY
GOVERNMENT OF JHARKHAND

1. INTRODUCTION

A mineral is a naturally occurring Chemical Compound usually of crystalline form having a specific chemical composition, where as a rock can be an aggregate of different minerals or mineral-oid.

Minerals are the life line of the development towards human need and the developing world. Minerals are used to make household articles to building materials.

Jharkhand is known as 'Museum of Minerals' right from Coal Bed Methane to Coal in fossil fuel to Industrial minerals, Uranium, Kyanite, Copper and associated minerals, precious and semi-precious minerals etc. are found in the State. The world famous Singhbhum Thrust Zone, which is the God's very own creation, has attracted the earth scientists from all part of the world. Every district of Jharkhand is also blessed with variety of Minor Minerals.

Minerals are the biggest source of Revenue to the State Exchequer as well as the highest job provider. A major portion of minerals produced are taken away from Jharkhand in raw form. Today when the world is craving for energy fuels, people are more aware of environmental pollution and ecological imbalances, it is very imperative that Jharkhand adopts a new mineral policy for Sustainable developments of State and optimum mineral exploitation towards employment generation; mitigating the post mining effect to a minimum and addressing the grievances of local people and their surroundings.

State Govt. is the owner of Minerals. Mines and Minerals come under the concurrent list of our Constitution. The Mines and Minerals (Development and Regulation) Act. 1957 is the main administrative act followed by the Mineral Concession Rules, 1960. The Government Jharkhand has framed and enforced The Jharkhand Minor Mineral Concession Rules 2004, The Jharkhand Mineral Transit Challans Regulation 2005 and The Jharkhand Mineral Dealer's Rules, 2007 for regulation, administration and transportation of minerals.

As minerals are unique endowment of the nature for economic and social development of any State but this endowment is finite and non-renewable. Moreover, failure to ensure scientific and systematic exploitation of this resource may lead to various social and ecological irreparable losses. The Govt. of Jharkhand is formulating this New Mineral Policy- 2017 according to the aims and objectives as pronounced by the National Mineral Policy, 2008 and Guidelines issued by the Government of India from time to time.

2. GEOLOGICAL SET-UP OF STATE

Jharkhand state is a part of the Indian Peninsular Shield, a stable cratonic block of the earth's crust. Jharkhand is known for its diversified geological set up. The whole of Singhbhum region is considered as a natural geological museum. Geologically, Jharkhand consists of different types of rock formations ranging from Pre-Cambrian to Cretaceous era.

The most predominant hard rock in the state comprises of the Archaean metamorphics with associated intrusives and sedimentaries belonging to Vindhyan and Gondwana Super Group with associated igneous rocks. The Raj Mahal hills, lying in the north-eastern extremity of the Chhotanagpur plateau of Jurassic volcanic lava flows.

The Vindhya comprising chiefly of khenju-shales, Porcelanite, Limestone and Sandstones occupy a small area in the north-western part of Garhwa district.

The Gondwanas are represented by alteration of argillaceous and arenaceous sediment sediment intervened with numerous coal seams. They are located in Palamu, Ranchi, Hazaribagh, Bokaro, Chatra, Dumka, Giridih, Dhanbad and Godda districts.

Structurally the state can be divided into “Southern Singhbhum Province” and “Northern Chhotanagpur Province” divided by Tamar – Khatra Fault (TKF) popularly known as the “Northern Singhbhum Shear Zone”. The famous 167 km. “Singhbhum Thrust Zone” is the store house of several important minerals, traversing East Singhbhum, Saraikela-Kharsawan and West Singhbhum district.

3. MINERAL RESOURCES OF JHARKHAND

Most of the mineral is extracted by surface mining, which includes opencast mining, strip mining and quarrying. For ore body that lie at a considerable depth below the surface, underground mining is considered. In both the techniques excavating and extracting minerals substances involve costly combination of drilling, blasting, hoisting and hauling, as well as measures for health and safety and reduction of environment impact. The term mining industry commonly includes such functions as exploration, mineral separation, hydrometallurgy, electrolytic reduction and smelting, refining, beneficiation even though these are not actually mining operations.

Jharkhand state enjoys a strong position on the mineral map of the country. The state has huge and high grade deposit of several minerals such as Coal, Iron ore, Bauxite, Limestone, Copper, Mica, Graphite, China clay, Kyanite, Uranium. Jharkhand is the sole producer of Coking Coal and Uranium.

Besides these, it possesses various other minerals to small quantity viz. Andalusite, apatite, Asbestos, Bentonite, Baryte, Chromite, Dolomite, Felspar, Fireclay, Fluorspar, Magnetite, Noble Metals (Gold & Silver) Ochre, Pyrite, Quartz, Quartzite, Steatite(Soapstone) and several varieties of gemstones.

4. EXISTING OPERATIVE AND NON OPERATIVE MINES IN JHARKHAND.

Presently in the State of Jharkhand 417 leases of Major Minerals are granted out of which 206 are operative and 211 are non operative.

Apart from above 3307 leases are granted for Minor Minerals, out of which 2261 are operative and 1046 are non operative.

5. MINERAL REVENUE :-

Mineral Revenue of previous Three Corresponding years are as under :-

Financial Year	Revenue collected (Rs. In Lakh)
2014-15	344984.00
2015-16	477059.00
2016-17	406726.00

6. SURVEY AND EXPLORATION

Geological Survey of India, Central Mining Planning and Design Institute, the Directorate of Geology and other important organizations of survey, exploration and assessment of mineral deposits, will be ensured for greater coordination and exchange of information amongst them.

The Directorate of Geology will be equipped with state-of-the-art technologies for exploration of minerals. The technical staff of the Directorate will be trained in application of latest techniques and technologies for exploration of minerals within a time frame.

Studies shall be carried out to use marginal grade of ore and development of suitable beneficiation process will be encouraged.

A Mineral Development Fund for mineral exploration, strengthening of mineral administration and development of mineral bearing areas will be formed.

Special priority will be given to exploration of precious metals and semi precious.

Technical experts from public and private sector, faculties and scholars from National level Institution, Universities and large Mining companies will be included in the Jharkhand State Geological Programming Board.

- The State Geological Programming Board shall be strengthened to undertake monitoring, survey, exploration and estimation reserves in respect of all prospecting/reconnaissance permits of the state

7. ESTIMATION OF MINERAL RESOURCES:-

In order to increase the resource base of the State, the Directorate of Geology will be suitably strengthened and shall take up annual programmes for the purposes of:-

- Detailed mapping and exploration of potential areas in Iron ore, Copper and associated mineral, Limestone, Bauxite, Graphite and important minerals deposit of the State.
- Programmes will be taken up in a collaborative mode with GSI through joint use of S&T, manpower and laboratory facilities. Activities may also be outsourced, particularly for prospecting of mineral bearing areas to Mineral Exploration Corporation Limited (MECL) or Central Mine Planning and Design Institute Limited (CMPDIL), or reputed exploration agencies in the private sector. It shall be ensured that the applicable United Nations Framework Classification (UNFC) system is fully adopted and utilized for reporting

reserves and other resources in a scientific manner. A Gem Testing Facility shall be developed at State Geological Laboratory.

- Out sourcing may be done wherever necessary.

8. PREPARATION OF DSR: -

The State shall prepare District Survey Report (DSR) for Minor Mineral in all district of Jharkhand. Initially preparation of District Survey Report for sand deposit of the State is being started. A DSR contents all the the informations such as co-ordinates, quality and quantity of minerals, status of land and other natural and manmade information of the deposit.

9. GRANT OF CONCESSIONS: -

The State shall actively encourage private investment in exploration of mineral resources and in particular shall include -

- Directorate of Geology, Department of Industries, Mines & Geology shall identify, explore and prepare mineral blocks as per the provisions of the Mineral (Evidence of Mineral Contents) Rule, 2015
- Grant of mining lease or composite licence (PL-cum-ML) of Major Minerals shall be done through online auction process as per provisions laid in MM(DR) Amendment Act, 2015 and under the provisions of Mineral Auction Rule, 2015.
- Grant of mining lease for minor minerals shall be done through online auction process as per provisions of JMMC Rule, 2004 and as amended in 2017 under the procedure laid in Jharkhand Minor Mineral Auction Rule, 2017.
- Jharkhand Sand Mining Policy, 2017 has been framed and notified.

10. Mineral Concession Regulation:-

- The Jharkhand Space Application Centre is engaged in converting land records in electronic form. Computerized Land Records shall will be dovetailed with a computerized mining concession system to enable the status of land

parcels to be seen online for the purpose of application and management of concessions.

- DGPS survey of mining lease holds have been made mandatory and MSS system is incorporated for fare and transparent mining system.
- GPS and other RFID enabled mineral carrier transport system shall be made mandatory in mineral transportation.
- State Level and District Level task force have been framed.
- State has introduce cash less system for which e-permit for mineral throguh e-pament for collection of royalty and other mineral cess.
- A State Co-ordination-Cum- Empowered Committee headed by the Chief Secretary and the Secretaries of all Departments concerned as members shall monitor the progress of grant of concessions and the proper management of the concession system including mine closure events.

11. SCIENTIFIC AND SYSTEMATIC MINING :-

- There is need to enforce scientific and systematic mining practices so that the precious natural resources are utilized to its optimum capacity. The Department of Industries, Mines and Geology, Directorate General of Mines Safety and the Indian Bureau of Mines (IBM) are the main authorities to ensure systematic and scientific mining. Concerted efforts will be made to achieve better coordination between these departments for fulfilling the objectives of scientific and zero waste mining.
- The Department of Industries, Mines and Geology shall establish a Technical Cell to develop expertise in Mining Plans and Mine Closure Management Plan. As far as possible, the Department shall ensure that mining activities adhere to the approved plans.
- The State Directorate will also develop expertise in ore beneficiation techniques and preparation of techno-economic feasibility Reports.

12. LAND USE PLANNING AND SUSTAINABLE DEVELOPMENT:-

- To facilitate and ensure sustainable development of mineral resources in harmony with the environment, a comprehensive view on land use will be taken keeping in view the needs of development as well as needs of protecting the forest, environment and ecology.
- Attempts will be made to utilize mine wastes and also promote the concept of zero waste mining to minimize the impact on the environment. Mining Plans and Mine Closure Plans will be dovetailed and harmonized for sustainable development.
- Local communities including Panchayats, NGOs, etc. will be closely associated with the process of preparation of Mine Closure Plans and it will be ensured that such Plans include adequate provision for long-term sustainability of host populations and for the best possible use of the mined out areas based on the needs of the local communities.

13. DEVELOPMENT OF INFRASTRUCTURE :-

- For extraction and utilization of minerals and promotion of mineral based industries, infrastructure development is a basic necessity. Existing infrastructure in the mineral-bearing regions is not adequate. Hence, development of roads within the mining areas and connecting roads to railway stations/ports would be given top most priority.
- Large potential mineral bearing areas will be notified and applications invited from large capacity mining companies who can take up integrated development of the area and develop transportation network along with large scale mining operation.

- Transportation of ore from mining area to railway siding/stockyard through conveyor belts, rope ways and other environmental friendly methods will be encouraged. This will avoid pollution in neighboring villages, congestion and damage of roads and prevention of accidents.
- The State will identify and develop by-pass roads on PPP basis across towns and villages through which the minerals are transported.
- Establishment of end use plant as near the mine as possible will be encouraged.

14. EXISTING REGULATORY ACT AND RULES :-

The following Acts and Rules are in operation to regulate mining activities in the State:

- a. The Mines Act, 1952
- b. The Mines and Mineral (Development and Regulation) Act, 1957 & Amendment Act 2015
- c. Mines Rules, 1955
- d. Minerals (Other than Atomic and Hydro Carbon Energy Minerals) Concession Rules, 2016
- e. Mineral Conservation and Development Rules, 1988
- f. Jharkhand Minor Minerals Concession Rules, 2004 and as amended time to time.
- g. Mineral (Evidence of content) Rule, 2015
- h. Mineral Auction Rule, 2015
- i. Jharkhand Transit Rule, 2005
- j. Jharkhand Mineral Dealer's Rule, 2007
- k. Coal Mines Regulation, 1957, and Metalliferous Mines Regulation, 1961
- l. Oil Field (Regulation and Development) Act, 1948
- m. Petroleum and Natural Gas Rules, 1959

n. Other allied Acts and Rules, notifications, circulars issued from time to time by Government of India and Government of Jharkhand are applicable to regulate the activities of the Mining field.

15. Mineral Based Industries:-

- Efforts will be made to attract mineral based industries into the State to add value and increase economic activity and bring in best practices in mining and sustainable development..
- A conducive industrial environment will be created and every effort will be made to ensure that law and order is adequately maintained.

16. Ore-linkage:-

The State policy on ore linkage (including captive linkage) and value addition shall be based on the following:-

- The basic effort will be to ensure that all mineral based industries have a reasonably assured supply of inputs including ore.
- Application from new or intending mineral based industries for areas notified for prospecting or mining shall be considered in an equitable manner with weightage for all or any of the following criteria:-
 - > Non-availability of adequate ore linkage.
 - > Pioneering nature of the industry in a location.
 - > Induction of high end and sophisticated technology.
 - > Use of advanced equipment and successfully proved novel mining technologies.
 - > Beneficiation or value addition at ore stage and better utilization of the run-of-the-mine.
 - > Utilization of fines/low grade minerals.

17. Public Sector:-

- The public sector units of the State Government and Central Government are pioneers in the mineral development of the State and their viability will be protected. Reservation of areas for public sector shall be made to meet reasonable needs of a unit or for the purpose of supply of ore to local industries in a transparent and equitable manner as part of an ore-linkage scheme. However a complete reassessment of their need would be made.
- Jharkhand State Mineral Development Corporation shall be strengthened and will be encouraged to get mineral concessions of good and marginal grade ore, industrial minerals and minor minerals to feed the industries already established in the State and to the industries to be set up in future.

18. Joint Venture with Public Sector:-

Joint ventures with public sector units for exploiting mineral resources or setting up mineral based industries shall be undertaken in a transparent manner by publicly/globally inviting Expressions of Interest and selecting a suitable applicant based on notified criteria that may include all or any of the following-

- Special expertise or knowledge.
- Long experience.
- Financial resources.

19. Environmental and Forest Related Issues:-

- The State Government shall ensure expeditious processing of cases involving forest land. It shall proactively identify areas where mining-related activities are likely to lead to unacceptable damage to the ecology and the environment . It shall also identify suitable areas for compensatory afforestation, including mined out areas.
- The State Government shall ensure adequate coordination between the State Directorate and State the State Pollution Control Board for the conduct of the

Environmental Impact Assessment in a quick, transparent and professional manner and ensure facilitation of preparation, approval and monitoring of the Environmental Management Plan.

20. Mining Tribal Areas:-

- The State shall as far as possible ensure that mining in tribal areas if unavoidable, is done through State agencies in collaboration with local tribal or by tribal organizations such as Tribal Cooperatives, Forest Labour Cooperatives, etc. if they are found having experience, technical competence and financial capability. The State shall facilitate the setting up of such institutions and shall ensure arrangements for the technical support and financial credit, and for marketing of the ore.

21. Relief and Rehabilitation:-

The State shall follow an enlightened policy which shall:-

- Emphasize on avoiding displacement of host population due to mining related activities where possible provide an accessible platform for the registering and redresses of the grievances of the displaced communities and conscientiously address their concerns where displacement is unavoidable. Where displacement does take place project assistance packages will be put in place in collaboration with the mining company in the light of resettlement and rehabilitation policy of the State which shall include a combination from amongst:-

- Employment assistance.
- Land-for-Land.
- Homestead assistance/housing.
- Relocation assistance, maintenance allowance, etc.

22. Reclamation & Restoration:-

- Mining activity will need to be done in a manner that does not permanently degrade the land. The State shall ensure that the mines in their Mine Closure Plans make adequate provision for reclamation and/or restoration of the land to the best possible potential in collaboration with local communities, and suitable for their use. Land after closure shall be returned to the local Panchayat for management preferably as a Common Property Resource, particularly for the benefit of the rural poor.
- Mine closure including progressive mine closure processes will be closely monitored and it will be ensured that stakeholders are taken into confidence at all stages through a transparent process facilitated by the State Government. Old and abandoned mines dating prior to regulated Mine Closure shall be restored or rehabilitated using funds generated from royalties so as to enable local communities to regain the use of such lands.

23. Employment Generation:-

Mining sector provides huge employment opportunities both at site and downstream. The State shall undertake a skill mapping study and strengthen the RITI and ITI network in mining districts in order to equip employable local population with basic skills enabling their absorption by the mining industry. Focus will be on excavation machinery, management and repair, industry trades including welding, electrical repair, lathe works, road and civil construction skills etc. Mining companies would be encouraged to adopt RITI for better absorption of skilled personnels.

24. Prevention and Control of Illegal Mining:-

- The State Government shall take steps to improve the regulatory supervision of areas of potential mineralization and shall involve the local population in the process.

- Transport of minerals through e-permits with security features incorporated will be introduced in a time bound manner. Village Panchayats will be incentivized to keep vigil on the mining of sand and boulders from streams in their jurisdiction and awareness generation programmes shall be organized for the purpose.
- High resolution satellite data will be used for detecting encroachments and illegal mining. Henceforth to ensure the accuracy of location of mining area, grid-based maps will be made mandatory for grant/renewal of mining leases. Mineral check posts will be modernized with sophisticated equipments to tract illegal transportation of minerals. Mobile squads will be formed to check illegal mining, transportation and storage of minerals.

25. H R Development and Training:-

- Vocational education system will be reviewed to ensure that skills required in the mining sector are adequately addressed.
- A training institute will be developed under the Directorate to impart in-service training on regulatory and development aspects of mining to the State Government officers of the Geology & Mining. The officers of Mines & Geology will be sent abroad for attending the Seminars, Conference and Symposium and taking part in mining related programmes.

26. Conservation of natural water sources and monuments :-

- The State Government shall take all precautionary measures to protect natural water sources and their natural flow without any obstruction in mining areas. The Government shall also protect national monuments in mining areas.
- The State Government shall give preference to mining companies in grant of mineral concession using underground technology so as to protect environment and forest and cause minimum displacement.

27. Conclusion

Jharkhand being mineral rich state envisages for the best management of mineral resources keeping in mind the present and the future needs. Jharkhand Mineral Policy will certainly fulfill its objectives for the better exploration and the transparent and eco-friendly exploitation of mineral resources, which leads to enhance the revenue of the State as well as generate the new avenue of employment.

APPENDIX A

STATUS OF IMPORTANT MINERAL RESOURCES OF JHARKHAND

A Reserve and Grade of Mineral of Jharkhand

S.N.	MINERAL	Reserve (in million tonnes)	Available Grade
1.	Coal (C)	82439.52 (As on 9-10-2017)	All grade.
2.	Haematite (Fe ₂ O ₃)	4596.62	> 45%
3.	Lime Stone (CaMg)CO ₂	745.77	Cement to Sub Cement grade
4.	Quartzite silica sand (SiO ₂)	40.59	SiO ₂ 96%
5.	China Clay (Al ₂ O ₃ SiO ₃ , 2H ₂ O)	198.69	Superior quality (Except Ranchi deposits)
6.	Quartz (SiO ₂)	154.76	>90% to 1.85%
7.	Copper Ore (Cu,FeS ₂)	288.12	1.00% to 1.85% Cu(Approx)
8.	Bauxite (Al ₂ O ₃ 2H ₂ O)	146.32	AlO ₃ (40.55%)
9.	Dolomite (CaCO ₃ ,MgCO ₃)	41.43	Mostly of all qualities.
10.	Kyanite (Al ₂ SiO ₅)	6.03	Lapsaburu->60%alumina Other place- 30 to 37%
11.	Fireclay	66.8	Good quality
12.	Graphite (C)	12.91	Carbon contacts 3.74 to 25%
13.	Andalusite (Al ₂ SiO ₅)	4.00	Low grade.
14.	Apatite (Ca ₅ (PO ₄) ₃ F)	72	9.60% as P ₂ O ₅
15.	Magnesite (MgCO ₃)	2.30	39% Magnesite rest talc
16.	Bentonite (Al,Mg) ₈ (Si ₄ O ₁₀) ₂ (OH) ₁₀ .12H ₂ O)	0.81	Mostly non-swelling type.
17.	Felspar (KNaCa)nAl ₂ O ₃ nSiO ₂	1.499615	Ceramic Grade.
18.	Chromite (FeCr ₂ O ₄)	0.73 Cr ₂ O ₃ -50% Max	All grade.
19.	Asbestors (Mg ₆ (Si ₄ O ₁₀)OH ₈)	0.154893	0.034 as chrysotile & 0.362As amphibole variety

20.	Bartes (Barite)(BaSO ₄)	0.035900	0.014 of high quality in Palamau district.
21.	Talc/Steatite, Soap Stone, talc (Mg ₃ SiO ₁₀ (OH) ₂)	0.3	N.A.
22.	Vermiculite (Mg ₃ Si ₄ O ₁₀)	0.030048	N.A.
23.	Gold (Au)	0.34	N.A. Au 13.5gms/tones.
24.	Pyroxenite	80.00	>30%MgO. 34.35%SiO ₂ And <1% chrome.
25.	Maganese ore (MnO ₂)	13.70	High magnetic content.
26.	MICA H ₂ KAl ₂ (SiO ₄) ₂	1494430 kg.	All grade.
27.	Magnetite Fe ₃ O ₄	10.54	High Magnetic content.
28.	Ochre	0.596321	
29.	Gem Stone	N.A.	N.A.

APPENDIX B

Status of Coal Resources of Jharkhand

(As on 30.09.2017)

Sl No.	Coal Field/District	Proved	Indicated	Inferred	Total
1	Ranigunj- Dhanbad	1538.19	466.56	31.55	2036.30
2	Jharia- Bokaro, Dhanbad	15127.97	4302.09	0.00	19430.06
3	East Bokaro- Giridih, Bokaro, Hazaribagh	3497.43	3922.80	863.32	8283.55
4	West Bokaro- Ramgadh, Hazaribagh	3761.25	1308.71	33.66	5103.62
5	Ramgadh- Ramgadh, Hazaribagh	756.11	742.08	58.05	1556.24
6	North Karnpura- Ranchi, Ramgadh, Hazaribagh, Chatra, Latehar	10319.44	6300.92	1864.96	18485.32
7	South Karnpura- Ramgadh, Hazaribagh	5176.08	1312.28	1143.28	7631.64
8	Auranga- Palamu, Garhwa, Latehar	352.05	2141.65	503.41	2997.11

9	Hutar- Palamu, Latehar	190.79	26.55	32.48	249.82
10	Daltonganj- Palamu, Latehar, Garhwa	83.86	60.10	0.00	143.96
11	Deogarh- Deogarh	326.24	73.60	0.00	399.84
12	Rajmahal- Pakur, Dumka, Godda	3211.18	11219.06	1691.82	16122.06
	Total	44340.59	31876.40	6222.53	82439.52

FOR ANY COMMENTS/SUGGESTIONS, MAY KINDLY BE INTIMATED THROUGH OUR EMAIL BELOW

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