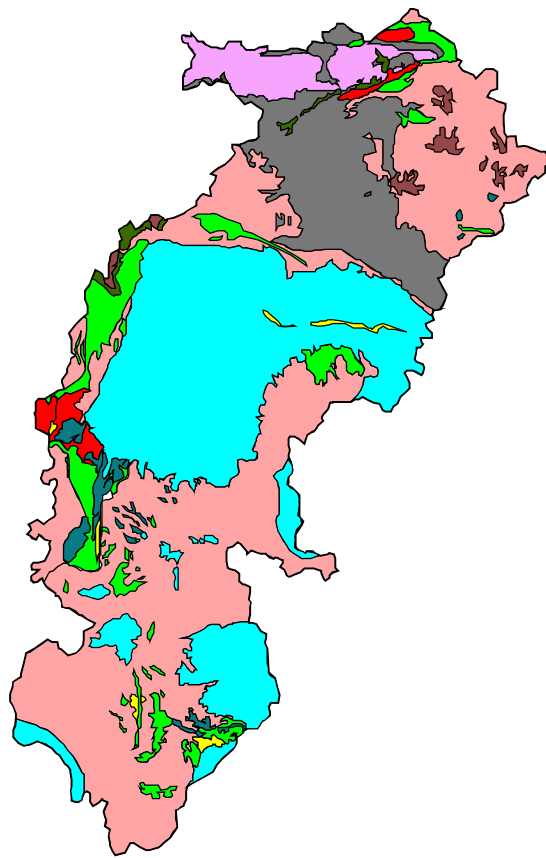


# MINERAL POLICY

## GOVERNEMENT OF CHHATTISGARH



MINERAL RESOURCES DEPARTMENT  
GOVERNMENT OF CHHATTISGARH

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# MINERAL POLICY - 2001

## Introduction

The State of Chhattisgarh was carved out of erstwhile Madhya Pradesh to provide deference to its distinctive historical, social background and natural resources. It is paradoxical that the State with richest natural endowments is amongst poor in the country. The basic purpose of its formation would be defeated if the natural resources are not used due to constraints of stringent forest laws and environment problems. To ease these strains and to provide accessibility in the benefit of natural resources utilization to the deprived class of the region, it has become imperative to evolve a suitable mineral policy for the nascent State.

The stringent self-serving policies are detrimental to facilitate financial investment. State mineral resources are its heritage. Appropriate steps would be taken up to provide share of profit through various taxes and corporate contributions to social infrastructure projects and endowments before any mining development is undertaken.

## Mineral Wealth

The geological and tectonic set up of the State is very conducive to provide many locales of minerals of different varieties. Almost 28 varieties of minerals have been reported in the State, most important being precious stone diamond, gold, iron ore, limestone, dolomite, tin ore, bauxite and coal.

The sole occurrence of tin ore in the country is reported from the State to the tune of 28.89 M.T. in southern part of Bastar region. Iron ore contemplates to form backbone for industrialisation of any State. At present, its small portion is being worked out and vast potential still remains to be utilized through export promotion and putting up steel manufacturing industries. The world's best quality of iron ore is found in Bailadila deposits of Dantewara district. The other important deposits of iron ore are located in Kanker, Durg and Rajnandgaon districts. The State is endowed with its huge reserves to the tune of 1969 MT. At present NMDC is exploiting iron ore for export to Japan and catering to the

needs of Vishakhapatnam Steel Plant. Dalli-Rajhara group of mines is being exploited by BSP for their Steel Plant at Bhilai. The bauxite ore of magic metal Aluminium is found abundantly in Surguja, Jashpur, Korba, Kawardha and Bastar region. It can support export orientation unit in the State. At present, public undertaking company BALCO has exploited Phutka Pahar deposit and now the Mainpat deposit is catering to the needs of BALCO through MPSMC for their aluminium plant at Korba.

The limestone deposits contribute a major share of mineral deposits in the State. It sustains 9 major cement plants with an installed capacity of 14.75 million tonnes and contributes to minor cement plants also. Cement grade limestone registered a significant presence in Raipur, Durg, Bilaspur, Bastar, Janjgir, Kawardha and Raigarh districts. The reserves to the tune of 3580.6 MT have been proved and vast area still remains to be explored. The low-grade limestone is used as building material abundantly.

The other important industrial mineral dolomite, which is mostly used in steel plants and refractories, is located in Bastar, Durg, Bilaspur and Janjgir districts and has total 606 MT reserves in the State. The largest share of mineral revenue is contributed by coal. It is being exploited and marketed by Coal India Ltd.

Diamond incidences in Mainpur region of Raipur district have been confirmed and 8 potential blocks qualify in the State for possible incidence of kimberlite, the mother rock of diamond.

Other minerals like corundum, clay, quartzite, fluorite, beryl, andalusite, kyanite, silliminite, talc, garnet, silica sand, etc. are reported from the State. Rare precious minerals like alexandrite and kornepine are also reported. Apart from these minerals vast reserves of granite of various attractive shades, which can be used as decorative stone, are also available.

### **Infrastructure in Chhattisgarh for mining activity**

Infrastructure Development Corporation has been constituted under the chairmanship of Hon'ble Chief Minister of Chhattisgarh. Hence infrastructure constraints would be addressed speedily. Available infrastructure in the State are :-

- (A) Railways
- (B) Road network
- (C) Power
- (D) Human resources.

Railways - It is a dominant factor for industrialisation of the State. The State capital is linked to most of the Indian States and to major seaport by rail line network. This will help a long way for mineral movement in the State. However, linkage of Durg-Rajhara rail line with Jagdalpur and Anuppur-Vishrampur line with Ramnujanjan via Ambikapur is evitable for transportation of mineral wealth and others.

Road Network - Chhattisgarh is well connected by road network. There are 3 National Highways passing through the State alongwith many State Highways connecting all district headquarters of the State.

Power - Power is a vital input for mineral based industries. The total installed capacity in the State is approx. 3900 MW. Efforts are being made to encourage entrepreneurs to develop their own captive power projects.

Human Resources - Looking at the number of mines and possibilities of up coming of many more, a large number of technically qualified personnel's are required. Geology is taught in Universities at graduate and post-graduate levels. Many Engineering and Polytechnic colleges and I.T.I. training centres persist in the area. Chhattisgarh is well known for its labour potential for peaceful industrial atmosphere.

## **REGULATION OF MINES AND MINERALS**

1. Although mineral wealth vests with the State Govt., yet the subject of regulation of Mines and Minerals development is covered under 7<sup>th</sup> schedule of constitution of India. By virtue of this, the Parliament has exclusive power to make laws with respect to regulation of Mines and Mineral development.
2. Mines and Minerals (Regulation and Development) Act, 1957 ( MMRD Act ) has been enacted by Parliament and Mineral Concession Rules 1960 have been

issued by the Central Government in exercise of powers given under section 13 of this Act. The Central Government has also framed Mineral Conservation and Development Rules 1988 for conservation and systematic development of minerals except coal, atomic minerals and minor minerals. Rule making powers in respect of minor minerals have been delegated to the States under section 15 of this Act.

3. Procedures regarding legislation of minor minerals is contained in Madhya Pradesh Minor Mineral Rules 1996. As per Rule 29 (5) the fixation of royalty rates and dead rents for minor minerals is vested with the State Government, who can not increase the royalty rates within three years of time.

According to Rule 56 the Mineral Administration royalty realisation is vested with Gram Panchayats.

4. A major milestone was achieved in mineral legislation and policy during 1999-2000 when the MMRD Act 1957 was ammended to provide greater delegation of powers to the State Government and has brought about major procedural simplifications.
5. With the opening of Indian economy Govt. of India have liberalised the grant of licences and leases for most of the minerals, except Atomic minerals and Fuel minerals, Under the National Mineral Policy of 1993, This policy envisages:-
  - (A) 13 Minerals viz. iron ore, manganese, chromite, sulphur, gold, diamond, copper, lead, zinc, molybdenum, tungsten, nickel and platinum group of minerals have been deleted from the list of minerals which had been earlier reserved for exploitation by the public sector. These minerals are now opened for exploitation by private sector.
  - (B) Foreign investment and technology will be encouraged. Ceiling on foreign equity in the mining industry has been removed.

- (C) Limestone has been deleted from the list of scheduled minerals and no approval from Govt., of India is required before sanctioning leases for cement grade limestone.

### **Objectives**

- To develop mineral resources keeping the priority for export oriented minerals, strategic minerals, base metals and to enhance the reserves of traditional minerals used by the local populace.
- In case of minerals like gold, base metals and diamond, where enormous capital outlay and modern technique are required for conducting aero-geophysical survey at 250 m. line interval/foreign participation will be sought.
- Ecological concerns shall be in conformity with the local ecosystem.
- The department has felt the need for development of existing laboratories like chemical, petrological, geophysical and photogeological laboratories with modern equipments and gadgets to increase the accuracy and quality of the mineral resources and their uses.
- To evolve suitable technology for further use of today's subgrade ore to meet further requirements, suitable beneficiation studies would be made with adequate R & D support.
- The existing policy of granite has failed to encourage the development of granite reserves in the State, which has immense potential for its development. Therefore, the State has proposed to adopt the Govt. of India. Granite Conservation and Development Rules 1999.
- Mineral policy shall be in tune with maximum participation of the people in mineral industries keeping the transaction transparent and to increase the mineral revenue.
- Effective measures to check illegal mining and pilferage of mineral revenue will be formulated.
- A continuous process of apprising technical staff with the latest techniques and instruments in mineral exploration and analysis round the year training programme has to be adhered to.

## **MINERAL EXPLORATION**

Minerals are at the foundation of all human endeavours since the dawn of civilization. These are valuable natural resources and are nonreplenishable and wasting assets. The search for additional mineral resources is, therefore, a compelling process in any developing country. This mineral search activity will have to maintain high degree of professionalism and commercial viable studies. The high risk and high gain character of exploration demand more careful approach in its planning and execution.

Mineral exploration is an inevitable and continuous process in any State. The search for additional mineral resources will, therefore, be kept in pace with the industrial development of the State. In the modern technology of high-grade environment, the intensity of mineral search has to be maintained to bring high degree of professionalism that would thrive on fundamental considerations of return on investment.

Mineral Exploration work aims at resource generation. Every expenditure in exploration may not be result oriented. Hence to venture into exploration expenditure involve lot of risk. It is, therefore, proposed that such expenditure should be categorised under Research and Development expenditure of the State.

The main activity of the Directorate of Geology and Mining, Chhattisgarh has been mineral survey and prospecting. It includes to locate new mineral deposits and to evaluate the known deposits for their integrated development. Most of the minerals found on the surface have been located and exploited by conventional methods. Now the target area has been shifted to remote areas and deep-seated mineral deposits. This mineral search requires sophisticated technology. Aerial geophysical surveys at 250 metres line interval has to be carried out to locate mineral bearing zones based on anomalies. Stream sediment samples, rock samples and limited borehole samples have to be collected to narrow down the area of exploration. The analytical part of the sample has to be performed with extra precision to achieve the required end product. Therefore, a well equipped laboratory is essential to deliver the accurate quality analysis of mineral resources and their industrial uses. The existing chemical, petrological and photogeological laboratories would be equipped with modern equipment to provide logistic support to high tech entrepreneurs venturing in the State. Beneficiation study of the

subgrade ore, substitute study for scarce minerals and industrial use of small deposits will be undertaken.

Technical staff of the Directorate will be associated with any exportation venture conducted in the State other than Central Govt. and public undertakings.

Mineral investigations were, so far, carried out mainly to cater the demands of large industries. Hence, the smaller deposits were not given importance. Now, the detailed prospecting for the smaller deposits will also be carried out to explore their industrial uses.

With the globalization of economy, mineral sector has also been opened up for private/foreign investment. Chhattisgarh State has immense potential for minerals to be exported. This being a high risk venture, the capital requirement is enormous. The nascent State like Chhattisgarh can not afford such bigger capital outlay. It is therefore, proposed to invite private/foreign investment in search for high value scarce minerals like :

-

- \* Diamond and gem stones
- \* Gold
- \* Base metals
- \* Tin
- \* Bauxite

The iron-ore is being exported from Bailadila iron-ore mines of Dantewara district.

So, identification of areas for exporting investment explorations has been proposed for the following minerals :-

- \* Diamond/gemstones
- \* Gold
- \* Base metals
- \* Iron-ore
- \* Granite
- \* Bauxite
- \* Tin-ore

Mineral exploration is a high risk venture. Hence, inflow of funds should facilitate in the endeavour exerting the least burden to the Govt. exchequer. Imposition of stringent

self serving restriction will disallow the inflow of fund in this sector. The State has immense unexplored potential of mineral wealth which requires heavy capital outlay. The help of private funds and know how has become inevitable. Therefore, State would adopt modus operandi to invite entrepreneurs to undertake such exploration works. This will facilitate unvailing of many important mineral locales in State.

Small and isolated deposits of minerals are scattered all over the State. The economic exploitation through small-scale mining can be undertaken to generate employment in the scheduled areas. Efforts should be made to promote small-scale mining in scientific and efficient manner safeguarding environmental imperatives.

Besides the Directorate of Geology and Mining, there are various Central Govt. agencies engaged in mineral exploration in the State. Efforts will be made to achieve a proper co-ordination among these agencies to avoid duplication of efforts and to ensure optimum use of the resources. A special cell in the Directorate of Geology and Mining will be established to provide escort services.

The information regarding availability of minerals, exploration status, mining and setting up of mineral based industries shall be made available to the entrepreneurs. A special cell in the Directorate of Geology and Mining will be formed to undertake the following activities: -

Preparation of an inventory of minerals produced in the State and updating it regularly. The maps indicating area permitted for prospecting and mining leases will be prepared and be updated every year. Mineral beneficiation studies, will be made on productive use of mineral waste and mines to prevent adverse effect on environment, will be undertaken.

Brochures would be published for target minerals like gemstones, cement grade limestone, granite, gold etc. These would facilitated setting up of mineral-based industries in the State.

## **MINERAL ADMINISTRATION AND DEVELOPMENT**

MMRD Act 1957 rechristened as MMDR ACT was first amended in 1994 and again in December, 1999. The ammended Act, interalia, includes provisions for devolution of more powers to the State Government. Now considerable responsibilities are vested with the State Govt. with regard to grant and renewal of licenses and leases, approval of mining plan, termination of mining plan and dereservation of reserved areas etc.

The Chhattisgarh State has proposed to recognise its policy and administrative machinery to effectively deal with additional responsibilities.

## **PREFERENCE IN SANCTION OF LEASES FOR MINOR MINERALS**

Provisions are being made to give preferences in sanctioning quarry leases and mining leases, other than the minerals like stone, murrum, sand, flagstone, to the following:-

- (A) Co-operative societies constituting members below the poverty line of scheduled castes, scheduled tribes, backward classes and women.
- (B) Co-operative societies of unemployed youth.
- (C) Co-operative societies of members where all are below the poverty line.
- (D) Unemployed youths below the poverty line.
- (E) Any person below the poverty line.
- (F) All other applicants.

If the lease area belongs to scheduled castes/scheduled tribes and backward classes and, if he or she applies, preference will be given in sanctioning quarry lease to them.

## **SIMPLIFICATION OF MINING LAWS AND LEASING**

1. Efforts will be made to simplify the process of granting mineral concessions. The proposals for major minerals will be sent to the Central Government and rules will be formulated for the minor mineral concessions in Chhattisgarh.
2. Reference will be made to Govt. of India for the timely revision of royalty rates for coal, diamond and iron ores.
3. Rules will be formulated to eliminate middle man in the mining trade. Stringent measures in accordance with recommendations of Govt. of India to stop illegal mining, transportation and pilferages of mining revenue will be taken up.
4. Normally mineral of the State is transported in the form of ores. Efforts will be made to get value added benefit to be accorded to and priority will be given to the entrepreneurs wishing to establish mineral based industries within the State.
5. In accordance with the Madhya Pradesh Mineral Policy 1995 and Madhya Pradesh Minor Mineral Rules 1996, the leasing and royalty collections of minor minerals were vested on to Panchayats. This policy failed to increase mineral revenues of minor minerals. The powers have been again vested to Collectors. This procedure will be adopted in Chhattisgarh where the minor minerals will be auctioned by the Collectors and revenue accrued will be deposited to Panchayat for development.
6. Mining activities will be enforced as per the mining plan sanctioned. This will be monitored by committee located at Directorate of Geology and Mining level.
7. Productivity norms will be installed while leasing and renewing.
8. Non working mines will be identified and activated.
9. Minimum size of the lease area will be reviewed as per the requirement and will be refixed.
10. Efforts will be made for creation of mineral land in tune with forest and revenue land where mineral deposits prevail.
11. Cluster mining in forest area will be promoted and mineral park will be developed in that area.
12. Non-compliance of stipulation regarding mineral conservation, systematic and scientific mining, mines safety and environment aspects would entail cancellation of mining/quarry leases.

### **Grant and renewal of Mining Leases**

### Report about Mineral Occurrences :-

1. A copy of grant of prospecting Licence will be referred to DGM Regional Office concerned for inspection of the area to verify presence of any minor mineral of economic important available in the area. A view will be taken regarding deletion of the area containing minor mineral before passing an order for grant of mining lease for major mineral.
2. Check list of deficiencies in the application, if any, to be issued alongwith the acknowledgement slip.

### Renewal of Mining Lease: -

Grant of leases for minerals will be renewed normally if:-

- (a) The lease area does not fall in the forest land.
- (b) There is no outstanding dues against the lessee.
- (c) Mining has been done effectively in the leased area.

### Agreement and lease Registration: -

- (a) No dues certificate will be necessary to be produced before the submission of lease application and execution of lease deeds.
- (b) No dues certificate will be valid up to a period of six months from the date of issue.

### AMENDMENTS CONTEMPLATED UNDER M.P.MINOR MINERAL RULES 1996

1. Limestone is classified in major and minor minerals both. Strict vigilance would be implemented to ensure that only low grade limestone is being used as minor mineral.
2. Flaggy limestone found in the State would be classified as Flagstone.
3. Exemption provided under M.P. Minor Mineral Rules 1996, Rules- 3(One) and (Two) to the Kumhars, who traditionally manufacture bricks, tiles and pots, is required to be reviewed under the heavy demand of bricks in the Capital Project. The leasee may

escape under this rule umbrella for manufacture of bricks up to 10 lacks. The Commercial utilization of the bricks will not come under the perview of these rules.

4. It is proposed to make a provision for self-assessment of royalty by the lessee according to a scheme formulated by the Govt. of Chhattisgarh with a provision of monitoring and review from time to time.
5. It is proposed to make it obligatory to stack the overburden waste material in a place identified by the Mining Officer.
6. A minimum production of the mines will be anticipated and the royalty, thereof, will be realised.
7. Royalty will be fixed in brick kilns depending upon the location and the sanctioned area.
8. Provisions of penalty is proposed for lessee engaging bonded and child labourers.
9. Provisions will be made to give preference in grant of quarry lease/mining lease to the female entrepreneurs.
10. Provision is being made mandatory for the Govt./ Semi Govt. offices taking supply of minor minerals to get royalty clearing certificate before making payment to the contractors.
11. Transfer of quarry leases will be allowed on payment of transfer premium.
12. Check posts and barriers will be installed on selected roads to effectively check the illegal transportation of the minerals.

### **Granite Policy**

1. The vast potential of granite exports evoked Govt. of India to constitute "Granite Development Concept " in 1995. The committee after a prolonged deliberations gazetted a uniform policy called "Granite Conservation and Development Rules 1999 " These rules will be implemented in Chhattisgarh State.

The salient features of this new policy are :-

- Prospecting leases for granite.
  - Long term leases of 30 years with an assured renewal of like period.
  - Mining plan as a prerequisite for grant of leases.
2. Scientific development of quarries will be implemented.

3. Adjoining granite lease of small sizes will be amalgamated to promote cluster mining in forest areas.
4. Non working granite leases would be identified and activated, so that leases are not kept idle.
5. Lease applications will be disposed off promptly (within three months).
6. Priority will be accorded to 100% export oriented units desiring to establish in the State.
7. Adequate steps to provide inflow of the raw materials for a longer term of leases will be assured.
8. Priorities to co-operative societies of scheduled caste, scheduled tribes, other backward classes, and educated unemployed women will be accorded.
9. Employment will be assured to the villagers where lease for granite is sanctioned
10. Self-assessment of royalty by the Lessee will be introduced.
11. Waste generated from the granite quarries will be separately stacked and will be charged at the rate equivalent to ordinary building material.
12. Development of Mineral Park by assigning suitable use to abandoned mines like developing as recharge tanks to ground water etc.

Chhattisgarh Mining Corporation will be given priority to develop a granite mine anywhere in the State in a joint venture. These mines would deploy latest mining equipments and would serve as a model mine for others.

### **MINING AND ENVIRONMENT**

A judicious approach has to be evolved for further utilization of the resources for proper industrialisation and economic development. Generally mining is seen as hostile to environment. To strike a balance between environment and mineral development the following steps will be adopted:-

- (A) Generation of environment awareness.
- (B) Orientation of lease holders for preservation of local ecological balance.
- (C) Participation of lease holders in afforestation in degraded land bank for compensatory afforestation in every mining block.

- (D) Conditions would be laid down in the lease agreement regarding planting and nurturing of trees, dumping of waste at specified site and proper stacking of top soil for later use will be incorporated. An alternate use of this abandoned mine into ground water recharge tanks, fisheries ponds and other appropriate land use for maintaining the ecological balance. Mining will be strictly adhered as per the mining plan sanctioned. This will be taken care of at the time of renewal.
- (E) Wastes arising out of mining activities will be allowed for use on payment of royalty as applicable to the waste materials.
- (F) Funds have to be earmarked for social endowments like health facilities to the people to combat mining related health hazard, schools for the children, technical schools for the local populace who are required for employment in the mining industries.
- (G) Indigenous people development project (IPDP) would be taken up.

### **EXPORT PROMOTION**

Iron ore, diamond and precious/semi precious stones, bauxite and granite have the potential for export. Iron ore is being exported even to-day. There is a need for improving their quality, standard acceptable to the foreign markets. The State proposes the following measures to be adopted:-

- (A) The State proposes to switch over gradually to U.N. frame work classification system of our mineral resources, so that true values of our resource estimation are correctly projected to all investors alike domestic and foreign.
- (B) Fairs and exhibitions of the mineral resources available in the States will be organised and shall be available for the wide publicity.
- (C) Participation in the National and Inter-National Trade Fairs.
- (D) Priority will be given in the grant of mining lease to those who put up export oriented units in the State.
- (E) To maintain the quality, standards, suitable beneficiation studies, ore dressing laboratories and chemical analysis will be initiated.
- (F) Creation of dry port would be undertaken with the Govt., of India.

## **DEVELOPMENT OF MINERAL BASED INDUSTRIES**

The following measures would be adopted for the development of mineral based industries in the State :-

1. Provision would be made for conduction of exploration work by the Directorate of Geology and Mining for those who wish to establish mineral based industries within the State.
2. Action group is being created in the Directorate of Geology and Mining to provide information and data regarding mineral wealth of Chhattisgarh.
3. Preference will be given in sanction of M.L., P.L. to those who are seriously interested in establishing mineral based industry in the State.
4. Incentives provided under the industrial policy of the State will be available for mining industries also.

## **IMPEDIMENTS IN MINERAL DEVELOPMENT**

1. Difficulties are being faced in granting new mineral concessions as well as in renewing the existing leases/ licenses due to the stringent Forest Conservation Act 1980 and the rules made there under. The State Govt., would constitute a "Fast Track Committee" under the Chairmanship of Additional Chief Secretary, Government of Chhattisgarh and the Forest Secretary, the Conservator of Forest of the relevant area and the Directorate of Geology and Mining would be its members.
2. To avoid inordinate delays in grant/ renewal of mining leases/ licenses in respect of areas which are not shown in the revenue map as forest land or in the category of revenue lands transferred to forest department or in the category of C and D class lands an affidavit will be required to be submitted by the leasee to this regard. Mineral Resources Department may forward with details of such areas to Forest Department seeking objections, if any, within a period of 90 days. If no objections are received the M.R.D. would allow the grant of licenses. Every applicant for mining lease/ prospecting licenses will submit an affidavit alongwith a certified copy of revenue map in support of his contentions that the area applied is not covered under any aforesaid lands.

## **CONSTITUTION OF MINING CORPORATION**

The mineral resources of the State would be the deciding factor to boost up the economy of the State. It has favourable inputs available in the State. So, in the days to come, mining industry will be the dominating one. To provide larger share in the profit of the State to the people of Chhattisgarh who are the real custodians of this natural wealth, Chhattisgarh Mining Corporation is proposed to be constituted. This will be the Principal mineral trading company of the State, which would, singly or in joint venture, undertake mineral trade in the State. This will be an autonomous body where the govt. equities will be more.

- Creation of State Mining Corporation aims to enhance government's sources of revenue.
- To develop knowledge base.
- To provide the support for involving studies and research in innovative mining projects.
- To ensure sustainable supply of raw materials for mineral based industries established within the State.

### **Constitution of Policy Implementation Committee:-**

- (A) Fast Track Committee constituted at the Govt. level would sort out the impediment and time bound assignment would be fixed and monitor under the chairmanship of Add. Chief Secretary Govt. of Chhattisgarh. The committee will meet once in every two months.
- (B) Action Group constituted at Directorate level would be manned by officers of the Directorate. They will meet every month and evolve an action plan for checking mineral exploration, chemical analysis, checking of illegal mining, transportation and royalty assessment.
1. Action group will provide logistic support regarding mineral wealth of State to the entrepreneurs.
  2. This committee will review the mineral use pattern of PUs like N.M.D.C., SECL, Mining Corporation of Chhattisgarh to enhance the mineral revenue and safeguard the interest of State.
  3. Royalty assessment and grade verification of existing mines and the status of nonfunctioning/abandoned mines would be effected by the technical staff

(including Geologists, Chemists, Statistician, Surveyors and Mining Staff) from various Regional/ District Offices.

4. Central flying squad based at the Directorate level headed by senior officer of Mineral Administration will monitor the royalty assessment, checking of illegal mining, transportation of minerals and leakage of mineral revenue.

## **The First Schedule**

[ See section 4(3), 5(1), 7(2) and 8(2) ]

### **SPECIFIED MINERALS**

#### **PART - A Hydro Carbons Energy Minerals**

1. Coal and Lignite.

#### **PART - B Atomic Minerals**

1. Beryl and other beryllium bearing minerals
2. Lithium-bearing minerals.
3. Minerals of the "group containing Uranium and Thorium".
4. Niobium-bearing minerals.
5. Phosphorites and other phosphatic ores containing Uranium.
6. Pitchblende and other Uranium ores.
7. [ Titanium bearing minerals and ores (ilmenite, rutile and leucosene) ]
8. Tantalum-bearing minerals.
9. Uraniferous allanite, monazite and other thorium minerals.
10. Uranium bearing tailings left over from ores after extraction of copper and gold ilmenite and other titanium ores.
11. <sup>1</sup> [ Zirconium bearing minerals and ores including zircon.]

#### **PART - C Metallic and Non- Metallic Minerals**

1. Asbestos
2. Bauxite
3. Chrome Ore
4. Copper
5. Gold
6. Iron Ore
7. Lead
8. <sup>2</sup> [ Omitted ]
9. Manganese Ore
10. Precious Ore
11. Zinc

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<sup>1</sup> Substituted by MM(RD) Amendment Act, 1999, Vide G.O.I. Ext. Part II, Section I, No. 51, dated 20-12-1999 ( No. 38 of 1999 )

<sup>2</sup> Omitted by MM(RD) Amendment Act, 1999, Vide G.O.I. Ext. Part II, Section I, No. 51, dated 20-12-1999 ( No. 38 of 1999).

**Production of Major Minerals Chhattisgarh State in context with  
National Production During (Year 1999-2000)**

S.No.	Name of Mineral	Production (Tonne)	Production in National context	
			Percentage	Place
1.	Coal	44723000	14.91	Second
2.	Bauxite	438095	6.39	Sixth
3.	Iron Ore	18490000	25.17	First
4.	Tin Ore (k.g.)	22812	100.00	First
5.	Dolomite	673111	23.41	Second
6.	Keolin	2444	0.27	Eleventh
7.	Limestone	12106000	9.47	Fifth
8.	Quartzite	17522	28.57	Second
9.	Ochre	175	0.03	Sixth
10.	Silica Sand	17000	0.54	Eleventh