

Government of India Ministry of Mines

Annual Report 2013-14

Indian Bureau of Mines

Nature is a vast tablet, inscribed with signs, each of which has its own significancy, and becomes poetry in the mind when read; and geology is simply the key by which myriads of these signs, hitherto indecipherable, can be unlocked and perused, and thus a new province added to the poetical domain.

- Hugh Miller

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Report Credits

K.Thomas

Controller General in charge

Guidance Ranjan Sahai

Controller of Mines (Planning & Coordination)

Formulation

Abhay Agrawal

Deputy Controller of Mines & Technical Secretary

Compilation & Drafting

Dr. V.G.K.Bhagwan Gumma Senior mining Geologist Varsha Gharote Mineral Officer (Int.) Ashish B. Mandavgane Senior Technical Assistant (ME) Govind Nimje Senior Technical Assistant (ME)

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Preface



Year 2013-14 will have a special significance in the evolution of IBM. As per directions of the Union Secretary Mines, IBM carried out a workshop on "Envisioning and Script Writing" for defining and determining Top Priority areas for IBM at IBM (HQ) from 24th to 26th July, 2013. Under the guidance of the Union Secretary Mines and Joint Secretary Mines, IBM earned conceptual clarity on the Vision Mission framework and set the goals for the organization 50 years ahead.

At the behest of Union Secretary Mines, IBM has initiated a number of measures for casting a vibrant and aggressive role in Indian mining Industry such as improving the system of inspections, synergy with sister concerns under ministry of mines and State governments and systematic approach to up-to-date technical knowledge of officers in their domain areas.

IBM is optimistic about implementation of the recommendations of the Committee for review and restructuring of the functions and role of IBM, for which Cabinet note is under approval of the Ministry.

The ambitious Project "Mining Tenement System" has been through for implementation by Standing Finance Committee and the recommendations of the SFC Meeting have been approved by the Hon'ble Minister of Mines. DPR prepared, SFC proposal approved & RFP finalized and tender floated. Process for re-tendering initiated as no bids received on due date.

"IBM Manual for Appraisal of Mining Plans" and "IBM Manual for Inspection" have been updated incorporating the valuable suggestions of stakeholders and the same has been uploaded on website for comments. IBM has prepared draft standard templates for Implementation of SDF in mining sector. Pilot Project for formulating guidelines for Pan Indian rolling out of SDF has been initiated.

New Scheme taken up in XII Plan titled "Capacity Building of State Governments - Development & Implementation of Ore Accounting Software" has proposed to be shelved after the consultant NISG in Proof of Consent (PoC) concluded that the implementation of such System may not be feasible in the present structural and operational set up.

During 2013-14, two more Regional offices viz. Chennai and Ajmer got ISO certification, bringing the tally to eight ISO certified Regional offices. IBM has prepared a Vision Document "Manganese Ore – Vision 2020 & Beyond' which revisits a whole gamut of interconnected issues that exists and confronts the Indian Manganese ore Industry in all its strata from Mines to Metals. Training Policy of IBM has been finalized by duly considering the requirement of mining sector.

IBM has introduced an internal audit system by Zonal heads of MCCM Division for the inspections under MCDR 1988 carried out by the Regional offices and during the year Zonal heads covered 125 inspections under this system. In a proactive role for checking irregular & illegal mining, during 2013-14 IBM formed Task Force III which inspected total **204** mines in endemic areas in seven mineral rich states and suspended 29 mines.

National Conference on UNFC 2009 was organised by Ministry of Mines through IBM at New Delhi in October, 2013 jointly with FIMI for shifting to implementation of UNFC 2009. Parliamentary Consultative Committee of the Ministry of Mines reviewed the performance of IBM in its meeting on 27th November, 2013.

On the Industry front, though sluggishness in the economy continues, there are some signs of initiation of revival. The high inflationary pressure and high interest rates have affected all the economic sectors of the country including the mining sector. The index of mineral production (base 2004-05) for the period of October, 2013- March, 2014 of the financial year 2013-14 is estimated to be 131.6 as compared to 130.5 for the corresponding period of previous year registering an increase of 0.8 %.

The minerals under MCDR 1988 reported positive growth of 14.3 % during October, 2013- March, 2014 of the financial year 2013-14 as compared to that in the same period of previous year owing to increase in production of iron ore, chromite, gold, kaolin and magnesite. The increase is mainly in respect of Iron ore (21.3%), Bauxite (31.8%), Chromite (39.2%), Manganese Ore (13.8%), Gold (5.0 %), Kaolin (72.2%) and Dolomite (14.07%). The incline in production is mainly due to resumption of mining activities in Karnataka.

With the ultimate aim of Sustainable Development of the Mining Sector, IBM is participating in the process of regulation by maintaining a fine balance between mineral production and development. Revival of mining Industry from the past slowdown is the immediate challenge. It will be the endeavor of IBM to have proactive approach to energize Indian Mining Sector.

PMBi

Ranjan Kumar Sinha Controller General, IBM.

Highlights of 2013-14

- As per Performance Evaluation Report, Total Composite score of IBM for Results Framework Document (RFD) 2013-14 is 80.01%.
- Inspected 2,512 Mines (including 1178 inspections for approval of Mining Plans/Schemes of Mining/Mine Closure Plans).
- Released National Mineral Inventory An Overview as on 1.04.2010 in respect of 70 minerals as per United Nations Framework Classification of mineral resources for providing a quick and broad scenario of national mineral resources for policy planners and entrepreneurs.
- To sensitise the importance of mineral conservation and protection of environment, organised 14 Mines Environment and Mineral Conservation Weeks in non-fuel mines pan India in which 1108 mines participated.
- Approved 167 Mining Plans, 604 Schemes of Mining and 26 Final Mine Closure Plans.
- Issued 5292 violations in respect of 2049 mines and prosecutions launched against 58 mine owners for non-compliance of provisions of MCDR, 1988. Suspended mining operations under rule 13(2), 45 and 56 of MCDR, 1988 in 900 mines and suspension orders were revoked in 228 cases.
- Updation of 100 multi-mineral leasehold maps with forest overlays in respect of Andhra Pradesh and Bihar on a scale of 1:50,000 was in progress.
- Completed 03 Mining Research oriented Consultancy Assignments.
- Completed 04 Technical Consultancy Assignments on Mining, Geology and Environment.
- To encourage value addition and mineral conservation completed 55 Mineral Beneficiation Investigations.
- Carried out chemical analysis for 41,483 radicals and 2,356 Mineralogical Studies.
- As an incidental activity, IBM generated a Revenue of Rs. 137.74 lakhs.
- Released 24 statistical and allied publications and periodicals on various aspects of the mines and minerals.

- As part of the capacity building of human resources, conducted 16 training courses for the industry, State Governments employees, IBM employees etc including three exclusively for personnel from the NER States.
- To mark the IBM foundation day, 'Khanij Diwas' was observed on 01 March, 2014 at IBM Headquarters and Zonal and Regional Offices.
- A scheme "Mining Tenement System" is being implemented by IBM to develop an online National Mineral Information System for investors by linking Central and State organizations engaged in administration of mineral resources in the country. During the year DPR of the Scheme prepared by a consultant have been approved by the Core Committee headed by Secretary (Mines). SFC proposal approved & RFP finalized and tender floated. Process for re-tendering initiated as no bids received on due date.
- New Scheme taken up in XII Plan titled "Capacity Building of State Governments - Development & Implementation of Ore Accounting Software" has proposed to be shelved after the consultant M/s National Institute of Smart Government (NISG) in Proof of Consent (PoC) concluded that the implementation of such System may not be feasible in the present structural and operational set up.
- As per amended Rule 45 of MCDR 1988, registration numbers have been allotted to 8835 lessees. Similarly as regards to the status of registration of end users, traders, stockiest and exporters, at the end of March, 2014 total 2753 units of end-users, 3698 number of traders, 1343 number of stockiest and 702 number of exporters have been registered.
- The Ministry of Mines accepted the recommendations of the Committee for Review and Restructuring of the Functions and Role of IBM. Out of 26 recommendations which have no financial implications, 11 have been implemented in 2012-13 and 6 have been implemented in the year 2013-14.
- Observed Hindi Fortnight at Head Quarters and at all regional offices and Regional Ore Dressing Laboratories of IBM during 02-13 September 2013.
- Organized Hindi workshop at Bengaluru, RODL Hingna Nagpur, Guwahati, Kolkata and Udaipur regional offices of IBM.
- Three officers of IBM were on foreign deputation to Moscow, Russia; Cape Town, South Africa and Toronto Canada during the year.

ROLE AND ORGANISATION OF INDIAN BUREAU OF MINES

The Indian Bureau of Mines (IBM) established in 1948 is a scientific and technical organisation under the Ministry of Mines. It is engaged in the promotion of scientific/ sustainable development of all the mineral resources of the country, conservation of minerals, protection of environment in mines, other than coal, petroleum and natural gas, atomic minerals and minor minerals, and accomplishes it through a gamut of assigned functions, both statutory and non-statutory.

Vision for IBM

2.2 The National Mineral Policy, 2008 (NMP) has envisioned diverse mineral development programmes and has formulated policy framework and strategies for providing a roadmap to achieve sustainable mineral development in the country. Therefore, the vision statement for IBM necessarily reflects the character of NMP, 2008. Accordingly, the vision envisaged is:

"IBM to perform as a National Technical Regulator and to discharge the developmental functions for the sustainable development of the mineral industry and to work as repository of database on mines and minerals".

Mission

2.3 1) To ensure effective regulation of Indian

Mineral Sector which promotes long term benefits for its sustainable growth.

2) To provide capacity building to State regulatory agencies and also to provide quality technical assistance to the mineral industry, and

3) To work as data bank on mines and minerals and to disseminate mineral

information for policy formulations.

Objectives

2.4 i. To work as National Technical Regulator operating at national-level designing systems, processes and guidelines for regulation of the mining sector;

ii. To function as a facilitator for creation and improvement of state-level regulatory mechanisms and to facilitate state agencies to ensure adherence to standards and parameters for scientific and systematic mining in the sector;

iii. To work as catalytic agent for development of mineral sector by evolving capability & proficiency in beneficiation techniques; dissemination of knowledge and skills in mining and allied areas through its training facilities; consultancy services.

iv. To play crucial role of that of an Advisor to the Government in matters and issues relating to the mineral sector in areas of short-medium and long-term mineralwise strategies, mineral taxation and legislative processes.

v. To play the role of National Repository of mineral data through maintaining a data bank of mines and minerals in the country by developing advanced IT based Mineral Information System enabling the industry to report and access information online, and

vi. To broaden its interactive base and reach out to overseas counterparts through consultations and exchange programmes and to build capacity, skill & expertise through academic and training programmes at institutes of international repute.

Role

2.5 IBM's functions are pivotal in the development of Indian Mineral Industry.

The Bureau:

- Promotes conservation and systematic & scientific development of mineral resources of the country through inspection of mines, beneficiation plants, and mineral based industries;
- Approves the mining plans which is a pre-requisite for grant/renewal of mining leases and also approves schemes of mining, mine closure plans, grants recognition to Qualified Persons for preparing mining plans.
- Conducts geological, mining, beneficiation and other related technoeconomic field studies and applied research on mining-geological problems.
- Conducts studies on environmental protection and pollution control in regard to the mining and mineral beneficiation operations.
- Implements the Offshore Areas Minerals (Development & Regulation) Act, 2002 and administers the grant of Mineral Concession in offshore areas.
- Prepares mineral maps and the inventory of mineral resources of India.
- Provides technical consultancy services in the field of mining, geology, mineral processing and environment.
- Conducts mineral beneficiation and related technological studies under the departmental programme.
- Disseminates information and data on exploration, prospecting, mines, minerals, mineral based industries and mineral legislation, and publishes bulletins and monographs.

- Imparts training to the scientific, technical and other cadres of IBM as well as persons from the mineral industry and other agencies for human resource development.
- ✤ Acts as Data Bank on Mines and Minerals.
- Advises the Government on matters in regard to mineral industry, relating to environmental protection and pollution control, export and import policies, trade, mineral legislation, fiscal incentives and related matters and conducts market surveys of minerals and metals.
- Promotes awareness about conservation, systematic and scientific development of mineral deposits and protection of environment including restoration, reclamation and rehabilitation of mined out areas through exhibitions and audio-visual media.
- Promotes and monitors community development activities in mining areas

Key Activities and Functions

In light of the role and charter of IBM, the key functions being performed by IBM can be broadly classified as (1) Regulatory Functions, and (2) Developmental Functions.

Regulatory Functions

2.6 i. Mining Regulations for ensuring implementations of Mining Plan, Scheme of Mining, Mine Closure Plan and other statutory provisions of MCDR 1988 and launching of prosecutions (Section 22 & 24 of MMDR Act 1957);

ii. Mining Plan & Scheme of Mining -Inspections and Approval (Rule 22(4),24A of MCR 1960; Rule 9, 10, 11 & 12 of MCDR 1988);

iii. Inspections and grant of permissions to

carry out 'stoping' operations in underground mines (Rule 26 of MCDR 1988);

iv. Monitoring of Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) aspects of mining operations (Rule 13 and 31 to 41 of MCDR 1988 and Section 10 of EP Act 1986);

v. Mine Closure Plan - Inspections, Approval and monitoring (Rule 23A to 23F of MCDR 1988);

vi. Accreditation to qualified persons as Recognised Qualified Persons (RQP) to prepare Mining Plans (Rule 22B & 22C of MCR 1960);

vii. Calculations of State-wise, mineralwise and month-wise royalty on *ad valorem* basis (Rule 64D of MCR 1960 and Rule 45 of MCDR 1988);

viii. Co-ordination with State Governments for curbing illegal mining activities (intimation of violation of Section 4(1) of MMDR Act 1957 to State Government agencies), and

ix. Grant of mineral concessions and monitoring of its activities in the offshore areas [various provisions of Offshore Areas Mineral (Development and Regulation) Act 2002 and the Offshore Areas Mineral Concession Rules, 2006].

Developmental Functions

2.7 (i) R&D in Mineral Processing - To play a role of a catalytic agency to promote &

develop the much-needed R&D in mineral processing in the field of mineral beneficiation, mineral characterisation, chemical analysis of ores and minerals and analysis of environmental samples;

(ii) Information Support and Advisory Services - To function as an advisory body to the government in formulation of mineral policy, lending technical guidance & support for framing Mineral Acts and in articulating provisions, rules & regulations thereof and lend it the credentials to formulate strategies, articulate policy requirements and oversee their implementation at both national and State levels;

(iii)National Mineral Inventory – Periodical updation of National Mineral Inventory reflecting the micro-level status and possession of various mineral resources of the country as per the international standards like UNFC;

(iv) Repository on Mines & Minerals – To shoulder the responsibility for collection, processing and storage of statistical data in respect of all major minerals through statutory and non-statutory basis;

(v) Publications on topical interest – To assort, process and analyse mines and mineral information generated on account of statutorily and non-statutorily collected information and supply them as important inputs for policy interventions, and

(vi) Training and Capacity Building – To provide training facilities for human resource development and to develop required technical expertise and skill in the personnel manning the mineral industry.

Organisation

- 2.8 IBM has its headquarters at Nagpur and was headed by Controller General. IBM is organized into six functional divisions, namely:
- (i) Mines Control and Conservation of Minerals Division.
- (ii) Ore Dressing Division.
- (iii)Technical Consultancy, Mining Research and Publication Division.
- (iv)Mineral Economics Division.
- (v) Mining and Mineral Statistics Division.

- (vi)Planning and Co-ordination Division having two sub-divisions:
 - a) Administration, Establishment matters (including training), Accounts with all other administrative and financial matters and;
 - b) Planning and Co-ordination.

The existing set-up is shown in the organisation chart (as on 31.3.2014).

Modern Mineral Processing Laboratory and Pilot Plant

2.9 UNDP aided Modern Mineral Processing Pilot Plant and Analytical Laboratory of IBM is located at MIDC Hingna, Nagpur. IBM's Environmental laboratory has the recognition of the Central Government to carry out testing of samples of air, water, soil and other substances specified under the Environmental (Protection) Act, 1986. IBM has been registered by the Department of Scientific & Industrial Research (DSIR) for purpose of availing Customs Duty exemption to carry out R&D work.

Zonal / Regional /Sub Regional Offices

he Mines Control and Conser-2.10 vation of Minerals Division functions through its Zonal offices viz North, Central and South located at Ajmer, Nagpur and Bangalore respectively and 12 Regional Offices located at Ajmer, Bangalore, Bhubaneswar, Chennai, Dehradun, Goa, Hyderabad, Jabalpur, Kolkata, Nagpur, Ranchi and Udaipur and 2 sub-regional offices located at Guwahati and Nellore. The territorial jurisdiction of regional offices is shown in the map.

Regional Ore Dressing Laboratories

2.11 The Bureau has two Regional Ore Dressing Laboratories and Pilot Plants at Ajmer and Bangalore to cater to the mineral beneficiation needs of the neighbouring areas. A Clay Testing Laboratory is also functional at Kolkata for catering the needs of North Eastern Region.

Activities of IBM

2.12 The activities of IBM have been conducted through the following continuing schemes:

Scheme No. 1. Inspection of mines for scientific and systematic mining, mineral conservation and mine environment;

Scheme No. 2. Mineral beneficiation studies, utilisation of low-grade and sub-grade ores and analysis of environmental samples;

Scheme No. 3. Technological upgradation and modernisation, and

Scheme No. 4. Collection, processing, dissemination of data on mines and minerals through various publications.

In addition a new Scheme, Scheme No. 5. Mining Tenements System is in process of implementation.

Human Resources in IBM

2.13 The Bureau has a total sanctioned strength of 1477 consisting of 420 Gazetted (Group A – 243 & B – 177) and 1057 Non-Gazetted (Group B – 362, Group C (Tech.) - 191 & Group C –504) posts. Sanctioned strength in various streams is as per the table below:

Sl.	Stream	Sanctioned
No.		strength
1	Mining Engineers	145
2	Mining Geologists	115
3	Ore Dressing, Chemical	224
	&Metallurgical	
	Engineers	
4	Mineral Economists	53
5	Statisticians	74
6	Administrative &other	866
	Technical Personnel	
	Total	1477

Committee for Review and Restructuring of the Functions and Role of IBM

2.14 In terms of the policy directions given in the National Mineral Policy 2008, the Government had constituted a Committee for review and restructuring of the functions and role of the Indian Bureau of Mines under the Chairpersonship of Joint Secretary (Mining Legislation), Ministry of Mines. The Committee submitted the "Report of the Committee for Review and Restructuring of the Functions and Role of IBM" to the Government on 4th May 2012.

The Committee has made 73 major recommendations for overall restructuring of the IBM including creation of additional 933 posts and infrastructure development like opening of new offices, new environmental laboratories, training centres etc.

The Ministry has communicated IBM vide letter No.31/72/2009-M.III dated 10th September, 2012 that the recommendations of the Committee have been accepted and directed to start the implementations of recommendations.

SFC note along with DPR and Cabinet Note for implementation of 46 financial implications recommendations of the IBM Review and Restructuring report is under consideration of Ministry.

Out of remaining non-financial 26 recommendations, 12 have been implemented and 4 are under approval of Ministry of Mines. Remaining 10 recommendations not linked with financial component are under implementation. Status of implementation of non financial recommendations is enclosed at Annexure V.

Capacity Building recommended in IBM Review & Restructuring Report

1. IBM to evolve as a National Technical Regulator ensuring effective regulation of Indian noncoal mining sector to ensure sustainable mining practices by creation of adequate human resource.

- 2. IBM to evolve as a consultant for creation and improvement of state –level regulatory mechanism in order to assist them for effective regulation of mineral sector including for prevention of illegal mining activities.
- 3. Improving quality of Mining Plans and Schemes of Mining and grant of recognitions to qualified persons for preparation of Mining Plans by re-orienting and improving the system.
- 4. To create infrastructure, facilities and expertise for regulation of the off-shore mineral developmental activities including systems and standards practices for grant of mineral concessions and exploration and exploitations techniques in offshore areas.
- 5. Digitization of resource inventory and updation of the same at frequent interval in accordance with the international norms.
- 6. Creation of facilities and expertise to monitor and implement the Sustainable Development Framework (SDF) including closure and post- closure activities and socio-economic issues related to mining industry.
- 7. Development of interactive web enabled portal and use of full potential of information technology for effective regulation of mineral sector to ensure transparency.
- 8. Development of 'Mining Tenement System' for transparent and effective mineral concession system linking with State

Governments, Indian Bureau of Mines and Central Government databases.

- 9. Opening of new Regional offices in mineral rich states and reorganisation of territorial jurisdiction of existing regional offices as per state boundaries to have greater synergy with the State Governments.
- 10. Strengthening of mineral processing, mineralogical, chemical and environmental laboratories of IBM and creation of facilities and infrastructure for mineral processing regulation in order to achieve the concept of zero waste mining.
- 11. To evolve IBM as a mineral intelligence and information centre and creation of data bank on mines and minerals rendering strong support and policy related inputs to the Government.
- 12. Capacity building of existing training facilities and creation of additional training infrastructure to work as Centre of excellence to impart training to Central, State and industry personnel in applied aspects of mining and mineral processing sector.

Inauguration of new office premises of Hyderabad Regional Office, IBM

2.15 The new office premises of Hyderabad Regional Office, IBM located at CGO Towers, 6th Floor, Kavadiguda, Secundarabad was inaugurated by Shri R.H.Khwaja, Secretary (Mines) on 8.2.2014, in the presence of Shri K.Thomas, Controller General in charge, Shri S.Tiu, Controller of Mines (South Zone) & Shri P.N. Sharma, Regional Controller of Mines. On this occasion, Shri Sabyasachi Ghosh, Principal Secretary, Industries & Commerce, Hyderabad and

senior officials from GSI, State DGM, DGMS, CPWD, PESO, PSUs and mining fraternity were present.

The new office is spread across an area of 5760 sq.ft on the 6th Floor of CGO Towers at Kavadiguda with Central Air Conditioning, un-interrupted power backup. It is equipped with optical fiber connectivity for LAN & WAN. Conference room with overhead projector and other modern facilities.



Indira Bhavan - IBM HQ



Analytical Laboratory, Nagpur



Modern Mineral Processing Laboratory & Pilot Plant, Nagpur



Inauguration of new office premises of Hyderabad Regional Office, IBM located at CGO Towers, 6th Floor, Kavadiguda, Secundarabad





Present organizational structure of IBM

MINES CONTROL AND CONSERVATION OF MINERALS DIVISION

The Mines Control and Conservation of Minerals (MCCM) Division is the primary wing of the IBM and is responsible for conservation, systematic and sustainable development of mineral resources of the country and protection of mines' environment through statutory enforcement as well as promotional activities. It is headed by the Chief Controller of Mines at the headquarters. There are 3 Zonal Offices located at Ajmer, Bengaluru and Nagpur and 12 Regional Offices and two Sub-Regional Offices (see para 2.5 and Map). The Zonal Office is headed by a Controller of Mines and Regional Office by a Regional Controller of Mines. The Chief Controller of Mines is assisted by the Chief Mining Geologist. Geological Mapping and Mineral Map Cell is headed by Chief Mining Geologist and is under the overall supervision of Chief Controller of Mines.

3.2 The Division carries out the following activities:

- Inspection of mines for enforcing Mineral Conservation and Development Rules, 1988.
- Approval of Mining Plans/ Schemes of Mining/ Mine Closure Plans under Mineral Concession Rules 1960, and Mineral Conservation and Development Rules, 1988.
- Granting recognition to the scientific and technical persons to work as Recognized Qualified Persons (RQPs) for the preparation of the statutory mining plans / Scheme of Mining / Final Mine Closure Plans.
- Conducting Regional Mining Geological Studies.
- Holding 'Mines Environment and Mineral Conservation Week' at different mining centers.
- Preparation of Mineral Maps along with forest overlays.

- Revision/updating of National Mineral Inventory of major minerals under private lease holds.
- Administration of Offshore Areas Minerals (Development & Regulation) Act 2002 & Offshore Areas Mineral Concession Rules, 2006.
- Attending Parliament Questions and Ministry References.

Inspection of Mines

3.3 During the year 2013-14, IBM carried out 2,512 inspections of mines 1178 inspections (including for examining mining plans/schemes of mining/ mine closure plans) to administer statutory provisions of Mineral various Conservation and Development Rules, 1988 in following States as listed below :

SI.	State	Inspection		
No.		MCDR	Mining Plan/	
		+ MCDP	Scheme of Mining/Mino	
		under	Closure Plans	
		RMDS		
1	Andhra Pradesh	157 + 25	93	
2	Assam	1	8	
3	Bihar	8	0	
4	Chhattisgarh	13+5	57	
5	Goa	1	0	
6	Gujarat	44+19	72	
7	Haryana	2	0	
8	Himachal Pradesh	44	7	
9	Jammu& Kashmir	0	1	
10	Jharkhand	131+25	32	
11	Karnataka	133	147	
12	Kerala	27	6	
13	Madhya Pradesh	31+25	185	
14	Maharashtra	33+5	39	
15	Manipur	0	0	
16	Meghalaya	10	16	
17	Orissa	144	41	
18	Punjab	2	0	
19	Rajasthan	73+26	206	
20	Sikkim	0	0	
21	Tamil Nadu	12+25	238	

22	Uttarakhand	36+22	22
23	Uttar Pradesh	3	3
24	West Bengal	0	5
Total		905+	1178
		177	

Year wise details of target and achievement of inspection of mines for enforcement of MCDR 1988 and for approving mining plans during last 5 years are shown in Figure 3.1



Figure 3.1

3.5 During inspections/studies, IBM advised the mine owners on adoption of appropriate technology for prospecting and mining; offered suggestions to ensure mining; systematic and guided for utilisation of low grade minerals and rejects and if not found feasible for the present, were advised to stack them separately for future use. On receipt of stoping notices, mines were inspected in detail to examine the scope for further development, feasibility of improved methods for stoping and other ancillary aspects. Environmental problems during and after cessation of mining activities were taken care of. Suitable advices were given to mine owners so that the environmental pollution due to mining could be properly managed by taking appropriate abatement measures.

Mining Plans

3.6 During 2013-14, a total of 306 mining plans were received of which 24

were withdrawn by the parties. Of the mining plans received during 2013-14 and also those received/under processing prior to this period, 167 were approved and 55 were not approved during the year.

From the time of introduction of the mining plan in the year 1988 upto March 2014, a total of 16,087 mining plans were received. Out of these, 13,123 mining plans were approved, 1,679 were not approved, 1,073 were withdrawn by the parties, 52 were pending with the parties for modification and 155 were at different stages of processing at IBM.

The status of disposal of Mining Plans during last 5 years is shown in Figure 3.2





Schemes of Mining

3.7 During the year, 808 Schemes of Mining were received of which 50 were withdrawn by the parties. Of the schemes received during 2013-14 and also those received prior to this period, 604 schemes were approved and 367 were not approved during the year.

Since the introduction of Scheme of Mining up to March 2014, 7,307 Schemes of Mining were received under Rule 12 of MCDR 1988. Out of these, 5,343 Schemes were approved, 1,197 were not approved, 305 were withdrawn by the parties, 132 were pending with parties for modification, and 330 were at different stages of processing at IBM. The status of disposal of Schemes of Mining during last 5 years shown in Figure 3.3



Figure 3.3

Mine Closure Plans

3.8 Mining operations are to be carried out as per the approved mining plan and after extraction of minerals, the mines are required to be reclaimed as per an approved Mine Closure plan. To ensure that the lessee completes the work of mine closure as approved for his mine, he has to submit a valid financial assurance in the form of encashable bank guarantee. So far up to 31 March 2014, Financial Bank Guarantees for a value of Rs.2044.98 million have been collected and after fulfilling the requirements of the FMCP, certificates under rule 29 A of MCR 1960 have been issued for 94 cases of partial or full surrender of lease.

During the year, 31 Final Mine Closure Plans (FMCPs) were received. Of the plans received during 2013-14 and also those received prior to this period, 26 plans were approved and 12 were not approved during the year.

Since the introduction of FMCPs up to March 2014, 375 plans were received. Out of these, 274 were approved, 50 were not approved, 26 were withdrawn by the parties, 8 were pending with parties for modification, and 17 were at different stages of processing at IBM. Cumulative status of disposal of FMCP is shown in Figure 3.4



Figure 3.4

Mining Plan Grievances Committee (MPGC)

3.9 The Mining Plan Grievances Committees for the redressal of grievances of entrepreneurs in dealing with IBM for approval of mining plans, constituted in each region comprise representatives of mine owners, RQPs, State Directorates of Geology and Mining, and the Controller of Mines, IBM of the concerned Zone as Chairman. All the MPGCs continued their activities and held one meeting each at 12 Regional Offices during the reporting year.

Grant/Renewal of Recognised Qualified Persons (RQPs)

3.10 Under Rule 22C of Mineral Concession Rules 1960, competent authorities of IBM have been delegated powers to grant/renew recognitions to qualified persons to prepare mining plan. During 2013-14, 44 recognitions were granted, 32 renewed and 26 refused.

A total 3,039 recognitions have been granted so far out of which 1066 were valid, on the IBM's record, as on March 2014.

Meeting with RQPs

3.11 During 2013-14, IBM held meetings with the RQPs at the following places with an objective to provide guidance regarding problems faced by them in preparation of mining plans:

SI.	Region/	Date	No. of RQPs
NO.	venue		participated
	CENTRAL ZO	NE	
1	Ranchi	22.03.2014	17
2	Jabalpur	22.02.2014	54
3	Nagpur	28-02-2014	34
4	Kolkota	29-03-2014	05
5	Bhubaneswar	31-03-2014	30
	NORTH ZONE		
6	Ajmer	17-02-2014	28
7	Dehradun	16-12-2013	05
8	Udaipur	22-11-2013	18
	SOUTH ZONE		
9	Chennai	14-03-2013	60
10	Hyderabad	06-01-2014	65
11	Goa	20-03-2014	70
12	Bangalore	17-03-2014	37
Total number of RQP's		423	
participated in Meetings			

Administration of MCDR, 1988

3.12 While discharging the statutory function of enforcing administration of Mineral Conservation and Development Rules, 1988, during 2013-14, **5292** violations of different rules and sub-rules were pointed out in respect of **2049** mines and were further followed up for their rectification. A summarized account of status of enforcement of MCDR is tabulated below:

Sr.No	Aspect	No.
1.	Violations pointed out	5292
	for various Rules &	
	Sub-rules.	
2.	Mines for which	2049
	violations pointed out.	
3.	No. Violations rectified	1525
4.	Show cause notices	955
	issued	
5.	No. of violations	771
	rectified after issue of	
	show cause notices	

6.	Court cases launched	58
7.	a) Cases compounded	24
	b) Total fee received	Rs. 1,67,000/-
8.	a) Cases decided in favour of IBM	25
	b) Fine imposed	Rs. 3,34,500
	c) Cased dropped	03
9.	No. of mines where,	
	a) Mining operations suspended	900
	b) Suspension orders revoked	228

3.13 Principal violations pointed out under MCDR, 1988 during mine inspections are given below:

		No. of
Dela Ma	Cash is at	violations
Rule No.	Subject	pointed
		out
	Chapter III Mining	
	Operations	
	(Rule No. 9 to 26)	
12(3)	Submission of scheme of	384
	mining.	
13(1)	Mining operations in	890
	accordance with mining	
	plans	
22(1)	Notice of opening of mine	163
23B(2)	Submission of progressive	64
	mine closure plan	
23E(2)	Responsibility of the holder	167
	of mining lease to submit	
	yearly report	
23F(1)	Financial assurance	140
23F(3)	Financial assurance	252
24	Notice of temporary	151
	discontinuance of mining	
	operations	
	Others under Chap. III	280
	Chapter IV Plans &	
	Sections	
	(Rule No. 27 to 30)	
27(4)	Maintenance of plans and	95
	sections	
29	Copies of plans and sections	70
	to be submitted	
	Others under Chap. IV	97
	Chapter V Environment	
	(Rule No. 31 to 41)	
31	Protection of environment	11
33(2)	Storage of overburden,	18
	waste rock, etc.	
	Others under Chap. V	51

	Chapter VI Employment	
	of Qualified Persons	
	(Rule No. 42 to 44)	
42(1)(c)(i)	Employment of Whole time	130
	Mining Engineer/Geologist	
42(1)(c)(ii)	Employment of Part time	146
	Mining Engineer/Geologist	
	Others under Chap. VI	72
	Chapter VII Notices &	
	Returns(Rule No. 45 to 53)	
45(1)	Submission of returns	81
45(5)(a)	Submission of Monthly	684
	Return	
45(5)(b)	Submission of Annual	767
	Return	
	Others under Chap. VII	579
Total		5292

Disposal of Applications for Grant of Permission under MCDR, 1988

3.14 Details of applications disposed off during 2013-14 for grant of permission under MCDR, 1988 are given below :

Sl. No	Subject	No of cases in which permission	
		Granted	Refused
1	Stoping (Rule 26)	19	Nil
2	Preparation of plans & sections of Mine working (Rule 27)	18	02

Significant Results of Inspections & Studies

3.15 Conservation of Minerals:

(i) In compliance to the Bhubaneswar Regional office letter no ORI/GRPH/NUP/MCDR-1/BBS,Dt 26.06.2013.. the lessee of Gandhabahali Graphite Mine Sri P.K Agrawal, reported that he has < 5% FC grade been stacking Graphite at the mine and over the time 214314 tonne of < 5% FC grade graphite has accumulated. This < 5% FC grade graphite is beneficiated with wt % recovery of about 7.16% and grade of the beneficiated product is < 40% FC

which is marketable at Rs 650/- per tonne. Thus the accumulated stack of <5% FC grade graphite will give 15342 tonne <40% FC graphite which works out to be of Rs 99.7 lakh, which is a salient achievement in the interest of mineral conservation

The Noamundi iron ore mine, Dist.-(ii) Singhbhum (W), State – Jharkhand of M/s Tata Steel Ltd mine was inspected on 16/07/2009 & 19/11/2009 by shri M.G. Bhattacharyya, J.M.G in connection with the Regional Mining Geological study (RMGS) for the year 2009-10. During the inspection of the mine, based on the mode of occurrence as well as structural configuration of iron ore in the lease area as well as new threshold value of iron ore, the mine management was advised to carry out exploration in the abandoned area at hill 1 & 2 of Noamundi iron ore mine for proving additional resources of iron ore.

> As per the above suggestion, the exploration proposal in the above abandoned area was incorporated in the mining plan of noamundi iron ore mine. During the plan year 2011-12. Subsequently, after approval of the mining plan exploratory drilling was carried out in the above area at hill 1 & 2. On the basis of these new boreholes and chemical analysis results of borehole samples, the lessee has estimated the following additional resources.

a) Iron ore (+58% fe) - 5.7 million tonnes

b) Iron ore (+45 to -58% fe) - 5.0 million tonnes.

Considering an average price of the iron ore (fe +58%) at rs 2500/ per tonne, the value of these 5.7 million

tonnes comes at about 1425 crore rupees.

Considering an average price of the iron ore (fe 45-58%) at rs 1500/ per tonne, the value of the 5.0 million tonnes comes at about 750 crore rupees.

As such iron ore having a value of Rs. 2175 crores was proved in the abandoned area which was not lost forever due to the suggestion of Indian bureau of mines, Kolkata.

The above achievement is incorporated as per the letter no.md/plg/71/426/2013 dated 8/11/2013 received from M/s Tata Steel Ltd. expressing their sincere regards for giving suggestions for exploring the abandoned area of hill no. 1 & 2 of noamundi iron ore mine.

3.16 Scientific development of mines:

(i) While scrutinizing the scheme of mining of Kalarangitta Chromite mine of M/S FACOR, by Dr M K Somani, SMG, IBM, Bhubaneswar, it was observed that during the conceptual period OB excavation of 14.75 lakh m3 in 8.4ha area was proposed which was very much on higher side. It was pointed out and in the final submission it was revised to 10.53 lakh m3 in 6.1 ha area. This reduced the OB handling by 4.22 lakh m3 for recovering the same quantity of ore, and the area of ultimate pit limit reduced by 2.3 ha. Otherwise this would have required the company to spend about Rs. 126.6 million extra (@ Rs. 300 per m3 of OB) for excavating and disposing off the OB. Moreover 2.3 ha area was also saved from degrading and will be available for other works in this leas area with acute shortage of space. This is a salient achievement in the interest of systematic and scientific development of the mine and more importantly for environmental protection.

(ii) While scrutinizing the Scheme of Mining of Gurubeda iron ore mine of Shri S C Padhee, it was observed by Dr M K Somani, SMG, IBM, Bhubaneswar that the reserves were estimated on the basis of lower recovery factor. Accordingly the same was pointed out to the party and in the final submission the reserves/ resources increased by 156 % of original submission. Taking average sale value of 58-60 % Fe @ Rs 3785/- per tonne the value of increase reserve is Rs 4679 million.

Measures for Abatement of Pollution and Environmental Protection

3.17 While approving the mining plans, schemes of mining and mine closure plans, IBM ensures that environment impact assessment studies have been carried out that effect environmental and to management plan has been incorporated for effective implementation, besides its reclamation and rehabilitation of mined out areas. IBM also ensures that mining operations are carried out in accordance with the approved mining plan/scheme of mining.

As a result of follow up for implementation of EMP, extensive afforestation has been undertaken in the mines by the mine owners. During the year 2013-14, about 2.60 million saplings have been planted over an area of 1719 hects. in and around mine areas. Thus, so far, 107.49 million saplings have been planted over an area of about 42,936 hects. with a survival rate of 67.43 percent.

Simultaneous reclamation in working mines, and reclamation of

abandoned mines are required to be carried out wherever it is feasible. During the year 2013-14, simultaneous reclamation / rehabilitation is going on in 359 working mines covering an area of about 1023 hects, taking the cumulative figure for an area of about 15,491 hects. So far, 83 abandoned mines covering an area of 887 hects. have been reclaimed/ rehabilitated.

Mines Environment and Mineral Conservation Week

3.18 IBM plays a key role in fostering greater awareness and inculcates competition amongst the mine owners by organising Mines Environment and Mineral Conservation (MEMC) Week in different mining areas in the country towards the protection and restoration of mine environment with sustainable development.

The MEMC week held under the aegis of different Regional offices of IBM during 2013-14, in which a total of 1017 mines participated, are given below:

REGION	Period		No of Mines participate d
CENTRALZONE			
Ranchi	06.01.2014	to	60
	12.01.2014		00
Jabalpur	10.02.2014	to	101
	15.02.2014		101
Nagpur	11.11.2013	to	69
	24.11.2013		08
Kolkota	03.02.2014	to	41
	09.02.2014		41
Kolkata (Guwahati	24.03.2014	to	15
Sub-Region)	29.01.2014		15
Bhubaneshwar	19.03.2014	to	70
	24.03.2014		19
NORTH ZONE			
Ajmer	03.01.2014	to	124
	09.01.2014		
Dehradun	13.01.2014	to	59
	19.01.2014		
Udaipur/	10.02.2014	to	115
Rajasthan	16.02.2014		115
Udaipur /Gujarat	16.01.2014	to	73
	22.01.2014		15
SOUTH ZONE			

Chennai (NZ)	03.02.2014	to		
	09.02.2014			
Chennai (SZ)	17.02.2014	to	170	
	23.02.2014			
Hyderabad	16.12.2013	to	100	
	22.12.2013			
Goa	No celebration due to closure of			
	mines			
Bangalore	17.02.2014	to	57	
(Karnataka)	22.02.2014			
Bangalore (Kerala)	27.01.2014	to	16	
	01.02.2014		40	
TOTAL MINES PA	1108			
MEMC WEEK				

The celebration of MEMC Weeks continued to receive wide publicity and popularity. It is happy state of affairs that a positive response towards mineral conservation and protection of mine environment has been noticed, particularly in mechanised mines. A healthy sign has also been observed amongst small mine owners towards achieving the goal of conserving mineral and protecting the mines environment.

Grant of Exploration Licence in Offshore Areas

The 3.19 Offshore Areas Mineral (Development and Regulation) Act, 2002 and the Offshore Areas Mineral Concession Rules, 2006 came into force with effect from 15.01.2010. The Controller General, IBM has been notified as Administering Authority as well as authorised officer for the purpose of the Offshore Areas Mineral (Development and Regulation) Act, 2002 vide order dated 11.02.2010. Subsequently, the Controller General & Administering vide notification Authority dated 07.06.2010 has notified total 63 blocks (26 mineral bearing Offshore blocks in Bay of Bengal and 37 mineral bearing Offshore blocks in Arabian Sea). In response to the above notification, total 377 applications were received from 53 applicants till the last date, i.e. 14.09.2010 stipulated for the purpose. Based on the recommendations of the Screening Committee, Exploration Licences were granted to 16 applicants for

62 mineral bearing blocks in the offshore waters of Bay of Bengal and Arabian Sea on 5th April 2011. Block No. 3 and 32 of Arabian Sea were having identical bounding latitudes and longitudes and therefore were recommended and granted as one block, i.e. Block No. 3. Draft of corrigendum for deletion of Block No. 32 (published in the notification dated 07.06.2010) has been sent to Ministry for approval on 03.03.2014.

So far, these exploration licences have not been executed due to pending litigation, lack of expertise, etc. Field guidelines for exploration on offshore areas as per UNFC were framed and sent to Ministry on 21.03.2013.



Figure 3.5 : Mineral bearing blocks in Offshore areas

Mineral Concession Approval System (MCAS)

3.20 The Web based Mineral Concession Approval System is operational in the Ministry of Mines and is being used to monitor the progress of applications received in the Ministry, recommended by the State Governments in favour of a particular applicant in respect of RP, PL, ML for major minerals specified in the first schedule of MMDR Act, 1957. The system is being extended to capture the post approval activities.

Measures to Curb Illegal Mining

3.21 While the issue of prevention of illegal mining is not covered within the functioning of IBM, it has been associated with state government and its law enforcement agencies in efforts of curbing the illegal mining activities.

The Ministry of Mines have formulated a three-pronged strategy for prevention of illegal mining viz. constitution of Task Force by the state government at State and District Level having a representative of IBM, framing of rules under Section 23C of the MMDR Act, 1957 and furnishing of quarterly returns on illegal mining for review by the Central Government.

With rigorous follow-up made by IBM with various State Govt(s)., all together, 22 State Governments have constituted Task Force namely, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Manipur. Mizoram. Maharashtra. Nagaland, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh & West Bengal and 20 states have framed the rules under section 23C of MMDR Act 1957 namely Andhra Pradesh, Bihar, Chhattisgarh, Goa. Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand & West Bengal so far. The function of the Task force is to review the action taken by member departments for checking the illegal mining activities in their respective jurisdiction. Further, whenever IBM detects illegal mining during the course of routine MCDR inspection, the same is reported to the State Govt. concerned to take suitable action and report the compliance to IBM.

The Ministry of Mines has directed the state governments to conduct special drive to increase awareness on the issue of illegal mining by organising "Pakhwara' (Fortnight Programme) in liaison with the office of IBM in the state. Accordingly, IBM has initiated the action on the matter and nominated one officer each from the regional offices of IBM for the event.

Besides, IBM has nominated Nodal Officers for every zonal/regional offices to look after all the work of prevention of illegal mining activities in the respective regions/states mainly for surfacial deposits of major and minor minerals. They will coordinate with the state governments for timely submission of quarterly returns on illegal mining; liasoning with state govt. for framing of rules under section 23 C of MMDR Act 1957 and constitution of task participation in the regular task force; force meetings, coordination in organizing Pakhwara for prevention of illegal mining; attending all the references pertaining to illegal mining and submission of report/comments thereof, referring the cases of illegal mining noticed during MCDR inspections to the state govt. and action taken by the state govt. and other related issues.

In compliance of the direction of the Ministry, IBM has constituted Special Task Forces for inspection of mines in endemic areas by taking help of Satellite imageries. The Task Force inspections were period conducted during the from December 2009 to March, 2014 in the States of Andhra Pradesh, Chhattisgarh, Goa. Guiarat. Jharkhand. Karnataka. Madhya Pradesh, Maharashtra, Odisha and Rajasthan. In all 658 mines comprising minerals like iron ore, manganese ore, dolomite, limestone, bauxite etc. were inspected by the Task Force.

Mining operations were suspended in 191 mines under rule 13(2) of MCDR, 1988. Suspension orders were subsequently revoked in 116 mines after ensuring rectification of violation(s). In 17 cases (Gujarat-02, Karnataka-08, Madhya Pradesh-02, Jharkhand-01, Maharashtra-01 and Odisha -03) recommendation to terminate the leases under rule 27(1) (u) and 27 (5) of MCR 1960 have been communicated to the concerned State Governments.

During the year 2013-14, 18 state governments have submitted the quarterly returns on illegal mining up to the quarter ending March, 2014. An annualised quarterly return on illegal mining for the year 2013-14 is given as **Annexure IX**.

The Ministry of Mines has further directed all the state governments to start the process of registration of end users, constitution of Special Cell in State Police, use of satellite imagery to track down illegal mining, hologram-marking / barcoding of transport permit etc. The state governments are also planning to set up special camp at sites and deployment of Boarder Home Guards in the areas where there have been complaints about illegal mining.

Implementation of amended Rule 45 of Mineral Conservation and Development Rules 1988

3.22 To keep account of mineral flow from mine to end, the Government of India has notified amendment in Rule 45 of Mineral Conservation and Development Rules, 1988, vide G.S. R. No. 75(E) published in Part-II, Section-3, Sub-Section (i) of the Gazette of India Extraordinary dated, 9th February, 2011, which stipulates mandatory registration of miners, stockists, traders, exporters, and end-users of minerals, and stringent reporting norms for ensuring endto-end accounting of the mineral produced. In this system it is mandatory for the miners, traders, exporters, and end-users of the minerals to send a copy of the reports to State Governments also. The State Governments have also been advised to ensure that any automation in the reporting system developed at the State levels should be compliant with the amended Rule 45 of the MCDR. Accordingly, IBM in association with NIC has developed online registration forms and statutory monthly and annual returns forms. The first phase of online system of submission of statutory returns was inaugurated by Hon'ble Minister of State for Mines (IC) Shri Dinsha Patel on 29.03.2012 at New Delhi.

The second phase viz online Annual Returns submission of was inaugurated the hands Shri at of C.S.Gundewar, Controller General, IBM on 1st March 2013 on the occasion of IBM foundation day at IBM Headquarters, Nagpur. The on-line reporting system is linked to on-line registration system.

Monthly Returns (Form F1 to F8) and Annual Returns (Form H1 to H8 have been made operational. IBM is receiving the returns online through this system

Complete switchover to Online submission of returns would help ensuring effective data collection, increasing the coverage of mines and faster collection and compilation of information and to bring out in time various statistical publications.

The on-line registration system has already commenced in the IBM and so far up to March, 2014, 5836 lease holders, 3936 traders, 742 exporters, 1421 stockiest and 2846 end-users have registered their details.

Broadly the reporting system is divided into two parts. Part-I covers the general information in addition to the employment details. Part-II of the monthly reporting system deals with the grade wise production, dispatches, stock and justification for increase/decrease of production and sale price of minerals. The Part-II of reporting system requires the registration number of the consignee and purpose of sale whether for domestic consumption or export and in case of domestic consumption whether it is made for captive consumption / sale / transfer.

In order to facilitate tracking of mineral from mine to end-use, the reporting system requires indicating the registration number of supplier from whom the mineral is procured. The reporting system will have details of approved mining plan production proposals to compare the same with the actual production from the mine. All the State Government will be able to access the system to check the data reported in the returns and can initiate action in case of wrong reporting of data, evasion of royalty, etc.

The amended Rule 45 of MCDR, 1988 specifies the penal action against defaulting mine owners and empowers the Central Government to order for suspension of all mining operations and may revoke the order of suspension after ensuring proper compliance, take action to initiate prosecution and recommend for termination of mining lease. The Rule further specifies that in case of defaulters engaged in trading or storage or end use or export of minerals, the State Government is empowered to order for suspension of trading license, all transport permits issued, storage license for stocking minerals and permits of end use industry, etc.

3.23 Website

A Web Portal of IBM as per the guidelines of Government of India was designed by National Informatics Centre (NIC) and hosted on its server In July, 2010 at *www.ibm.gov.in.* Information regarding IBM's history, functions, organization, divisions of IBM and its activities, jurisdiction of regional & zonal offices, services offered by IBM, Mining Plans – guidelines / formats / circulars thereof, RQPs - guidelines / formats thereof, UNFC guidelines. Mining Mineral Laws. Information like mineral reserves, value, rovalty and dead rent. details of reconnaissance permits, threshold values, notices & returns under MCDR,1988 Mining Leases distribution data, Indian Mineral Year Books, Bulletin of Mining Leases & Prospecting Licenses, Bulletins of Mineral Information, Offshore Mineral Concession Rules, Notification & Form G thereof, Tenders, RTI information, Photo gallery, etc., have been displayed on the web portal. There is also provision for online submission of vigilance complaints and Grievances.

Third Subcommittee of Parliament on Official Language Committee inspected RO IBM, Udaipur on 18.10.2012 and it was assured by IBM that website will be made bilingual at the earliest. Accordingly, a A proposal was sought from NIC and got approved from Ministry in the month of July, 2013 and designing work for website was given to NIC in the month of August, 2013. The new design of bilingual website was approved on 20.11.2013 by CGIBM. NIC is working on approved design.

3.24 Computerised Online Register of Mining Tenements System

A scheme on Computerized Online Register of Mining Tenements system was taken up by the IBM during the programme year 2009-10.

The objective of the Scheme is to develop an online National Mineral Information System for investors by linking Central and State organizations engaged in administration of mineral resources in the country. The project comprised of GIS and Registry parts. The approved funds will be utilised for implementation of the project in mineral rich states i.e. Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu.

The MTS has been envisaged by the Government to automate the various processes associated with the mineral concession regime. This would not only give an impetus to the decision making process but is also expected to meet the ends of transparency and openness. It is envisaged that MTS will not only enable online filing of applications but it will also be possible to identify online the areas for various types of mineral concessions. This would involve integration of web based technology services with Geographical Information System (GIS), so that information could be shown spatially in the form of maps. IBM has been nominated by the Ministry as the Nodal Implementing Agency for the project.

A detailed consultative meeting with the States, NIC and IBM was held on 20.9.2012 to solicit their views on draft DPR submitted by the consultant and implementation issues. Accordingly provisions for IT manpower and hardware support to the States and technical manpower support to IBM were included in the DPR. Thereafter the DPR was endorsed Co-ordination-cumbv the Central Empowered Committee (CEC) and finally approved by the core committee of MTS in its meeting on 31.10.2012.

M/s Ernst & Young Pvt. Ltd. has prepared Request for Proposal (RFP) as per approved DPR.

The Ministry of Mines vide office memorandum No. 37/5/2004-Vol.III (Pt.) dated 13th August 2013, constituted Technical Evaluation committee (TEC), for selection of system integrator, finalisation of tender document and evaluation of tender document. The SFC for the project on Mining Tenement System was approved on 29th August 2013 by the SFC committee under the chairmanship of the Secretary (Mines) at the Ministry of Mines.

The RFP document finalized by the TEC sent to Ministry of Mines for approval.

The approved RFP was hosted on CPP portal and IBM website on 03.12.2013.

As per time schedule of RFP a prebid meeting for the project MTS was held on 20.12.2013 at CHQ, IBM, Nagpur. Representatives of 14 companies participated in the pre-bid meeting.

As scheduled, the tender opening process started under the chairmanship of the IBM tender opening committee on 17th February, 2014 at 15.30 hours. After opening the bids in tender box of IBM and CPP Portal it was found that IBM did not receive any bid in the form of hard copy or soft copy from any of the bidders.

A detailed note prepared on bid opening for the project on Mining Tenement System, with possible reasons for not receiving bids and proposed course of action is communicated to ministry vide this office letter No: I-11013/1/MTS/PBQ/2013-14-CCOM dated 21.02.2014.

As part of the project, MoUs with respective State Governments, who are involved in the first phase of the system, are also being signed. So far State Governments of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Goa, Karnataka, Kerala, Gujarat, Jharkhand, Maharashtra, Odisha and Rajasthan have already signed the MoU with IBM for MTS implementation. Government of Tamil Nadu, is being followed to sign the MoU.

The Project will be implemented in three phases. In phase I, the registry component of Central Database will be developed covering aspect of registration, returns, revision, inspection, mining plan approval and mine closure plan approval. The state specific registry components would be developed in phase II and phase III will be devoted for GIS component. Some parts of GIS components can be taken up simultaneously along with development of Phase I and Phase II.

Umbrella software will be developed for all States. The project will be implemented by adopting the cafeteria approach wherein the system is developed for pilot locations and latter other States are free to choose the software package as per their requirements. As per the individual need and strategy of each State, the services can be opted and payment can be done for the limited package opted by the State.

GEOLOGICAL MAPPING AND MINERAL MAP CELL

GEOLOGICAL MAPPING CELL

Geological Mapping (G.M.) Cell is engaged in the scrutiny of updated NMI (as on 1.4.2010) for private sector leasehold mineral deposits received from various Regional Offices of IBM and also maintaining RP / PL database.

Achievements

4.2 Administration of RP is covered under Rule 3A to 3E of MCDR 1988. For effective implementation of these rules, Violations were issued to the defaulting RP holders. This has helped to regulate and streamline reports/returns/data submission from these RP holders. During the year, 197 such documents were received from RP holders, which were scrutinized and documented for further follow-up action. Quarterly status report on RPs in India for the quarter ending March, June, September and December 2013 were furnished to Ministry and also hoisted on IBM website.

4.3 As on 31 March 2014, out of 398 Reconnaissance Permits (RPs) granted in the country, there were 35 active RPs over an area of 45209 Sq. Kms.

MINERAL MAP CELL

4.4 Mineral Map (M.M.) Cell prepares multi-mineral leasehold maps (MMLM) depicting distribution & disposition of mining leases of various minerals found in a region, along with other relevant details about infrastructure, physiography, resources, forest cover etc. It is equipped with AUTO CAD 2004, AUTO CAD MAP 2008, MICRO and STATION V8 **GEOMEDIA** PROFESSIONAL., Lease details from mining plans and scheme of mining, forest density maps from Forest Survey of India and details of regional geology from published maps of Geological Survey of India are used in preparations of minerals maps. These maps

have been found useful for policy planners and to facilitate development of mineral deposits. Besides, these maps also serve as authentic references for resolving mining and mineral related issues.

The various maps prepared by MM Cell are:

(i) **Index Map:** The index map incorporates the distribution of mining leases, regional geology, physiography and infrastructure available in the area. These maps are prepared on 1:50,000 scale.

(ii) **Forest Overlays:** The forest overlays are prepared for the corresponding index maps on 1:50,000 scale and they incorporate forest cover as obtained from Forest Survey of India (FSI).

Achievements

4.5 During the year 2013-14 Work related to updation of **100** multi-mineral leasehold maps on a scale of 1:50,000 with corresponding forest overlays in respect of Andhra Pradesh and Bihar States was taken-up and up to March, 2014, scanning and geo-referencing of 714 key plans and 108 topo-sheets has been completed. Multi-mineral leasehold map :Andhra Pradesh



Forest Cover map : Andhra Pradesh



ORE DRESSING DIVISION

The Ore Dressing Division undertakes test work on beneficiation of low grade ores and minerals to develop suitable process flow sheet on bench-laboratory scale and pilot plant scale. It has a Modern Mineral Processing Laboratory and Pilot Plant at Nagpur and two Regional Ore Dressing Laboratories at Ajmer and Bengaluru. Ore Dressing Division is headed by Director (Ore Dressing). The Modern Mineral Processing Laboratory and Pilot Plant at Nagpur is headed by Chief Ore Dressing Officer. The Regional Ore Dressing Laboratory and Pilot Plants at Ajmer and Bengluru are headed by Superintending Officer (Ore Dressing). This Division has a strong R&D base for mineral beneficiation and these studies are carried out on various low grades of ores/minerals, waste/rejects viz ferrous. non-ferrous. sulphide minerals and industrial minerals except atomic minerals on charge basis as well as on promotional basis, as a part of the conservation studies being carried out by the MCCM Division.

5.2 The Modern Mineral Processing Laboratory and Pilot Plant at Nagpur is well equipped with most sophisticated equipment and is regarded as "Centre of Excellence" in the field of Mineral Beneficiation. This is a core centre to cater to the needs of the country for beneficiation test work. The pilot plant has flexible capacity ranging from 0.5 to 2.0 tonnes/hour for conforming the process evolved in the laboratory as well as to generate additional data before commercial application and also to produce adequate quantity of concentrate, if needed, for end use testing.



Modern Mineral Processing Laboratory & Pilot Plant, Nagpur

5.3 The Analytical Laboratory located in the premises of Modern Mineral Processing Pilot Plant, houses the Chemical Laboratory. the Mineralogical laboratory and the Environmental Laboratory. The Environmental Laboratory is a recognized laboratory by the Central Pollution Board of Ministry of Environment & Forests (MoEF), Government of India.

5.4 The Bureau has region-wise facilities in mineral testing and beneficiation with regional ore dressing laboratory and pilot plants at Ajmer and Bengaluru which are also well equipped with sophisticated equipment. A 'Clay Laboratory' has also been established at Kolkata to cater to the needs of the northeastern region exclusively.

5.5 The most important function of this Division is to conduct R&D work with an objective of developing a suitable process flow sheet for beneficiation of low grade ores and minerals for commercial application; chemical analyses by conventional as well as instrumental methods; mineralogical studies and physical characterization of ores and minerals and ore dressing products: preparation of pre-feasibility reports; in-plant studies and plant audit; environmental studies of mine waste effluents: trouble shooting jobs at site for commercial plants; and providing consultancy services in fields of mineral processing. chemical analyses and mineralogy. This Division also imparts training to the scientists of mining industry in the specialized fields of ore dressing.

Performance

5.6 During the year 2013-14, 55 ore dressing investigations, chemical analyses in respect of **41,483** radicals, 2,356 mineralogical examinations were carried out. Out of these achievements, 46% of the Ore Dressing Investigations were on promotional basis and the remaining were on charge basis. A revenue of `86,98,329/- was generated during

SI.	Item	Target/Achievements during 2013-14								
NO.		Ajmer		Bengaluru		Nag	Nagpur		Total	
		Т	А	Т	Α	Т	Α	Т	Α	
1	Ore Dressing investigations	15	(18)	15	(15.75)	30	(21.75)	60	(55.50)	
2	Chemical Analyses	6,000	4917	6,000	8,443	28,000	28,123	40,000	41,483	
3	Mineralogical Examinations	500	519	500	507	1,300	1,330	2,300	2,356	
4	In-plant Study	-	-	-	-	-	-	-	-	
5	Revenue Generated (`Lakhs)	-	6.89	-	48.14	-	31.94	-	86.98	

the year. Laboratory-wise break-up of work fo carried out and revenue generated is as

follows:

In case of promotional work, IBM conducts test work on the samples mainly collected during inspections of mines and R&D support provided towards fulfilling regulatory functions of IBM for systematic and scientific mining, which are prime importance from conservation and environmental aspects. The charge basis samples are received from the public and private sector mines and also from exploratory agencies such as GSI, MECL etc. Annexure II furnishes the list of laboratory and pilot scale investigations completed during the year 2013-14. Mineral-wise breakup is as follows:

Sl. No.	Mineral	Charge Basis	Non- Charge Basis	Total
1.	Bauxite	1 (0.25)	1 (0.25)	2 (0.50)
2.	Copper Ore	8 (5.00)		8 (5.00)
3.	Clay/Chin a clay	2 (2.00)	6 (3.75)	8 (5.75)
4.	Chromite Ore	3 (1.50)	12 (12.00)	15 (13.50)
5.	Feldspar	2 (0.50)		2 (0.50)
6.	Fly Ash	3 (1.50)		3 (1.50)
7.	Garnet	1 (1.00)		1 (1.00)
8.	Graphite	2 (1.25)	1 (0.25)	3 (1.50)
9.	Iron Ore	5 (4.25)	7 (7.00)	12

				(11.25)
10.	Lead-Zinc	2 (1.25)		2 (1.25)
11	Limekank ar	1 (1.00)		1 (1.00)
12.	Quartz	1 (0.25)		1 (0.25)
13.	Rock Phosphate	9 (4.50)		9 (4.50)
14	Silica sand/ Beach sand/Sand	9 (5.25)	2 (2.00)	11 (7.25)
15	Others	3 (0.75)		3 (0.75)
	TOTAL	52 (30.25)	29 (25.25)	81 (55.50)

() Equivalent No. of full scale investigations

5.8 TRAINING PROGRAMMES

TRAINING PROGRAMME ON "MINERAL CHARACTERIZATION IN VIEW OF BENEFICIATION OF ORES AND MINERALS"

A training programme on "Mineral Characterization in view of beneficiation of ores and minerals" for executives of Mineral Industry was held from 21 – 22 August, 2013 at Modern Mineral Processing Laboratory & Pilot Plant, MIDC, Hingna Road, Nagpur.

Total 16 Executives from various Mineral Industries viz. M/s Arcelor Mittal Ltd., Ranchi. M/s A.C.C. Ltd., Madukkarai, Coimbatore, M/s R. C. Fertilizers, Mumbai, M/s Kerala Minerals & Metals Ltd., Kollam, M/s NMDC, Diamond Mining Project, Panna, etc. attended the training programme. The training programme was inaugurated by Controller General, Indian Bureau of Mines.

A comprehensive course module was prepared comprising of various topics viz. (i) Facilities and capabilities of IBM in the field of Mineral Characterization, Mineral Beneficiation. Chemical/Environmental Analysis (ii) An introduction to Mineral Characterization - Needs and significance of instrumental techniques (iii) An introduction to Chemical Analysis of Ores/Minerals and its application to Mineral Characterization as well as Mineral Beneficiation. (iv) Importance of Microscopic Studies in the field of Mineral Characterization in view of Mineral Beneficiation including sample preparation for Microscopic as well as other instrumental studies followed by demonstration on Microscope and other instrumental techniques. (v) Modal Analysis, liberation studies with respect to grain size as well as other physical properties of minerals. (vi) Amenability Studies in Mineral Characterization in relation to mineral beneficiation. A visit to Chemical Laboratory as well as Ore Dressing Laboratory & Pilot Plant was also undertaken. Shri L.B.Toal, Dy. Ore Dressing Officer was the Course Director of the training programme.

A valedictory function was held on 22nd August, 2013. A few participants expressed their views on this occasion and appreciated the training programme. Certificates were distributed by Director (Training) and Suptdg. Chemist & Head of Office (OD). Lastly, the programme ended with a formal vote of thanks.

Evaluation sheets were given to the participants and a feedback about the training programme was obtained. All the participants appreciated the About the technical training programme. contents and course module the opinion of the participants ranged from very good to excellent and a few of the participants mentioned that the course was according to today's requirement of industry. Some of the participants were of the view that the technical presentation was informative and was very valuable. Most of the participants mentioned that the training course will be very useful for them and will help them in their projects. In all, the training programme was a successful one.

TRAINING	PROGRAM	MME	ON
"SELECTION	AND	USE	OF
INSTRUMENTS	FOR	CHEM	IICAL
ANALYSIS OF R	OCKS AND	MINERA	LS":

The Training Cell, IBM organized a Training programme for Industry personnel on "Selection and use of instruments for chemical analysis of rocks and minerals" at Modern Mineral Processing Laboratory and Pilot Plant, IBM, MIDC, Hingna Road, Nagpur on 4th and 5th March 2014. The training was inaugurated at the hands of Controller General In-charge, IBM.

The participants from various industries were apprised of the various techniques & facilities available in IBM by delivering lectures by faculties on:

(i). Facilities and capabilities of IBM in the field of Mineral beneficiation, (ii) Principle and applications of XRF in chemical analysis of rocks and minerals, (iii) Introduction and methodology of chemical analysis by Inductively Coupled Plasma Analyzer (iv) Instrumentation and (ICPA), methodologies of Chemical analysis of rocks and minerals by using Mercury Analyzer, Flame Photometer and Ion selective electrodes for fluoride and cyanide, (v) Selection, use and importance of various methods of Chemical analysis of rocks and minerals, (vi) Introduction and methodology of Chemical analysis of rocks and minerals by Atomic Absorption Spectrophotometry (AAS).

A visit to mineralogy laboratory as well as Oredressing laboratory and pilot plant was also undertaken.

at the valedictory function on 5th March 2014 four participants expressed their views & appreciated the training programme. Certificates for participation were distributed by Controller of Mines.Evaluation sheets from thirty four participants from various industries were collected. The participants appreciated the deliberations/presentations given by the faculty members.

Salient Results

5.9 Salient results of the important investigations are as follows:

CHROMITE ORE :

Upgradation of low grade Chromite Ore from Kaliapani Chromite Mines of M/s Balasore Alloys Limited, Odisha (RI No.1994/NGP).

A low grade Chromite ore feed sample from Kaliapani Chromite Mines of M/s Balasore Alloys
Limited, Odisha, collected during RMD studies (jointly by Ore Dressing Division and MCCM Division) to ascertain the efficacy of the process adopted by the plant so as to develop a process flow sheet for producing chromite ore concentrate with maximum grade and recovery.

The sample as received assayed 23.91% Cr2O3, 27.21% Fe(T), 4.43% FeO, 22.88% Al2O3, 2.84% SiO2 and 9.40% LOI.

Hydro-cyclone followed by stub cyclone on -100 mesh ground original sample followed by tabling on U/F(II) yielded a table concentrate – I assaying 50.09% Cr2O3, 17.02% Fe(T), 18.83% Al2O3, 1.22% SiO2 and 2.51% LOI with Cr2O3 recovery percent of 58.5 and wt.% yield of 27.9 whereas Composite of table concentrate I + II assayed 44.08% Cr2O3, 19.51% Fe(T), 20.23% Al2O3, 1.29% SiO2 and 3.69% LOI with Cr2O3 recovery percent of 73.6 and wt% yield of 39.9.

The upgradation of low grade chromite ore from 23.91% Cr2O3 to 44.08% Cr2O3 is appreciable and this may find application in industry as charge chrome.

CLAY:

Recovery of glass grade Silica Sand concentrate from clay sample for M/s Hindustan National Glass Industries Ltd., Kolkata (RI No.689/BNG).

A clay sample from Raibazar, Rajmahal Mines, Sahibganj district Jharkhand was sent by M/s Hindustan National Glass & Industries Ltd., Kolkata with an objective to produce a Silica Sand concentrate assaying SiO2 > 98.5%, Fe2O3 < 0.05% and Al2O3 < 1% in the size range of -25 + 100 mesh.

The as received sample assayed 90.0% SiO_2 , 0.27% Fe_2O_3 , 6.12% Al_2O_3 , 0.03% TiO2 and 2.42% LOI.

A homogenous slurry of the representative sample was screened over 25 and 100 mesh size. The -25 + 100 mesh product was ground in pebble mill and – 100 mesh fraction was rejected.

The -25 and + 100 mesh fractions were mixed and were subjected to gravity separation on deister quarter deck. The light fraction (Silica sand concentrate) obtained assayed 98.83% SiO₂, 0.04% Fe₂O₃, 0.45% Al₂O₃ with 75% recovery of SiO₂ (wt% yield 68.0).

The concentrate obtained meets the specifications as stipulated by the party.

COPPER ORE:

1. Bench scale beneficiation studies on Copper ore sample from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur (RI No. 533/AJM)

The copper sample (duplicate half drill core) from Muradpur central sub block, Muradpur copper project post Singhana, District Jhunihunu (Rajasthan) sent by Mineral Exploration Corporation Ltd., Nagpur at Regional Ore Dressing Laboratory, Indian Bureau of Mines, Ajmer with an objective to evolve a process flow sheet to produce a copper concentrate assaying more than 18% Cu and less than 10% insoluble.

The as received sample assayed 0.46%Cu, 14.95% Fe(T), 50.67% SiO₂, 7.72% Al₂O₃, 66.45% Ai, 3.34% CaO, 5.20% MgO, 0.28% P₂O₅, 2.33% S(T), 0.36% TiO₂, 1.13% Na₂O, 1.32% K₂O, 0.10% Mn, 49 ppm Pb, 237 ppm Zn, 191ppm Co, 58 ppm Ni, 1.74 ppm Ag, 0.17 ppm Au, 281 ppm Bi, 87 ppm Mo and traces of Cd, Sb.

Extensive flotation test work carried on the sample produced a copper concentrate assaying 25.54% Cu, 4.38% acid insoluble with 89.38% copper recovery (Wt.% yield 1.6). The copper concentrate comply to all the specification stipulated by the party and can be used in smelter.

A split flotation test on 87.2% -200 grind produced a copper mesh assaying 28.14% concentrate Cu. 3.65% Acid insoluble with 84.96% copper recovery (wt.% yield 1.4). Though the grade of copper concentrate obtained is very good however recovery is slightly low. The copper concentrate meets all the specification required for the smelter.

2. Bench Scale beneficiation studies on a Lean Copper ore sample from Malanjkhand, Balaghat District, M.P. for M/s Hindustan Copper Ltd. (RI No. 2003/NGP).

A lean copper ore assaying 0.38% Cu from Malanjkhand Copper Project was subjected to bench scale beneficiation studies at the Modern Mineral Processing Laboratory and Pilot Plant, IBM, Nagpur.

A simple flotation process developed comprising of rougher flotation carried at 79.5% - 200 mesh grind deploying xanthate and the frother supplied by the party followed by one cleaning using sodium silicate as gangue depressant produced a cleaner copper concentrate assaying 19.06% Cu, 15.35% AI, 10.23% SiO2, 6.90% Fe2O3, 2.97% AI2O3, 29.28% S and 15.94% LOI with a copper recovery of 93.6% (wt% yield 1.87).

Considering such a low tenor of the ore, the results obtained can be considered as highly encouraging.

The industrial application of the process would pave the way for the treatment of such material presently stacked at the site in huge quantity in the existing plant.

IRON ORE:

Upgradation of an Iron Ore Sample From Peru, South America For M/s Upakar Mining Pvt. Ltd., Bangalore (RI No. 698/BNG).

The iron ore sample from Peru. South America sent by M/s Upakar Mining Pvt. Ltd., Bangalore assaying 54.44 % Fe (T), 17.66 % SiO₂, 1.18 % Al₂O₃ and 1.38 % LOI was sent to Regional Ore Dressing laboratory, Indian Bureau of Mines, Bangalore with an objective to develop a flowsheet by both dry & wet processing method to produce a concentrate suitable for commercial applications, particularly special anti corrosive paints.

The sample was subjected to dry magnetic separation at various sizes at 7000 and 9000 gauss and a combined magnetic concentrate assaying 63.81 % Fe (T), 6.04 % SiO₂ and 0.58 % Al₂O₃ with recovery of 71% (wt% yield 60.4) could be produced.

The original sample subjected to gravity separation at minus 48 mesh size produced a table concentrate assaying 66.55% Fe(T), 3.02 % SiO₂ and 0.28% Al₂O₃. The weight yield in the concentrate was 53.8% and Fe (T) recovery was 65.6%. The slimes

was subjected to magnetic separation separately. Also middling fraction after stage grinding to minus 150 mesh was subjected to magnetic separation. The composite table concentrate & magnetic concentrates yielded an iron concentrate assaying $66.40 \ \%$ Fe(T), 2.98 % SiO₂, 0.34 % Al₂O₃ with over all weight percent yield of 62 % and Fe(T) recovery 75.4 %.

LEAD- ZINC

Beneficiation studies of low grade Lead-Zinc ore sample from Gurla North Block area, Bhilwara distt. Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur (RI No. 538/AJM).

M/s Mineral Exploration Corporation Ltd., Nagpur sent a Lead- Zinc exploratory sample from Gurla North Block area to Regional Ore Dressing Laboratory, IBM, Ajmer with an objective to evolve a process flow sheet producing a Lead-Zinc concentrate of metallurgical grade with maximum recovery.

The as received sample assayed 0.87% Pb, 1.83% Zn, 21.28% Fe(T), 44.08% SiO2, 0.025% Cu, 8.98% Al2O3, 3.09% CaO, 8.20% MgO, 3.47% S(T), 68 ppm Cd, 58 ppm Co, 65 ppm Ni and traces of Au.

Sequential flotation of Lead and Zinc at 87.9% minus 200 mesh with three cleanings yielded the following concentrates

- A lead concentrate assaying 52.78% Pb, 2.95% Zn with a lead recovery of 66.8% (wt% yield 1.1).
- (2) A zinc concentrate assaying 51.21% Zn, 1.81% Pb with a zinc recovery 80.9% (wt% yield 2.9).

Both Lead and Zinc concentrates obtained may find utilisation in metallurgical industry and the results obtained are very encouraging.

ROCK PHOSPHATE:

Upgradation of a composite Rock Phosphate sample from Maton area, Udaipur, Rajasthan for M/s Hindustan Zinc Limited (RI No. 518/AJM).

M/s Hindustan Zinc Limited sent a composite Rock phosphate sample from Maton, Udaipur, Rajasthan at RODL, Ajmer with an objective to (1) produce a flow sheet to obtain rock phosphate concentrate assaying more than $31.5\% P_2O_5$ and (2) reduce iron, silica and alumina content in the sample.

The as received sample assayed 21.76% $P_2O_5,$ 32.86% $SiO_2,\ 9.15\%$ $Fe_2O_3,\ 1.64\%$ $Al_2O_3,\ 27.91\%$ CaO, 0.95% MgO and 3.51% LOI.

By adopting flotation route and subjecting the phosphate float to wet high intensity magnetic separation (WHIMS) a phosphate concentrate assaying 35.01% P2O5, 0.69% Fe₂O₃, 0.46% Al₂O₃ and 8.18% SiO₂ with 73.3% recovery (overall wt% yield 45.0) could be obtained.

Though the concentrate obtained meets the specifications as stipulated by the party, it is slightly higher in silica concentrate. This concentrate may be utilised in acid grade Rock Phosphate after blending it with Rock Phosphate concentrate with low silica content.

SILICA SAND:

1. Beneficiation of silica sand from Halol, GIDC, Panchmahal Distt., Gujarat to produce concentrate for Float Glass Industry (RI No. 688/BNG).

A Silica Sand sample from HNG Float Glass Limited, Gujarat was received at RODL, Bangalore to produce a silica sand concentrate so as to meet the specifications for float glass industry.

The as received sample assayed 95.15% SiO_2 , 0.4% Fe_2O_3 , 2.55% Al_2O_3 , 0.12 % CaO, 0.0045 % MgO, 0.1 % TiO_2 , 0.04% Na_2O , 0.04% K_2O and 0.68 % LOI.

By Scrubbing and screening, followed by wet magnetic separation at 9 kilo gauss, the -25+120 mesh size non-magnetic fraction assayed 98.51% SiO₂, 0.025% Fe₂O₃, 0.8%

 Al_2O_3 and 88.6% SiO₂ recovery.(wt.% yield was 85.9). The concentrate obtained may find its utilization in float glass making industry.

2. Upgradation of Silica sand from clay mine overburden siliceous material (Sample no. 2) of Lithariya mines, Jaitaran tehsil, Pali district, Rajasthan (RI No. 514/AJM).

A weathered siliceous sample (designated as sample No.2) was received from the office of COM (NZ), IBM, Ajmer, Rajasthan, at the Regional Ore Dressing Laboratory, IBM, Ajmer with an objective to develop the flowsheet for recovery of silica sand useful as refractory /glass sand. The sample is a waste overburden of the Lithariya clay mines in Jaitaran tehsil, Pali district, Rajasthan collected during field inspection.

The original sample assayed 96.42% SiO_2 , 0.15% Fe_2O_3 , 1.57% Al_2O_3 , 0.53% CaO, 0.19% MgO, 0.59% LOI, 0.10% Mn and 0.0016% Cr_2O_3 .

The original sample was subjected to screening. The -25+120 mesh fraction after attrition scrubbing assayed 99.00 % SiO₂ with reduction of Fe₂O₃ impurities from 0.15% to 0.06%. This product meets the Grade III & Grade II glass sand specifications as per Bureau of Indian Standards Specification for Glass making sands - Second Revision [IS: 488: 1980].

TECHNICAL CONSULTANCY, MINING RESEARCH AND PUBLICATION (TMP) DIVISION

The Technical Consultancy, Mining Research and Publication Division is headed by the Controller of Mines. It offers technical consultancy services to the mining industry, undertakes scientific, techno-economic, research oriented studies and brings out monographs and bulletins on topical interest.

TECHNICAL CONSULTANCY

6.1 Technical consultancy services are offered on charge basis to the mining industry within the country and abroad in the fields of surveying, exploration, geology, mining and environment related issues. It offers consultancy services to large as well as small mine owners. Small mine owners are offered services at a concessional rate. It helps the mine owners in systematic development of their mines, formulation of their production plans, better utilisation of mineral resources available in the areas, to take investment decisions for implementation of new projects and obtain financial assistance from the financial institutions. The services offered are:

6.2 Survey and Geological Services

- Topographic survey of mineral properties
- Preparation of geological plan as per MMR-61 and MCDR 1988
- Preliminary geological appraisal of mineral deposits
- Formulation of scheme of explora-tion and preparation of detailed exploration reports
- Geo-statistical evaluation of mineral deposits
- Collection of bulk samples from mineral deposits/mineralised

dumps for laboratory and pilot plant investigation

6.3 Mining Services

- Preparation of mine development scheme of opencast and under-ground mines
- Preparation of mining feasibility reports of opencast and underground mines
- Evaluation of feasibility reports for financial institutions.
- Financial analysis of mining projects
- Remodeling of old mines for introduction of advanced mining technology.

6.4 Environmental Studies

- Preparation of Solid waste management plan
- Generation of environmental base-line data
- Preparation of Environmental Impact Assessment (EIA) & Environmental Management Plan (EMP)

6.5 Specialised Services

- Productivity study of opencast and underground mines
- Techno-economic survey of mineral properties
- Production planning and grade control on given process parameters

6.6 Advanced computer facilities like Surpac 2000 computer system alongwith latest software on mine planning and designing, map making etc, highly sophisticated, sensitive and accurate survey equipment like Differential Global Positioning System (DGPS), Electronic Total Station, Electronic Distance Meter, Lap Top Computer with software suitable for processing of survey data, available in this division provide necessary sophisticated backup to these services.

6.7 Achievements

During the year 2013-14, 4 assignments have been completed which includes 1 Techno-Economic Pre-feasibility assignment and 3 survey assignments against the target of 1-2 mining assignments, 2 geological assignments and 2 to 3 survey assignments. Besides 4 Regional Mineral Development Studies as per SDF aspects have also been completed (as per action Plan 2013-14). Total revenue generation for the period for 2013-2014 was Rs. 07,19,886/-

Assignments completed

6.8 The details of consultancy assignments completed during the year 2012-13 and salient features of these assignments are as follows :-

Techno-Economic 1) and Prefeasibility study report on Serengdag bauxite deposit Lease -I (257.923ha.) & (140.883ha.), Lease-II Village Balarampur, Serengdag, Distt. (Chhattisgarh) Mineral for M/s **Exploration Corporation Ltd.**

Serengdag Bauxite deposit Lease-I (257.923ha.)

Bauxite irregular, occurs as discontinuous lenses, pockets or tabular bodies mostly in the upper crust of the laterite profile. Texturally the bauxite may Concretionary, be Pisolitic, Oolitie, Vesicular or Breccia like. The report was prepared based on approved mining plan & data provided by the party. The total insitu reserves of lease-I estimated of about 24,79,680 tonnes. Similarly, total mineable reserves of 19,87,680 tonnes with AL₂O₃of 48.33% and SiO₂ of 4.37% under 111 category of UNFC.

Opencast method of mining proposed with annual production target of 3 lakh tons of ROM has been considered for feasibility study. Clean Ore Production considered 2.70 lakh tonnes (90% of ROM). The anticipated life of the mine will be 8 years. During the life of mine, overall stripping ratio as worked out in terms of OB+generated waste to ROM are on is 2.04 on tones to tones basis.

The mine has been designed and planned as Mechanized mine by deploying the Hydraulic shovel, ripper DTH drill and tippers/trucks etc.

In terms with departmental workings.

The capital investment for mine development is worked out as Rs.19.99crores. Operating cost/ton is comes out to Rs.251.00. NPV Rs. 24.00 crores. IRR34%. Sale Price Rs.800.00 per tonne.

In terms with outsourcing

The capital investment for mine development is worked out as Rs. 7.96 crores. Operating cost/ton is comes out to Rs.358.00. NPV Rs. 20.01crores. IRR 54%. Sale Price Rs.800.00 per tonne.

Serengdag Bauxite deposit Lease-II (140.883ha.)

Serengdag lease No.II is located in the south-western part of Jamirapat plateau with area extent of 1.41 sq.km. The occurrence of bauxite within lateritic profile is very erratic, usually with frequent unpredictable changes in thickness and quality within a short distance. Bauxite generally is whitish grey to pinkish grey in colour and massive, compact and pisolitic texture, while laterite is mostly reddish brown in colour and clayey in texture. The total insitu reserves of lease-II estimated of about 12,36,393tons.

Similarly, total mineable reserves of 9,94,108 tons with AL_2O_3 of 48.83% and SiO_2 of 4.35% under 111 category of UNFC.

Opencast Method of Mining proposed with annual production target of 2.1 lakh tons of ROM has been considered for feasibility study. Clean Ore Production considered 1.89 lakh tons (90% of ROM). The anticipated life of the mine will be 6 years. During the life of mine, overall stripping ratio as worked out in terms of OB+ generated waste to ROM are on is 0.84 on tones to tones basis.

The mine has been designed and planned as mechanized mine by deploying the hydraulic shovel, ripper DTH drill and tippers/trucks etc.

In terms with departmental workings.

The capital investment for mine development is worked out asRs. 13.05 crores. Operating cost/ton is comes out to Rs.262.00. NPV Rs.10.44 crores. IRR Rs.31%. Sale Price Rs.800.00 per tonne.

In terms with outsourcing

The capital investment for mine development is worked out asRs. 5.19 crores. Operating cost/ton is comes out to Rs.400.00 NPV Rs.7.01 crores. IRR Rs.44% sale price Rs.800.00 per tonne.

- 2) Joint survey and measurement of Excavation work/Lignite stock of Mangrol mine of M/s Gujarat. Ind. Power Co. Ltd. Surat Gujarat
- 3) Joint survey and measurement of Excavation work/Lignite work of Vastan Lignite mine of M/s Gujarat. Ind. Power Co. Ltd. Surat Gujarat
- 4) Joint survey and measurement of Excavation work/Lignite work of Valiya Lignite mine of M/s Gujarat Ind. Power Co. Ltd. Surat Gujarat.

Assignments i.r.o. Joint survey measurement of Excavation work/Lignite stock of Mangrol, Vastan & Valiya Lignite mine of M/s Gujarat. Ind. Power Co. Ltd. Surat, Gujarat has been completed .

5) 4 Regional Mineral Development Studies of Iron Ore mines In Odisha State.

i) Joda-East Iron Ore Mine of M/s TISCO.

As per the recommendations of the "Committee of the Review & Restructuring of the Functions & Role of Indian Bureau of Mines", of Ministry of Mines, the RMDS study has been re-introduced from the programme year 2013-14. Under this RMDS study, four Iron ore mines of Distt. Keonjar, Odisha has been taken up. Joda-east Iron Mines(671.093 Hect), Tq. Barbil,Distt. Keonjhar,(Odisha) M/s. TISCO was one of them. The salient features of the study is as follows.

Company is well equipped to take up core drilling exploration in their respective leaseholds for Iron mines. The area has been thoroughly explored with 620 bore holes for total 25000m drilling.

As per the present reserves under 111 category the life of the mine will be around 14 years. It is a captive mine &mine is working by opencast mechanised method with the help of mechanized drilling, charging & shovel-dumper combination.

At present, Co. is mining ore with +58% Fe as feed to the plant to upgrade the same to +65% Fe products & Fe% less than ROM feed cut-off of 58% and more than threshold value of 45% Fe is staked separately as sub-grade for future use. The cumulative sub-grade generated upto Mar. 2013 was 18.06 million tones. Total transportation of the ore from plant through conveyors. Transportation of finished product is also through belt conveyor only.

There is only one waste dump beyond ultimate pit limit. As a precaution protective measures like garland drain, settling tank and check dam have been provided.The rejects generation is there only in beneficiation stage & the slime generated from wet beneficiation process is being stored separately in zero discharge slime dam.

The monitoring of air, water, soil and noise levels and ground vibration's due to blasting are carried out at regular intervals and right now all the parameters are well within the prescribed limit of the standards. Adequate measures are being taken to contain water pollution. The major use of surface water is for beneficiation of iron ore, dust suppression, sanitation, and plantation. As there is no use of ground water for mining purpose hence there has been no effect on ground water table. The decanted water from the slime pond is completely recycled back to the beneficiation plant within the mine ensuring zero outside discharge.

Up to April-2014 company has planted total 607066 No. saplings in the total 135.69 Ha. & special vegetation of 1 lakh vetiver grass plantation. All the dumps have been stabilized through terracing, compaction and afforestation.On the basis of individual company level the social and community development work has been carried out time to time like medical camp, training, education, transportation etc.

ii) Jajang Iron And Manganese Mine M/S Rungta Mines Limited.

The Regional Mineral Development Study (RMDS) has been reintroduced from the programme year 2013-14 based on recommendations of the "Committee of the Review and Restructuring of the functions and role of IBM". As per the annual action plan, the objectives of the study are as follows :-

Improvement of recovery and efficiency of mining operations in operating mines.

Study of reclamation and rehabilitation of mined out areas.

Socio-economic impact on account of closure of mines.

Non-legislative SDF aspects are to be considered in the study.

The outcome of the RMDS will facilitate to formulate policies, guidelines, and preparation of capacity base for development of policies for Regional Development Planning. Jajang Iron and Manganese Ore Mine of M/s Rungta Mines Limited, comes under revenue village of Jajang, of Champua subdivision, Keonjhar district, Odisha state. Total mining lease area is 666.150 hects, out of which 485.585 is in forest and 180.565 is in non-forest area. The lease was under operation for more than five decades. At present the lease is under 2nd renewal which is valid for 20 years w.e.f. 13.02.1997 to 12.02.2017. The mine is in continuous operation from 13.02.1957. to cater raw material for domestic iron & steel industries and for exports. The mine was visited on 21 Nov. to 23 Nov.2013.

iii) Balda Block Iron And Manganese Mine of M/S Serajuddin & Sons Limited.

RMDS of Balda Block Iron Ore Mine also undertaken as per the annual action plan 2013-14. Balda Iron and Manganese Ore Mine is located about 32 kms from Barbil, the nearest tehsil place and 12 Km. from Joda. Barbil is 289 kms. North of Bhubaneshwar and is well connected by state highway. The lease block is located in BarbilTaluka, Keonjhar District. Balda Iron and Manganese Ore Mine are having a lease area 335.594 Hectares. The present reserve under 111& 122 categories is 269.723 MT. Based on the current reserve data and average rate of production, the life of the mine will be around 109 years. Balda Iron and Manganese Ore Mine is a non-captive mine. Present method of mine working is by opencast mechanised miningof benches are 5 to 10 meters with width more than three times the height of benches and overall slope is 37.5° . Drilling is done using 115m/102m dia drills with 10% (i.e. 1m) sub-grade drilling. Excavation of ore and overburden is undertaken through loaders varying in capacities from 1.17Cu.m to 9 Cu.m. Excavated material is hauled through dumpers of capacity ranging from 30 - 100 tones. Blasting is done by using mostly SME (Site Mixed Emulsion Explosives) in loose form. Transport from mine to destination is being done by truck & onward by rail. Entire mineral processing is dry processing which requires only screening and size reduction by crushing which does not require any water. The ROM which fed to the screen gets segregated into the following products: 0-10 mm, 10-40 mm, 40-80 mm, and +80 mm. The waste material are mainly laterite, ore (Fe<45%), lateritic iron BHO (Fe<45%), shale alluvial soil etc. The monitoring of air, water, soil and noise levels are carried out at regular intervals and right now all the parameters are well within the prescribed limit of the standards. The mine is non-captive in nature and there no industrial effluent is discharged outside the lease boundary. All the waste dump site and ore stacking site are proposed to be surrounded by retaining wall and garland drains. The survey of the lease area has not indicated the presence of any rare, endangered or endemic species within this area. Mining pits have not reached ultimate depth hence not matured for reclamation and rehabilitation however the dumps have through terracing, been stabilized compaction and afforestation. About 715 people including managerial, skilled, Semiskilled & unskilled persons are directly employed in the mine at least twice numbers are thriving on this industry in the ancillary and peripheral activity. Due to erratic market pattern and strict enforcement of forest laws, it is not possible to progress the mining faces further by way of developmental work and this may affect the availability of iron ore.

iv) Thakurani Iron ore mine of M/s Sarda Mines (P) ltd:

The Regional Mineral Development study of Thakurani Iron ore mine of M/s Sarda Mines (P) ltd. has been carried out as per action plan of 2013-14. The estimated proved and probable resources as on 01.04.2013 as per UNFC is 215.861 Million tons(111 & 122 Category). Total 12 blocks located in different location of lease. The mining operation by opencast method fully mechanized having production of 7.593 million tons of ROM ore during 2012-13. The rate of generation of waste per year during mining is 3.5% of total ROM and from beneficiation process it is 11%. During 2012-13 waste generated as 4, $83,189 \text{ m}^3$ and cumulative till 2012-13 as 39,46,000 m³. The reject generation is about 7-9% of total ROM produced. During year 2012-13, it was 340400 m³ (say 851000 tons) whereas cumulative up to 2012-13 was 2,62,4000 m³. The rate of generation of sub grade mineral is about 7.5% of the total ROM produced.

The Sub grade ore generated during 2012-13 was 823150T whereas cumulative generation till 2012- 13 is 1502150T, out of these, 6,78,700 MT of sub grade ore were blended with ROM produced, to get the desired quality of product. These sub grade ore are being stacked separately for future beneficiation.

The exploration proposed in the mining scheme could not be achieved due to requirement of forest clearance and DRP proposal which is under process, production of ore cannot be achieved as proposed in the scheme of mining, the utilization of machineries is 67% with its maximum mechanical efficiency of 86%.M/s Sarda Mines (P) ltd.have developed a number of practical programs for environmental management which include input from the local communities as well as from experts in these fields. Regular environmental monitoringis being carried out with remedial measures.

M/s Sarda Mines (P) ltd. has carried out very extensive afforestation both within and outside the mine lease area. A specialized technique called "Miyawaki Plantation" has been adopted over dump and other degraded areas. The total recovery comes out as 75-80% by weight. The ratio with feed is 1:0.75 & ratio with final product was 1.75:0.25. The rejected tailing contains <47 to 48.0% Fe with (-) 0.1 mm products. However the recovery is not optimum and further R and D work is necessary to improve the recovery.

On the basis of individual company level. social and community the development work has been carried out time to time like medical camp, training, education, transportation etc.Due to strict enforcement of forest laws, it is not possible to progress the mining faces further by way of developmental work and this may affect the availability of iron ore. The ecological availability of the iron ore resources would be much less if restriction on mining in the forest land continues. However, with investment exploration, prudent on judicious mining can ease the situation. Further R and D work is also necessary to improve the recovery.

6.9 Assignments in progress

Three assignments of Joint survey of Excavation measurement and original ground level survey were at various stages of completion.

MINING RESEARCH CELL

6.10 The Mining Research Cell carries out applied mining research on various mining aspects with a view to help the industry in systematic development of mines, improvements in productivity and to development achieve sustainable by adopting state-of-the-art environmental management systems. Besides, undertaking assignments on promotional basis, it undertakes industry sponsored assignments on environmental and geo-technical aspects, on charge basis. To cater the present day requirements Cell is equipped with latest facility and software like 'Galena' for Geo Technical work, 'Blast

Ware' for analysis of blasting vibrations data.

Achievements

6.11 During the year 2013-14, 03 assignments were completed including 02 consultancy assignments of Ground Vibration Monitoring Studies and 01 Techno-Economic feasibility study.

During the year 2013-14, total revenue generation from consultancy services was `**1,65,169/-** (including Service Tax).

Projects completed

6.12 The details of assignments completed during the year 2013-14 and salient features of these assignments are as follows :-

i) Blast Induced Ground Vibration Study at Amli Limestone Mine of M/s Binani Cements Ltd., Tahsil Pindwara, District Sihori (Rajasthan).

On the request of M/s Binani Cements Ltd., Tahsil Pindwara, District Sihori (Rajasthan), study of ground vibrations due to blasting at their Amli Limestone Mine. Tahsil Pindwara, District Sihori (Rajasthan) over an area of 468.6875 Hect. was carried out to study the impact of blast induced ground vibrations on the nearby structures, human settlements and to suggest control measures to minimize the adverse impact of the same. Under this study, total 08 numbers of blasts at Amli Limestone Mine at different dates were carried out and monitored at five different locations at a time and 40 events were recorded. Based on the monitoring data and a regression analysis report submitted to party. For minimizing the vibration effects and fly rocks due to blasting control measures have been suggested in the report.

ii) Blast Induced Ground Vibration Study at Thandiberi Limestone Mine of M/s Binani Cements Ltd., Tahsil Pindwara, District Sihori (Rajasthan).

On the request of M/s Binani Cements Ltd., Tahsil Pindwara, Districyt Sihori (Rajasthan), study of ground vibrations due to blasting at their Thandiberi Limestone Mine, Tahsil Pindwara, District Sihori (Rajasthan) over an area of 254.125 Hect. was carried out to study the impact of blast induced ground vibrations on the nearby structures, human settlements and to suggest control measures to minimize the adverse impact of the same. Under this study, total 03 numbers of heavy blasts at Thandiberi Limestone Mine at different dates were carried out and monitored at five different locations at a time and 14 events were recorded. Based on the monitoring data and a regression analysis report submitted to party. For minimizing the vibration effects and fly rocks due to blasting control measures have been suggested in the report.

(iii) Techno-Economic Feasibility Report for Ajjanhalli Gold Mines for M/s Hutti Gold Mines Co. Ltd., Hutti, Karnataka

On the request of M/s Hutti Gold Mines Co. Ltd., Hutti, District Raichur Karnataka, study on Techno-Economic Feasibility of Ajjanhalli Gold Mine was carried out. The mineable reserve calculations, life of mine, overall stripping ratio, planning of production, estimation of quantity of gold produce per annum and total area required for wate dump has estimated and calculated and accordingly suggestions have been made in the report.

Projects in Progress

Two proposals of Ground Vibration Monitoring were under negotiations.

Assignments outside Annual Programme

Advisory Committee constituted by Ministry of Labour and Employment.

IBM is representing Ministry of Mines on the Advisory Committee constituted by Ministry of Labour and Employment regarding to develop appropriate control strategies and to review the safeguards in relation to primary exposure to asbestos by workers. Comments on the Draft Occupational Health Regulatory Bill was prepared and sent to Director Safety & Member Secretary of the Advisory Committee.

ii. Preparation of Guidelines on "Environmental Aspects on Quarrying Minor Minerals – Evolving Model Guidelines"

Ministry of Environment & Forests had constituted a Group of State Secretaries of both the Environment and Mining Departments of major States under the chairmanship of Secretary (E&F), Government of India, to evolve model guidelines on environmental aspects of minor minerals. quarrying of IBM represented the Ministry of Mines as a member of the Group. The Group submitted its report in March, 2010. As a follow up of the recommendations of the Group, the Ministry of Mines was assigned the work of preparation of guidelines on "Environmental Aspects on Quarrying Minor Minerals - Evolving Model Guidelines" for (i) Mining framework of Minor Minerals, (ii) Framework for cluster mining (iii) Guidelines of and for reclamation and rehabilitation". IBM constituted a committee which drafted the model guidelines after obtaining comments from stakeholders and State Governments and posted it on Ministry and IBM website. In the light of the Supreme Court Order in Deepak Kumar Vs State Government of Haryana dated 27th February, 2012, the Mines Ministry was directed to frame model guidelines and also to take steps to bring into force the Minor Minerals Conservation and Development Rules 2010.

Accordingly, a committee was constituted comprising members from IBM, MoEF and State Governments of Andhra Pradesh, Chhattisgarh and Rajasthan which has submitted draft guidelines.

PUBLICATION CELL

6.14 The Publication Cell brings out Monographs on individual minerals under the series Mineral Facts and Problems, and Bulletins of topical interest. However, due to acute shortage of manpower working of the Publication Cell is hampered.

MONOGRAPH ON CHROMITE:

Monograph on Chromite was released on 5.12.2013.



MINERAL ECONOMICS DIVISION

The Mineral Economics Division (ME) information provides support and advisory services to the Government and Mineral Industry specially on issues like marketing, specifications minerals. uses of mineral and legislation. inventory of mineral resources, mining leases, and taxation etc. Moreover, it disseminates latest information on mineral industry, collected through statutory as well as non-statutory sources, through its flagship publication `Indian Minerals Year Book' and number of other publications. This Division is headed by a Chief Mineral Economist (CME). The IBM's Library and IBM Press are also function under this Division.

ACHIEVEMENTS

7.2 NATIONAL MINERAL INVENTORY (NMI)

Intermediate updating of NMI as on 1.4.2013 as per UNFC with its computerization, validation and in respect of 12 minerals synthesis namely, apatite, chromite, copper, diamond, gold, iron ore (hematite), molybdenum, lead-zinc. rock phosphate, silver, tin & tungsten was taken up during 2013-14. The processing & generation of mineral wise summary outputs is underway. The updated data will be released shortly. India Mineral wise All resources as on 1.4.2010 is enclosed as Annexure XI.

During the year, National Mineral Inventory At a Glance As on 1.4.2010 and National Mineral Inventory An Overview As on 1.4.2010 have been brought out.

The National Mineral Inventory, based on UNFC System, is being used for making decision of investments in exploration and mining by foreign investors. Such a system has wide ramifications of use in different kinds of decision making and policy formulation concerning not only minerals but allied fields as well.



7.3 MARKET SURVEY ON MINERAL AND METALS

The Market Survey Reports on minerals and metals of topical interest are prepared. These reports provide comprehensive analysis of resource availability, uses, consumption pattern, holistic approach to the future demandsupply projections. The reports also provide the various problems faced by the mineral consuming industries and their probable solutions. These reports the entrepreneurs, useful to are researchers, planners, traders, etc.

A Market Survey Report on Manganese Ore was released, while work related to Market Survey report on Rock Phosphate has been stopped as Rock Phosphate is included in Sub Sector Plan Reports as per RFD 2014-15. Sub Sector Plan reports on Chromite and Copper was prepared, approved by CG, IBM and same were sent to Ministry of Mines, New Delhi in the month of April, 2014.

7.4 BULLETIN OF MINERAL INFORMATION (BMI)

Bulletin of Mineral Information (BMI) is a half yearly Bulletin, published by IBM, a sole publication in the country of its nature, which provides information to mine owners and mining industry on - court decision concerning mineral legislation, trade policy on minerals & metals; trends in mining lease and prospecting licenses along with R/P granted for mineral based industries in the country; the month wise production of various mineral based products and also high lights status of mineral and mining industries both in domestic & foreign sector.

In a nutshell, this publication provides concise & synthesized knowledge and information on mining of various metallic / industrial minerals of the country, explored through its respective mines.

During the period 2013 – 2014 BMI viz. October 2012 – March 2013 was released. The April 2013 -September 2013 issue, is under printing, and preparation of master pages of BMI issue October 2013-March 2014 is under progress.



7.5 INDIAN MINERALS YEARBOOK (IMYB)

IMYB is the flagship publication of IBM. As decided by Ministry of Mines, the IMYB 2012 onwards will be brought out in three volumes. It consists of **Part I** having as many as 11 General Chapters, **Part II** consists of 19 Reviews on Metals & Alloys and **Part III** consists of 50 Mineral Reviews. This publication covers information on minerals and mineralbased commodities, their development, production, resources/reserves. consumption, trade and policy. It also world scenario. IMYB includes provides a status report of Mining and Mineral Industry in India on an annual This publication has wide basis. readershipboth National and International which is now available on IBM's Website.

As per the decision, IMYB 2012 (data 2011-2012), total 80 general/metal & alloys/mineral reviews were prepared, technically edited, finalized and sent to Press after consolidation of all chapters with the statistical data. The IMYB 2012 was printed in following order.

IMYB Volume I – May, 2014 IMYB Volume II – November, 2013 and IMYB Volume III – March, 2014

These volumes have been released and uploaded earlier on IBM's website.

IMYB 2013(data 2012-For 2013) about 2.500 letters/questionnaires were issued for capturing of data. Nearly 7590 (including Form 'O', 'N' and Others) receipts from various mineral-based industries. Central/State Government Departments, Central/State Undertakings, National Laboratories etc. were received during the period End-use mineral under review. consumption tables (data 2012-2013) in respect of 50 minerals were computed. Work related to developing the different modules of the software for Online submission of returns (Form

'O') had also been initiated through NIC.



7.6 DIRECTORY OF MINING LEASES

Updating of mining lease information based on consolidated annual returns from State Governments and Union Territories under statutory provisions of rule 57(2) of MCR, 1960 was continued. Based on these data an Annual Directory on All India basis depicting the distribution of mining leases granted/executed for different states are generated.

The Directory of Mining Leases in India as on 31/3/2013 has been released. State wise summary of Mining leases as on 31.3.2013 and mineral wise summary of Mining leases as on 31.3.2013 are enclosed as Annexure II A & II B respectively.

A sum of Rs.1,400/- was realized on sale of Mining Lease information during the year.

7.7 BULLETIN OF MINING LEASES AND PROSPECTING LICENCES.

The Bulletin of Mining Leases and Prospecting Licences is the sole publication which contains information on mining leases, prospecting licences as well as reconnaissance permits. The bulletin provides the distribution pattern of mining leases spread over in as many as 28 states with its break-ups. into state-wise, district-wise, mineralwise and sector-wise (Public and Private) information demarcating high, medium and low mineral potential bearing districts. Exhaustive information on mining leases abridged concisely for easy assimilation will suit convenience readers the of / entrepreneurs or policy makers.

Bulletin on Mining Leases and Prospecting Licences, 2012 was released.

7.8 MINERAL INFORMATION AND ADVISORY SERVICES

During the year, 28 Parliament Questions, 44 Central Govt. references, two State Government references and 31 private and other inquiries were attended. These were related to mineral resources, availability and utilization, reservation of mineralbearing areas, mineral trade, policy, mineral legislation, etc. Two draft speeches for Hon'ble Minister of Mines on mineral/mines related issues were prepared.

7.9 WORLD MINERAL INTELLIGENCE

During 2013-14, 19 ministry references were attended.

Comments/suggestions and draft notes were furnished and these are related to mineral Trade, bilateral co-operation in Mining and Mineral sector.

During the year 2013-14, the country wise/mineral wise reserves/ resources ata for 45 minerals based on Mineral Commodity Summaries. USGS were prepared and furnished to IMYB Unit. Country wise World Production data for the year 2009 & 2010 were updated and data inputting for the year 2011 is carried out and output is generated and the same also forwarded to IMYB unit for incorporation in various reviews of IMYB.

7.10 MINERAL LEGISLATION

The Mines and Minerals (Development and Regulation Bill, 2011.

The Mines Minerals and (Development and Regulation) Bill, 2011 prepared by the Ministry of Mines to replace the existing Mines (Development and Minerals and 1957 Regulation) Act. has been introduced in Lok Sabha on 12th December, 2011, and the same has been referred to standing committee on coal and steel on 5th January, 2012. The committee has held thirteen meetings and submitted its report on 7th May,2013.

The bill has been prepared after several rounds of consultation and workshop with all the stakeholders. The draft Mines and Minerals (Development and Regulation) bill, was circulated to all the stakeholders in July, 2009 for comments. Subsequently, follow-up meetings and workshops were held with the various stakeholders between August, 2009 and April, 2010. The successive draft bills were circulated/uploaded 6 times on the website of the Ministry for obtaining comments of take holders between August, 2009 and June, 2010.

The Bill seeks a complete and holistic reform in the mining sector with provisions to address issues relating to sustainable mining and local area development, especially families impacted by mining operations. The bill also aim to ensure transparency, elimination equity, of discretions, effective redresser and regulatory mechanisms along with incentives encouraging good mining practices. which will also lead to technology absorption and exploration of deep seated minerals.

Study Group on Revision of Rate of Royalty and Dead Rent.

7.11 In order to review the royalty rates and dead rent, the Ministry of Mines 13^{th} has on September, 2011 constituted a Study Group on revision of rates of royalty and dead rent for minerals (other than coal, lignite and sand for stowing) and to make appropriate recommendations to the Government. It was reconstituted on 4^{th} February. 2013 with special secretary (Mines) as chairperson. The Study Group has commended its discussions/deliberations, and draft

recommendations on the rate of royalty and dead rent have been prepared. The draft recommendations are being circulated to the members of Study Group on 16.5.2012 for their comments, based on which the Study Group will finalize its recommendations.

The Study Group was required to report by 31.7.2012. submit its However, as Study Group Report is yet to be finalized, the Ministry of Mines decided vide its letter No. has 3/3/2011-MVI dated 4th February, 2013 to extend the tenure of the Study Group for submission of the report from to 31.3.2013 under the 1.8.2012 chairpersonship of Special Secretary (Mines). The Ministry of Mines vide office Memorandum No. 3.3.2011-MVI (Pt-1) dated 10th April, 2013 has again extended the tenure of the Study Group on revision of rates of royalty and dead rent for major minerals (other than coal, lignite and sand for stowing) for submission of its report from 1.4.2013 to 30.6.2013. Draft report of the Study Group to review the Rates of Royalty & Dead rent submitted in June, 2013.

Mines and Mineral (Development and Regulation) Act, 1957 and Rules made there under

7.12 Subsequent to the notification of Rule 45 of Mineral Conservation Development Rules, 1988, issued vide GSR 75 (E) dated 9.2.2011. A decision has been taken in the Ministry to replace the Forms F1 to F8, H1 to H8, N,O (which require amendments) with a complete set of the fresh forms, by way of repealing the existing forms and replacing it with corrected forms.

7.13 CENTRAL LIBRARY

IBM's library at the headquarters has rich collection of books, journals, published and unpublished reports of IBM and GSI, annual reports of various organizations, ministries. industrial houses, etc., mainly connected with mining and allied subjects. Total collection of publications during the about 5973 including year was gazettes, annual reports and periodicals received on subscription as well as exchange/complimentary basis.

For the benefit of its users, compiled subject-wise library bibliographies, provided indexing services covering all technical subjects alongwith all IBM publications, annual notifications reports, gazette and administrative matters. Besides. it helped readers by providing paper copies, including copies for outsiders on payment basis and information on reference enquiries.

The strength of the borrowing members as on 31.3.2014 was 387 persons. Apart from these, academicians, research scholars, students and executives from other institutions utilized library facilities.

The monthly paper clippings from newspapers of national and local dailies were regularly drawn and were made available as file service for reference. About 120 books and 197 articles have been entered through LibSys software during the year.

7.14 IBM PRESS

About 25-30 publications of IBM, including the flagship publication, Minerals Year Indian Book and bulletins, monographs, market survey reports, mineral legislations and other periodicals like Monthly **Statistics** of Mineral Production Bulletin (MSMP), of Mineral Information (BMI), guarterly newsletter IBM News etc. are brought out every year. The section is also responsible for sale of publications and complimentary distribution, signing of agreements with organizations in India and abroad for formal exchange of publications. A total of about 4000 complimentary copies of IBM publications were distributed to an approximately 350 listed addresses (Indian and Foreign) during the year 2013-14.

The Section continued to provide editorial and in-house printing services for the Department's publications. The in-house Press printed approximately 7,92,358 lakhs page impression for various publications, reports, bulletins etc. during the year ended 31st March 2014. A list of publications released during 2013-14 is placed at Annexure VII.

IBM's publications worth Rs. 4,68,806/-/- were sold in 2013-2014.

MINING AND MINERAL STATISTICS DIVISION

The Mining and Mineral Statistics (MMS) Division functions as the Nation's Data Bank on Mines and Minerals. The Division is responsible for collection. compilation, analysis, interpretation and dissemination of statistical information on various economic activities on mines and minerals. It caters to the needs of the Central and State Governments, Planning Commission, Central Statistical Organization, research and educational institutes, United Nations, other foreign organizations and private agencies. As per the Special Data Dissemination Standards laid down by IMF, this Division supplies monthly index of mineral production to Central Statistical Organization (CSO) for computation of index of industrial production in the country. This division is headed by Deputy Director General from ISS Cadre and comprises of officers/officials of ISS & SSS Cadre and supported by Ministerial staff from IBM. During the year 2013-14, the following work was carried out:-

Database Management and Computerization

8.1 Mines Cum Production (MCP) Database

MMS Division receives monthly and annual returns in 16 prescribed formats under rule 45 of MCDR, 1988 from about 3565 mines regularly. Data entry and verification of 2222 Annual Returns received under MCDR for the year 2012-13 was completed. Outputs for the year 2012-13 and 2013-14 relating to labour, production, stocks and value were generated. Computerization of monthly returns for the year 2013-14 was taken up. Data entry and verification of data received in 42700 monthly returns were completed and provisional monthly statements generated for the year 2013-14. The Directory of Mines as on 31.03.2014 now contains 3055 reporting mines. A number of software application

dynamic report using SQL were developed to generate outputs from the MCP database.

8.2 External Trade Database

Data on external trade are collected from the Directorate General of Commercial Intelligence and Statistics (DGCI&S) in accordance with Indian Trade Classification Harmonized based on Commodity Description and Coding System. The data is collected annually in respect of more than 1300 commodities which cover minerals, metals and selected mineral based products. Export and Import data of minerals, metals and selected mineral based products. Export and Import data of minerals, metals and selected mineral based products received from DGCI&S for the year 2012-13 was processed and about 500 statements were generated.

Publications

8.3 Monthly Statistics of Mineral Production (MSMP)

This monthly publication MSMP contains information like Index of Mineral Production, state-wise mineral production and value, average sale price of minerals by grades etc. During the year, 13 issues of the publication for the months of October 2012 to October 2013 were released.



8.4 Statistical Profiles of Minerals (Annual)

This publication gives a bird's eye view of most of the vital aspects of major minerals (except fuels and atomic minerals) produced in India. It contains information on production, value and stocks of minerals, labour employment and number of reporting mines for the current year. Besides, data on reserves, mining leases, life index of mineral resources, export and import of minerals are incorporated for the latest available year. The issues for 2011-12 and 2012-13 have been released.



8.5 Indian Mineral Industry at a Glance (Annual)

It is a pictorial publication providing time series data on production of minerals, mineral based metals and products. consumption of minerals, labour employment and external trade. In addition, detailed information machinery, on mining consumption of explosives, mining leases and afforestation in metalliferous mines are also presented for the latest year. The issues for 2010-11 and 2011-12 have been released, 2012-13 issue is under preparation.



8.6 Indian Minerals Yearbook (annual)

Statistical tables with reviews on national income, production, stocks, labour, exports, imports and prices covering major minerals, fuel minerals, minor minerals and metals along with detailed figures at the district and state level for IMYB 2013 is under preparation.

Statistical Reports and Data Dissemination

8.7 Reports on estimated value of monthly mineral production for March, 2013 to February, 2014 were sent to the Ministry of Mines for preparation of Monthly Cabinet Review Note on mineral industry.

8.8 Press Note on Monthly Mineral Production for February, 2013 to January 2014 was prepared and sent to the Ministry of Mines.

8.9 Material for answering 59 Parliament Questions giving information on various parameters like production, value, number of mines, labour, dispatches, stocks, exports, imports, etc; was prepared and supplied to other divisions/Ministry.

8.10 Ex-mine prices of 19 mineral grades for the months of February, 2013 to January 2014 were sent to the Ministry of Commerce and Industry, for computation of Wholesale Price Index.

8.11 Finalization of state wise average sale price for specified minerals for which royalty is chargeable on advalorem basis and not linked to any international bench mark prices. LME prices for the period upto October, 2013 (upto December 2013 for iron ore) were sent for hosting in the Web Site of IBM.

8.12 MMS Division is also engaged in collection, compilation and dissemination of production details of fuel minerals, minor minerals and ferrous and non-ferrous metals and also prices of minerals and metals in the domestic as well as in the international market.

8.13 Data on different aspects of minerals and metals were provided to the Central and State Governments, Central Statistical Organization, MMTC, Railway Board, private agencies and foreign organizations as and when requested by them

8.14 Information on production, value, stocks, dispatches, number of mines, index of mineral production, etc. was supplied to CSO, for inclusion in their publication namely : Statistical Abstract, Monthly Abstract of Statistics, Compendium of Environment Statistics, Directory of Statistics, India in Figures, Statistical Pocket Book, etc. Data on input cost was also sent to CSO for computation of National Income in respect of mining & quarrying sector for the year 2010-11 and 2011-12.

8.15 Mineral-wise deductible rates of all minerals for 2009-10 and 2010-11 were provided to all the States Government for computation to State Domestic Product. Information on district-wise and mineral-wise number of mines, production and value was

also sent to all the state Government for the years 2009-10 and 2011-12.

8.16 Growth in mining & quarrying sector

The total value of mineral production (excluding atomic mineral) during 2013-14 (estimated) was Rs. 227175.69 crores, which shows an decrease of about 9.32% over previous year. The fuel minerals accounted for Rs. 155645.83 crores or 68.51 percent, metallic minerals Rs. 37213.02 crores or 16.39 percent, non-metallic minerals (including minor minerals) Rs. 34316.84 cores or 15.10 percent of the total value. This was mainly due to low production of coal, lignite, natural gas, petroleum (crude), iron ore, chromite, gold, gypsum, phosphorite, barytes and steatite. However, the production of some important minerals like bauxite, copper concentrate, lead concentrate, zinc concentrate, diamond, dolomite, laterite, limestone. silica sand have increased marginally during the year.

The index of mineral production (base 2004-05=100) for the year 2013-14 was 124.46, which shows a negative growth of 0.8% over that of 2012-13.

ANCILLARY STATISTICS

8.17 External Trade

Export and import data of minerals, metals and selected minerals based products for the year 2012-13 was collected from the Directorate General of Commercial Intelligence & Statistics. The data thus collected were processed and above 500 statements were generated.

8.18 Minor Minerals

Information on quantity and value of production of minor minerals was collected on non-statutory basis from all the States and Union Territories. Data in respect of 24 minor minerals for the year 2010-11 was processed and finalized.

8.19 Fuel minerals

Data on monthly production of coal and lignite was collected from the office of the Coal Controller, Kolkata and similar data for petroleum (crude) and natural gas was collected from the Ministry of Petroleum & Natural Gas. These data were used for computation of index of mineral production and also for inclusion in the IMYB and other publications of IBM.

PLANING AND CO-ORDINATION DIVISION

The Planning and Co-ordination Division (P&C) comprises two sub-divisions namely, (i) Planning and Co-ordination (including Training); (ii) Administration Establishment Matters, Accounts with all other administrative and financial matters. This division is headed by Controller of Mines (Planning & Co-ordination) assisted by Technical Secretary and Chief Administrative Officer/Head of Office.

9.2 The Controller General. IBM is assisted by Controller of Mines (Planning & Co-ordination) as well as Technical Secretary (TS) in important technical and administrative matters. In this process in consultation with the Divisional Heads, they draw up, Five Year Plans, Annual Programme, Annual Action Plans, Performance Review of activities in IBM, Preparatory work for IBM Advisory meeting and other important meetings regarding plan proposals, reviews, performance, etc., in IBM as well as in the Ministry and take follow up actions. Material for inclusion in the Annual Report, Outcome Budget and Demands for Grants of the Ministry of Mines are also prepared. A brief account of activities carried out during the year is as follows.

Plans / Proposals of IBM

9.3 Following documents regarding plans/proposals were furnished to the Ministry:

- i) Annual Plan, 2014-15
- ii) Annual Action Plan, 2014-15
- iii) Outcome Budget, 2014-15

iv) Material in respect of IBM for the Annual Report of Ministry of Mines, 2013-14

v) Result Framework Document (RFD) for IBM for 2014-15.

Parliament Questions & Ministry References

9.4 Coordinated regarding preparations of draft replies for the Ministry of Mines on 163 Parliament questions and 530 other Ministry references.

Notable Comments / notes / reports furnished by TS Section to the Ministry :

- 9.5 (i) Monthly Progress Reports on the Activities of IBM for March 2013 to February 2014.
- (ii) Agenda Papers and Action Taken Report (ATR) on meetings chaired by Hon'ble Minister of Mines on 9.4.13 & 4.9.13
- (iii) Agenda papers for eight monthly review meetings by Secretary (Mines)
- (iv) Replying questionnaire on Demands for Grants 2013-14 and clarifications contained in the 34th & 45th Report of the Standing Committee on Coal & Steel for Demands for Grants 2013-14.
- (v) Preparation of Agenda Papers, Draft Speech for Hon'ble Minister of Mines, for Consultative Committee Meeting on 'IBM' held on 27.11.2013 at Parliament Annexe, and preparing draft minutes and ATR on approved minutes.
- (vi) Background note for meeting of the Department related Standing Parliamentary Committee on Science & Technology.
- (vii) Status Note on Departmental Activities for Cabinet Secretary.
- (viii) Highlights on Achievements in XI Plan, Salient Achievements of IBM

Parliamentary Consultative Committee Meeting on Indian Bureau of Mines

9.6 The meeting of the Parliamentary Consultative Committee of the Ministry of Mines on 'Indian Bureau of Mines' was held under the Chairmanship of Shri Dinsha Patel, Hon'ble Minister of Mines on 27th November, 2013 in the Committee Room–B, Parliament House Annexe, New Delhi.

chairman welcomed The the Hon'ble Members of the Consultative Committee and other officials present in the meeting and in his welcome addressed briefed about the functions and activities of the Indian Bureau of Mines (IBM). While praising IBM's role in checking illegal mining, the chairman advised IBM to work hard to keep in line with the global scenario and also to become a world class organization. This was followed by Secretary's briefing on the action taken report on the minutes of the last Consultative Committee meeting. In turn, Controller General, IBM made a presentation on "Indian Bureau of Mines" covering the detailed functions under various schemes of IBM, the present set up of IBM and performance of IBM on various activities during the ongoing 12th Five Year Plan. This was followed by discussions by the Hon'ble Members on various issues relating to the functions & activities of IBM.

The Hon'ble members who participated in the meeting included Dr. Bhushan Lal Jangde, MP. Shri Sohan Potai, MP. Shri Amarnath Pradhan, MP, Shri Madhu Kora, MP and Shri Deoraj Singh Patel, MP. Besides Shri R.H. Khwaja, Secretary (Mines), the Ministry of Mines was represented in the meeting by Shri R. Sridharan, Additional Secretary, Shri Durga Shanker Mishra, Joint Secretary and Shri Naresh Kumar, Joint Secretary and other officers. From IBM side Shri C.S.Gundewar, Controller General along with S/Shri K. Thomas, DDG(S), Ranjan Sahai, COM, R. K. Sinha, COM, (Dr.) S. S. Bhake, CME, Y. G. Kale, RCOM & TS, S. K. Adhikari, Sg.MG, D.D. Bhardwaj, ACOM and Smt. V. A. Gharote, MO attended the meeting.

Performance Evaluation of IBM through RFD 2013-14

9.7 The Prime Minister approved the outline of a "Performance Monitoring and Evaluation System (PMES) for Government Departments" vide PMO LD. No. 1331721/PMO/2009-Pol dated 11.9.2009. Under PMES, each department is required to prepare a Results-Framework Document (RFD). An RFD provides a summary of the important results that most department/ministry expects to achieve during the financial year.

The RFD contains the following six sections:

Section 1: IBM's Vision, Mission, Objectives and Functions.

Section 2: *Inter se* priorities among key objectives, success indicators and targets.

Section 3: Trend values of the success indicators.

Section 4: Description and definition of success indicators and proposed measurement methodology.

Section 5: Specific performance requirements from other departments that are critical for delivering agreed results.

Section 6: Outcome / Impact of activities of department/ministry

IBM formulates its strategy through preparation of Five Year Plan and Annual Plan with budget proposals and then key objectives are derived from all of its schemes approved by Planning Commission. Accordingly, key objectives along with actions, success indicators and criteria values are set for RFD 2013-14. Units of success indicators provide clarity in understanding the progress made by the department.

The following are Key objectives:

- 1. Inspection of Mines.
- 2. Regional Mineral Development Studies (RMDS).
- 3. Preparation of Mineral Maps with Forest Overlays.
- 4. Development of Project on computerized online register of Mining Tenement System (MTS).
- 5. Ore Dressing Investigations.
- 6. Indian Minerals Year Book (IMYB).
- 7. Compilation of Monthly Statistics on Mineral Production (MSMP).

- 8. ISO 9001-2008 Certification for some Regional Offices of IBM.
- 9. Development of ore accounting software.
- 10. Technical Consultancy and mining research studies.
- 11. Implementation of IBM Review and Restructuring Committee Recommendations.
- 12. Internal Audit for MCDR Inspections.
- 13. Scrutiny and Processing of Statutory returns

After implementation of RFD system, IBM is able to deliver timely results and also improved its performance perception. The total composite score of IBM based on performance evaluation is 80.01 % for the year 2013-14.

The following chart indicates comparison of IBM RFD performance during 2011-12, 2012-13 and 2013-14.



Key IBM Objectives in Ministry's RFD 2013-14

9.8 Ministry of Mines during the preparation of its RFD, certain key objectives has been derived from IBM's schemes approved by Planning Commission.

The following are some key objectives related to IBM considered for Ministry's RFD:

• Sub Sector Development Plans for copper, aluminium, lead & zinc and, chromite.

• Sustainable Development Framework (SDF) for the Mining Sector.

Two Stakeholder workshops to be organized in two States. Implementation of SDF as a pilot Project in two States Finalization of standard template for SDF for mining sector

- Mechanisms for bringing accountability in the mining sector. To make mandatory, by suitable amendment in the MCDR 1988 f or online submission of returns under Rule 45 of MCDR 1988. External audit of inspection of mines by IBM. (by% of IBM Target of Inspection.
- Restructuring of functioning of IBM as per recommendation of the Committee constituted for the purpose
- Implementation of Project of Mining Tenement.
- Development of ore accounting software through DPR
- Implementation of UNFC system of classification of mineral reserves

IBM goes for ISO certification

9.9 As part of the Results Framework Document for 2013-14, Indian Bureau of Mines proposed to obtain ISO 9001-2008 Certification for its two Regional offices . The ISO 9000 family addresses various aspects of quality management and contains some of ISO's best known standards. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved.

ISO 9001:2008 sets out the criteria for a quality management system and is the only standard in the family that can be certified to. It can be used by any organization, large or small, regardless of its field of activity. In fact ISO 9001:2008 is implemented by over one million companies and organizations in over 170 countries. The standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement.

Under RFD 2012-13 commitment Bengaluru, Goa, Kolkata, Nagpur, Hyderabad and Udaipur Regional Offices got ISO 9001-2008 certification. With this IBM has embarked upon the quality management standards and added another feather to its cap.

Deputation/Delegation Abroad

9.10 Shri Saji George, D (S) attended Second Meeting of the Steering Committee of the Ulaanbaatar City Group on Statistics for Economics based on Natural Resources held at Moscow, Russia during 17-18 September, 2013.

As a member of the Indian Delegation Shri Arun Kumar, Joint Secretary (Mines), Shri J. R. Chaudhary, RCOM International Conference & Expo – 'MINING INDABA 2014' at Cape Town, South Africa from 03 to 06 February, 2014.

As a member of the Indian Delegation led by Shri R. Sridharan, Additional Secretary (Mines), Shri B. Ram Mohan, RCOM attended PDAC 2014 Convention & Trade Show at Toronto Canada as well as attended Joint Working Group meeting (India & Ontario Province) besides visit to a Gold mine and Geosciences Laboratory at Ontario, Canada from 02 to 08 March, 2014.

Generation of Revenue in IBM

9.11 The Indian Bureau of Mines generates revenue as incidental to the following activities:

• Beneficiation studies on low grade ores and minerals including mineralogical and chemical analysis on sponsored samples from other organizations and analysis of environmental parameters of air, water and soil.

- Technical Consultancy to Mining Industry on mining, geological, environmental and geo-technical assignments.
- Fee for processing of mining plans and scheme of mining.
- Compounding of offences under Mineral Conservation and Development Rules (MCDR) 1988.
- Sale of IBM's technical and statistical publications, mineral inventory datasheets, mineral maps and other data.
- During the year 2013-14, revenue of Rs. 137.74 Lakh has been generated on account of these activities.

Visit of Naresh Kumar, Joint Secretary to IBM Headquarters

9.12 Shri Naresh Kumar, Joint Secretary, Ministry of Mines looking after the IBM affairs paid visit to IBM Headquarters on 16th & 17th April. 2013 and chaired a meeting with senior officers of Indian Bureau of Mines (IBM), National Institute of Smart Government (NISG): and National Informatics Centre (NIC) to review various issues of IBM. In the review meeting, various issues such as Amendment in MMDR Act,1957; External Audit of MCDR Inspections; Implementation of Mining Tenement System; Implementation of Ore Accounting Software; Action on the Report of the Committee for Review and Restructuring of IBM; Black listing of mining firms involved in Illegal Mining; UNFC Guidelines and its Implementation; Rolling out of Sustainable Development of Framework; Implementation of Rule 45 of MCDR,1988 and Status of on-line submission of returns; System of Empanelment of Recognized Qualified Persons; Review on Achievement of RFD 2012-13; Special Task Force of IBM

for monitoring of illegal mining; filling up of vacant posts; etc. were reviewed by the Joint Secretary.

Shri Naresh Kumar was also the Chief Guest of the Valedictory function of the Workshop on "Mining Plan and RQP Examination" held at IBMHO on 16th April, 2013. Speaking on the occasion Shri Naresh Kumar indicated that 21st Century is the "Century of Technology". The technology is changing very fast and therefore, one must keep pace with the changing technology. Technology is having multidisciplinary approach encompassing various facets such as software, robotics, medicine, electrical. mechanical, electronics etc. To obtain the quality output it is essential to prepare Standard Operating Procedures. Shri Naresh Kumar invited attention that the same is also equally important in the respect of preparation of Mining Plan as the same is very dynamic in nature and therefore, demands to keep in tune with the changing time and technology. As regards, the system of 'RQP', he desired to introduce continuous evaluation with focus on conservation & development, environment and economic evaluation.

SECRETARY REVIEWED THE PERFORMANCE OF IBM AT HYDERABAD

9.13 Shri R.H.Khwaja, Secretary to the Government of India, Ministry of Mines held series of meetings at Hyderabad during 16th and 17th May 2013 to review the performance of IBM on various aspects.

The first meeting was chaired by the Secretary (Mines) regarding bringing synergy in the areas of cooperation, collaboration and coordination between Geological Survey of India and Indian Bureau of Mines on 16th May,2013 in the conference hall of GSI Training Institute, Hyderabad. The meeting was called to emphasis need for synergise the work of IBM and GSI to achieve the optimum results for the benefits of both the organizations and also for the country.

The various issues of common interest like National Mineral Inventory, National drill core repository/library, Geophysical Data Data Filing and Data Repository and dissemination, implementation of Mining Tenement System, creation of Mineral Prognostication and Intelligence Cell to provide future guidance of mineral sector to the country, regular interaction between IBM & GSI, sharing of infrastructure, updation of mineral maps, human resource development through mutual training, offshore areas mineral development and regulation etc. were deliberated at length in the meeting.

The second meeting was chaired by Shri R.H. Khwaja, Secretary (Mines) on 17th May, 2013 to review synergy between National Institute of Smart Government (NISG), Hyderabad and Indian Bureau of Mines. Emphasizing the need for such synergy, Shri Khwaja mentioned that to transform government organization from department- centric mode of working to citizen centric way of working, the national e-governance programme was conceived. The National Institute of Smart Government was set up to help the Govt. of India and State governments to realize the national egovernance vision. Shri Khwaja desired for a better and effective interface between IBM & NISG to enable IBM to function in a vibrant e-governance mode. In this context, Shri Khwaja referred to the report of the "Review and Restructuring of the Functions and Role of IBM" and desired NISG to come out with solutions to facilitate IBM to move towards a more IT oriented services. Shri Khwaja highlighted the importance of the vision and mission matrix for achieving the goals of the organization. He cited the constitutional provisions in the mineral sector and stresses need to give proper guidance, support and help from the Ministry to IBM to

enable them to discharge their duties in an effective manner. Speaking on the occasion Shri D.S. Mishra, Joint Secretary highlighted the on-going areas of cooperation between Ministry, GSI, IBM and with NISG and stressed need for capacity building of IBM through IT applications. The issues that were deliberated includes preparation of concept note to integrate and make web enabled the IBM's present data base, their contents, the systems of input and output retrieval, identification of IBM's services in the light of Mines and Minerals (Development and Regulation) Bill 2011 and to study and identify need for re-engineering for IBM, preparation of Ore Accounting Software in order to implement new scheme in the XII Five Year Plan by IBM. It was decided that NISG would synchronize the development of ore accounting software keeping in view the mining tenement project, registration system and on-line submission of monthly and annual returns under the amended Rule 45 of MCDR 1988.

The third meeting was also chaired by Shri R.H. Khwaja, Secretary (Mines) on 17th May 2013 regarding restructuring of Indian Bureau of Mines. Shri Khwaja indicating background of the restructuring of IBM and recalled that in terms of the policy directions given in the National Mineral Policy 2008, the Government has constituted a committee for review and restructuring of the functions and role of IBM and the committee has submitted its report. He further said that report entrusted IBM the role of National Technical Regulator apart from the legal regulator for the Indian mining sector in respect of non-coal minerals. The restructuring of IBM has been done especially in view of responsibility of IBM to shoulder various functions as provided for in the NMP 2008 and incorporated in the MMDR Bill 2011. Shri Khwaja mentioned that presently the Indian mineral industry is passing through critical phase on various issues like illegal mining, environmental and social issues and slow pace of development. He emphasized that IBM should rise to the

occasion to take up new challenges and become a world class organization. He assured that Ministry of Mines would take requisite steps in a time -bound manner for restructuring of IBM. Shri Khwaja indicated generic solutions like effective that coordination, cooperation and collaboration within IBM and with GSI and State integration of governments, sustainable development framework and environmental issues, implementation of UNFC, building synergy with all stakeholders, long-term goal of the organization should be the priority areas for restructuring of IBM. Shri Y.G. Kale, RCOM and Technical Secretary, IBM made a brief presentation on the salient features of the IBM Restructuring report. The progress made for implementation of the recommendations of IBM Restructuring report were reviewed. While summing up the deliberation Shri Khwaja advocated that vision statements for IBM should necessarily reflect the character of NMP 2008 and chart a course with definite commitments that would serve the best interest of the country's mineral industry.

From IBM side all the meetings were attended by Shri C.S. Gundewar, Controller General, Shri Ranjan Sahai, COM, Shri P.N. Sharma, RCOM, IBM, Hyderabad , Shri Y.G. Kale, RCOM & Technical Secretary and Shri Manish Maidiratta, DCOM,IBM, Hyderabad.

VISIT OF ADVISOR (MINERALS), PLANNING COMMISSION TO IBM

9.14 Smt. Suman Kaushik. Advisor Planning (Minerals), Commission. Government of India paid visit to IBM headquarters on 8th July, 2013. During her visit, she held an interactive meeting with senior officers of IBM. During interactive meeting, a presentation on the salient features of the IBM Review and Restructuring Report were made by Shri Y.G.Kale, RCOM & TS. The restructuring report has envisaged strengthening of IBM in terms of infrastructures and human resources. Therefore, CG, IBM requested Planning

Commission to provide adequate funds for implementation of the recommendations of IBM Review and Restructuring Committee. Smt. Kaushik was also apprised with the salient features of the IBM's ambitious scheme on Mining Tenement System. The presentation was made by Shri V.K.Misar, Senior Mining Geologist highlighting the status of the progress made towards the implementation of the new scheme. Smt. Kaushik opined that IBM may priorities the various components of the Mining Tenement System and to start with Registry component in the beginning and GIS component can be taken up at a later stage. She also desired that IBM to have synergy with various organisations like Geological Survey of India, National Institute of Oceanography, Ministry Earth Sciences for grant of mineral of concessions in the off-shore areas to have an integrated approach. In her concluding remarks, she assured all out support and cooperation from the Planning Commission to fulfill the various activities of IBM.

IBM ORGANIZED WORKSHOP ON ENVISIONING AND SCRIPT WRITING

9.15 As per directions of Shri R.H. Khwaja, Secretary (Mines) during a meeting held on 31.1.2013 to review the functions of IBM, IBM conducted an exercise with a view to develop commitment for improving functioning with listing of ten biggest achievements and ten major failures of IBM during the last ten years. The exercise was then extended to trace out the major achievements and failures since IBM's inception in 1948 with reasons for the achievements and the strategic paths through which the failures can be overcome in future. Following this exercise, the Ministry of Mines asked IBM to come out with a realistic long term plan in vision-matrix framework for next 10 years. All these exercises were essentially aimed to look at and assess the achievements, failures and the ways in which the organization should progress in future to achieve the goals that are fully aligned with the Vision and Missions of IBM.

The three day workshop on "Envisioning and Script Writing for IBM" was organised at IBM HQ during 24-26 July 2013 was the culmination of this exercise and was essentially targeted at the middle level officers of IBM having a length of service more than ten years. In all, six Missions were identified and officers from various disciplines of IBM were entrusted the job of Envisioning and Script Writing for their respective Missions. Mission Heads and Team Leaders were identified and two retired officers of each discipline were invited as resource persons for Group discussions and finalizing presentations.

The Idea of Envisioning and Script Writing was conceived in a series of meetings on 16-17th May, 2013 at Hyderabad chaired by Shri R.H. Khwaja, Union Secretary of Mines for IBM-GSI Synergy, IBM-NISG Synergy and IBM Review and Restructuring Report. Secretary Mines had mentioned that the National Mineral Policy 2008 (NMP) has envisioned diverse mineral development programmes and strategies for sustainable mineral development in the country. IBM prominently figures in the assemblage of schemes and has an important role to play in realising the objectives as laid out in the NMP. The Vision Statement of IBM, should necessarily reflect the character of NMP 2008 charter a course with definitive and commitments that would serve the best interest of the country's Mineral Industry. He emphasized that IBM should have a clear vision and mission and work within its framework.

Against this backdrop, IBM initiated action for conducting Workshop. IBM has started Management script writing exercise under the guidance of Shri Naresh Kumar, Joint Secretary Mines. Six Missions, Mission Heads, Team Leaders and Team Members and resource persons were identified and the presentations were prepared. The Presentations inter alia contained:

Mission

Objectives Role of IBM World Scenario vis-à-vis IBM position SWOT Analysis Way forward A Roadmap for short term and long term goals

A total of 28 officers drawn from Mining Engineering, Mining Geology, Ore Dressing, Mineral Statistics and Mineral Economics disciplines under the supervision of Divisional Heads participated in the Workshop under six Missions.

The proceedings of the first session of the first day began with the Shri C.S. Controller Gundewar, General, IBM extending a warm welcome to all the participants and resource persons. He highlighted some of the major contributions and failures of IBM in the past and opined that the implementation of the Review and Restructuring report would bring considerable improvements in the human resource augmentation as well as the facilities in the organization. Lastly, he underlined the long term goal of IBM "to be the National Technical Regulator for non coal Mining Sector" and emphasized the need to work together to achieve it. After encouraging speech of Controller General, IBM the deliberations and brainstorming transactions took place in pre and post lunch sessions. It was a very good and qualitative interaction amongst IBM officers and the draft Mission presentations were modified accordingly. Resource person actively participated in guiding and modification process.

Day two and first half of day three of the workshop was chaired by Shri Naresh Kumar, Joint Secretary Mines. His clarity of thoughts and farsighted view infused fresh flux of enthusiasm amongst the participants. The ideas were discussed, strategies were drawn, bottlenecks were pointed out, the solutions were prescribed and the missions were rewritten with crystal clear visions.

Shri Naresh Kumar, Joint Secretary, Ministry of Mines, the guiding Force for IBM, assured that he would give proper justice to responsibility given to him and would do his best for IBM. He believed that the country is in transition phase and the present scenario is not promising. The best possible way for survival in such situation is to shoulder the responsibility for carving our future. If destination is clear we are ready to find out the way but in the words of Lord Gautam Buddha he cautioned that there are two apparent roads from top to bottom and another from bottom to top. Shri Naresh Kumar insisted that the exercise of Script Writing should be a regular practice with clear cut short and long term objectives and IBM must come forward and spell out what they want from Ministry of Mines in terms of creation of posts, budget and delegation of financial powers. Critical issues under various missions such as agglomeration, pellatisation of slimes, export of fines, pilot projects for SDF roll out, transition time period for making online returns mandatory under MCDR, 1988, difficulties in switching over to UNFC 2009, scope for overseas training to IBM officers, implementation of MTS project in time bound manner, huge task of scrutiny of online returns etc were discussed at a length.

The concluding session of the third day was chaired by Shri R. H. Khwaja, Secretary to the Government of India, Ministry of Mines.

Shri Naresh Kumar, Joint Secretary Mines. in his address reiterated the importance for organizing this workshop as IBM is passing through a cross-road and has to cope with the challenges of protecting mining environment and checking the illegal mining. The Union Secretary Mines in his inspirational speech asked IBM to acknowledge the past mistakes, stop blame game, have self motivation and come to the level of self searching. He stated that as far as he was concerned, IBM being a subordinate

office of the Ministry of Mines did not make it inferior to the ministry. The total organization needed to be above the feeling of superiority or inferiority. He said that each one of IBM officers must individually exercise whatever abilities, capabilities the almighty has blessed them with and start taking responsibility

He said that we kept repeating our mistakes because we did not acknowledge our mistakes, in the first place. We always tend to blame other persons. "So, let us stop this blame game. Let us ask objectively ask where responsibility lies and let us look at the glass which is having $1/10^{th}$ of water as $1/10^{th}$ full and not $9/10^{th}$ empty." If this was considered as mere motivational talk and nothing more, then so be it.

Thereafter, the following six missions made their presentations. Each presentation first spelt out the challenges and the tasks ahead for their respective groups and then highlighted the important short term and long term milestones that they would cross in their journey to accomplish the mission in a time bound manner.

Mission- I "National Technical Regulator of the Mining Industry including Sustainable Development Framework in mining and developing Mining Tenement System"-Presented by Shri A.B.Panigrahi, RCOM, Kolkata

Mission-II "Research & Development Laboratory in the field of mineral beneficiation. mineral characterization, chemical analysis and analysis of environmental samples"- Presented by Dr. Sandhya Lal, Ore Dressing Officer

Mission-III "To work as data bank of mines and minerals and repository of statutory returns and publishing statistical periodicals" Presented by Shri Saji George, Director (Stat).

Mission-IV "Custodian of National Mineral Inventory and Advisor to Central & State Government on all aspects of mineral industry, trade, legislation, etc" Presented by Dr. S.S.Bhake, Supt Mineral Economist (Int) **Mission-V** "Implementer of scientific, techno-economic, research oriented studies in various aspects of mining, geological studies and environmental studies"- Presented by Shri M.V.Sahasrabudhe, RCOM.

Mission- VI "Capacity builder of IBM, State Regulatory regime and Mining Industry through its training facilities"- Presented by Dr. V.G.K.Bhagavan Gumma, Senior Mining Geologist.

Shri R.H.Khwaja, Secretary, MoM in his concluding remark expressed his satisfaction on IBM's newly earned conceptual clarity on the Vision-Mission framework. While stating that the presentations are in right direction and agreeing with the suggestion, he again stressed to use this framework intelligently for getting focussed results as that real challenge lies with achieving time bound milestones. He assured that Ministry of Mines will try best for approvals from ministry of Finance for strengthening of manpower.

ENTHUSIASTIC PARTICIPATION OF IBM IN FIMI'S CONFERENCE

9.16 In order to attract investment and technology in mineral sector, Federation of Indian Mineral Industries (FIMI) has organized a three days Convention on "Mining, Exploration Convention and Trade Show" from 19-21 September 2013 at Bangalore International Exhibition Centre, Bengaluru with the support of Prospectors and Developers Association of Canada (PDAC) to provide a unique opportunity for various stakeholders involved in the mining value chain - policy makers, exploration agencies, mining companies, regulatory agencies technologists, economists, investors including peoples from abroad - for intense deliberations and discussion. The Ministry of Mines, Government of India has sponsored this event.

As part of the convention, an International Seminar was organized by the FIMI. The seminar was inaugurated at the hands of Shri R.H. Khwaja, Secretary to the Govt. of India, Ministry of Mines on 19th September, 2013. Speaking on the occasion Shri Khwaja, Secretary, appealed that the Mining MAZMA 2013 should act as a platform to share the positive developments especially in technology scenario and explore investment opportunities in the Indian mineral sector. He highlighted the India's contribution in terms of mineral production and also shared the status of Indian mineral scenario. Shri Khwaja expressed deep concern regarding the state-of- affairs through which the Indian mineral sector is passing and hoped that the sector will once again come up to the expectation of all stakeholders. He advocated that we should introspect ourselves for what went wrong and work in a common vision-mission framework. While citing the relevant policy issues of the National Mineral Policy 2008, he appealed to the State governments to initiate positive role for furtherance of the mineral sector. He emphasized that special attention needs to be paid towards the societal issues so that the mining industry is welcomed by the host population. In this direction, he expressed opinion that the State governments can play key role so as to come up with the solution to put into effect the policy initiatives of the National Mineral Policy. He cited examples of public-sector companies like Nevveli Lignite Corporation Ltd. (NCL) and Singareni Collieries Company Ltd. (SCCL) as the good examples of sustainable mining. While elaborating the major initiations taken by the Ministry of Mines, he spelt about revamping of Geological Survey of India, reforms envisaged for NALCO and HCL. He also indicated that reorganization of IBM is also on the anvil with determination and assured positive outcome in the near future. Shri Khwaja appealed for the soul, heart and head searching for the betterment of the Indian mineral industry through constant, dynamic and vibrant initiatives. Earlier Shri S.C. Daga, President, FIMI, welcomed the dignitaries. Mr. Marc Leroux, Hon'ble Asstt. Deputy Minister of Northern Development and Mines, Ontario, Canada, Mr Jaime Stiglich, Ambassador, Embassy of Peru, Mr. Mohan Singh, Chief Inspector of Mining, Papua New

Guinea, Mr. Anjani Agrawal, National Leader, Mining and Metal Sector, Ernst & Young Pvt. Ltd., Mr. R.K. Sharma, Secretary General, FIMI and Mr. Basant Poddar, Sr. Vice President, FIMI also spoke on the occasion.

C.S. Controller Shri Gundewar, General, IBM, Shri R.K. Sinha, Controller of Mines (SZ), Shri B Ram Mohan, RCOM, IBM, Bengaluru, Shri T.K.Rath, RCOM, Chennai and Shri Y.G.Kale, RCOM & TS participated in the Convention as delegates from IBM. The first Session on "Policy Issues and Initiatives in Mineral Exploration and Mining Development and Finance. Investment Potential and Opportunities in Mineral beneficiation Exploration, and Mining" was chaired by Shri C.S. Gundewar, Controller General, IBM. In this Session a Paper titled "Policy Issues and Initiatives in Indian Non-coal Mineral Sector" jointly authored by Shri Y.G. Kale, RCOM & T.S. & Shri C.S. Gundewar, CG, was presented by Mr. Kale. The Paper highlighted the evolution of mineral policy in the Indian non-coal mineral sector, an overview of the Indian mineral industry highlighting the mineral resources, number of mining leases and mines, index of mineral production, Exim trends, status of mechanization, policy initiatives highlighting the Mining Tenement System , the Long-term goals in XII Five Year Plan, Fiscal initiatives, Strategic plan for unlocking the potential of Indian mineral sector, the Assessment of threshold values of Grant of mineral important minerals, concessions in off shore areas, Registration under Rule 45 of MCDR 1988, Sustainable Development Framework, Implementation of UNFC system for assessment of mineral resource and thrust areas for the future prospects. The paper evoked good response from the delegates.

Concurrent with the Convention an International Trade Show was also organized in which many international organizations participated by putting their stalls. Indian Bureau of Mines also participated in the Trade Show through its stall in the International exhibition highlighting its capabilities. The IBM stall was inaugurated by Shri R.H. Khwaja, Secretary (Mines) in presence of higher officials of the Govt. of India and many State governments. Shri C.S. Controller General. Gundewar. IBM. welcomed Shri Khwaja by presenting a bouquet. IBM displayed its publications, mineral samples and expertise available for the mineral industry through various posters and panels. Shri N.P. Haran, In charge, RODL, Bengaluru and Shri N.U. Kadu, Editor and other officials of the IBM, Bengaluru and Nagpur worked hard for impressive presentations and success of the stall.

6TH JWG MEETING BETWEEN INDIA-ONTARIO (CANADA) HELD

9.17 6th Joint Working Group Meeting between Ministry of Mines, Govt. of India Ontario Ministry of Northern and Development and Mines was held on 20th September 2013 at Bengaluru. The Indian side was co-chaired by Mr. D.S. Mishra, Joint Secretary, Ministry of Mines and the Ontario side was co-chaired by Mr. Marc Leroux, Hon'ble Asstt. Deputy Minister of Northern Development and Mines, Ontario, Canada. At the outset Shri Mishra Joint Secretary, Ministry of Mines welcomed all the participants of the Joint Working Group meeting. Mr. Mishra informed that Memorandum of Understanding (MoU) the Govt. of India and Ontario between Ministry of Northern Development and Mines was signed on 8th March, 2010 and since then 5 Working Group meetings have been held . Mr. Marc Leroux expressed satisfaction that he was involved in the Joint Working Group meeting since the signing of MoU. Mr. Mishra informed that considerable progress has been made for the mutual benefit of both the sides since the signing of MoU. Both the co-chair expressed that the JWG meetings will benefit Indian as well as Ontario counterparts. On behalf of the Govt. of India, Shri Y.G. Kale, RCOM & TS, IBM

Mining made presentation on " a in India-An Overview opportunities including Procurement Process and Consultancy service related to Mining". The presentation highlighted the status of the Indian mining scenario, the investment opportunities existing in Indian mining sector and the process of grant of mineral concessions in India. As a part of the deliberations, the issues relating to the capacity building of IBM in terms of exposure to modern mining technologies to ensure the scientific and systematic mining with focus on proper post-mine closure best practices in mineral measures. beneficiation process of nickel and PGE minerals to achieve zero waste mining and short-term course on 2D and 3D modeling of ore deposits in Ontario University/academic institutions for handling mining tenement system effectively were also discussed in the meeting. The Ontario side assured to look after the issues and suggest suitable training modules. In the JWG meeting, "Geological Exploration in India an Overview" was also presented from GSI side. The Ontario side made a presentation on overview of current mining climate including 'Ring of Fire'. policy for acquisition of copper deposits in Ontario Province in particular in the area of 'Ring of Fire' and information about opportunity for procurement of iron ore, cocking coal in Ontario Province was also deliberated. At the end, both side expressed satisfaction towards the progress made by the Joint Working Group.

VISIT OF SHRI ARUN KUMAR, JT. SECRETARY, MINISTRY OF MINES TO THE IBM HEADQUARTERS

9.18 Shri Arun Kumar, Joint Secretary, Ministry of Mines, visited IBM on 30th September, 2013. The objective of his visit was to understand the concepts of UNFC and processing of Mining Plans, Schemes of Mining and Mine Closure Plan in IBM. He held interactions with the senior officers of IBM. A presentation on Concepts of UNFC was made by Shri S.K. Adhikari, Suptdg. Mining Geologist, followed by another presentation on Processing of Mining Plans and Schemes of Mining by Shri Abhay Agrawal, DCOM. Shri Arun Kumar took keen interest to understand the issues related to reserves and resources codification as per UNFC and also micro-level issues pertaining to the processing of Mining Plans and Schemes of Mining in IBM. S/Shri K. Thomas, Dy. Director General (Stat.), Ranjan Sahai, Controller of Mines, M. Sengupta, Chief Mining Geologist, Dr. S.S. Bhake, Chief Mineral Economist, Shri Y.G. Kale, RCOM & Technical Secretary, Dr. GVGK Bhagavan, Sr. Mining Geologist and Dr. R.N.Meshram, Consultant also participated in the meeting. Shri Y.G. Kale proposed the vote of thanks.

Conference on Sustainable Mining and the UNFC- Challenges and Opportunities in India at New Delhi

9.19 Ministry of Mines & Ministry of Coal, Government of India have organized a National Level Workshop on Sustainable Mining and the United Nations Framework Classification (UNFC) - Challenges and opportunities in India jointly in association with Federation of Indian Mineral Industries (FIMI) & United Nations Economic Commission for Europe (UNECE) on 29th -30th October 2013 at New Delhi.

Sustainable Mining : The conference was held with goal to address capacity-building steps that ultimate lead to implementing globally recognized good practices such as Plans' 'Sustainable Mine to ensure sustainable mining. Issues and constraints while implementing Sustainable Mine Plans ('SMPs') has been deliberated with close interaction with faculties from abroad. In this context, role of IBM as the key institution has been highlighted and capacity building invariably required to ensure that the Mine Plans shall be based on global good practices in sustainable mining. As per deliberations it has been decided to develop Standard SDF templates . Now the draft SDF Template are ready for discussion.

UNFC : India has already adopted a globally amicable classification system i.e. United Nations Framework Classification (UNFC -1997) since 2003 and further committed towards adoption of UNFC 2009 as spelt out in National Mineral Policy, 2008.

The UNFC1997 underwent revisions in 2004 to extend its applicability to oil, natural gas and uranium. UNFC 2004 version was further revised to achieve alignment and harmonization between UNFC 2004 and Committee for Mineral Reserves International Reporting Standards (CRIRSCO) Template of 2006, and Petroleum Resources Management System (PRMS) developed by the Society of Petroleum Engineers (SPE). This led to the Development of UNFC-2009 and was published by UNECE as "United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009".

Since, India is already following the UNFC system for classification of its mineral resources, high level **mapping is required between UNFC – 1997 and UNFC 2009**.

In view of the above, the workshop was primarily aimed at providing an opportunity to all stake holders such as Government, private sector, public sector, policy makers, academicians & financial institutions, to understand the system and deliberate for its suitability & adaptability with the existing system in India.

Fifteen international experts having expertise in various extractive activities and resource classification and the World Bank had participated in the conference. The conference was attended by more than 250 delegates from Central Government, State Government, Public Sector, Private Sector, Academia and other Professional bodies. Some of the key recommendations of the conference on implementation of UNFC 2009 in India are:-

- Formation of a High level committee comprising all stakeholders across the governance space, to assess the roles and responsibilities of key government agencies (IBM and GSI) in the mining life cycle from exploration to postmine closure.
- The above noted high level Committee shall define and agree upon milestones, deliverables, and be properly resourced.
- Set up a National body to deal with all micro/macro issues on resource classification & UNFC in line with the Expert Group on Resource Classification (EGRC) of UNECE.
- Assess options for a certification processes for competent persons and institutional arrangements to reinforce the compliance process.
- Take up pilot projects and case studies with the industry to test UNFC 2009 both at deposit level and at aggregate level.
- Modify & simplify the existing field guidelines (MCDR-88) as per the definition of UNFC -2009 and its specifications.
- Introduce standard templates of reporting inline with CRIRSCO and international best practices.
- Training to trainers to understand the relationship between UNFC-1997 and UNFC-2009.
- Introduction of UNFC in the curriculum at college and university level.
- Promotion of UNFC 2009 through workshops, conferences, meetings & articles etc.
- Continued active participation of India within the UN Expert Group on Resource Classification, providing lessons learned here to the global community.

Visit of Shri D. S. Mishra, JS, Ministry of Mines

9.20 Shri Durga Shanker Mishra, Joint secretary, Ministry of Mines was in city for two days during 21st and 22nd October 2013 on occasion of foundation day of MECL. Taking the opportunity of his availability, Controller General, IBM has invited him to visit IBM headquarters.

Shri Mishra visited IBM office on 22.10.2013 and had an interaction with Divisional heads and other senior officers. In this occasion, Shri Y.G. Kale, Regional Controller of Mines & Technical Secretary made a presentation on activities and functions of various divisions of IBM. He also explained various concerns and issues related to HRD and review and Restructuring of IBM role and functions.

JS stressed up on HRD. He suggested that frequent assessment of HR need; gearing up initiatives to fulfil the existing vacancies and exploring the possibilities to go for outsourcing/ contractual basis for time being etc. are essential measures to meet the HR needs.

In the said meeting, Shri K. Thomas, DyDG, Shri RanjanSahai, Controller of Mines, Shri M. Sengupta, CMG, Dr S.S. Bhake, CME, Shri M.V. Sahasrabudhe, RCOM, Shri S.K. Adhikari, SgMG, Shri M.S. Rao, ODO, Shri S.K. Ghosal, CAO and Dr VGK Bhagavan Gumma, SMG were also present. JS also visited Central Library and Mineral Map Cell of IBM.

TRAINING CENTRE

The Training Centre of IBM is headed by the Director (Training) / Regional Controller of Mines. It is under the overall supervision of Controller of Mines (Planning & Co-ordination). It conducts in-house training programmes for its employees and also for persons engaged in mining industry as well as overseas with the objective to provide them adequate orientation and updation in their fields of work.

10.1 During the year 2013-14, 16 training programmes comprising 5 in-house and 11 training programmes for industry personnel, including 03 for the North-Eastern personnel, were conducted. A total of 186 internal and 308 industry personnel plus 34 from North-Eastern States were benefitted. Revenue of Rs. 23.09 lakhs was realized from the training programmes conducted for the industry personnel. The details of the courses conducted are as given below:

10.2 Training Programmes for IBM Personnel

(i) Workshop-cum-Training Programme on Environmental Monitoring Methodology was conducted on 18-19 June, 2013 at Nagpur in which a total 45 personnel from Indian Bureau of Mines participated.

(ii) Refresher Course on UNFC was conducted on 22-23 July, 2013 at Nagpur in which 28 personnel from IBM participated.

(iii) Refresher Course on MMRD Act, MCDR& MCR was conducted on 23-24 October, 2013 at Ajmer in which total 29 personnel from IBM participated.

(iv) Training Centre conducted Refresher Course on Administration & Purchase Procedure on 07-08 January, 2014 at Hyderabad in which total 39 personnel from IBM participated. (v) Workshop-cum-Training programme on Office Procedure, Accountancy DGS & DRC Financial Rules & Pension Papers was conducted during 25-27 February, 2014 at Nagpur in which total 44 personnel from IBM participated.

10.3 Training Programme for Industry Personnel

(i) Workshop-cum-Training programme on Mining Plan Guidelines and RQP Examination was conducted on 15 & 16 April, 2013 at Nagpur, in which a total 46 personnel from industry and 07 personnel from State Directorate of Mining & Geology participated.

(ii) Workshop on Mining Plan Guidelines and RQP Examination was conducted on 05-06 June, 2013 at Udaipur, in which a total 47 personnel from the industry participated.

(iii) Workshop on Mining Plan Guidelines and RQP Examination was conducted on 15-16 July, 2013 at Bengaluru, in which a total 59 personnel from the industry and 03 personnel from State Directorate of Geology & Mining participated.

(iv) Workshop on Mining Plan Guidelines and RQP Examination was conducted on 06-07 August, 2013 at Bhubaneswar in which personnel from the industry participated.

(v) Workshop-cum-Training programme on Preparation of Mining Plan, Scheme of Mining, Mine Closure Plan and Financial/Economic Aspects of Mining Project on 12-13 August, 2013 at Bhopal in which 40 personnel from State Directorate of Geology & Mining participated.

(vi) Training Programme on Mineral Characterization in view of Beneficiation of Ores and Minerals was conducted on 21-22 August, 2013 at Nagpur in which 16 personnel from industry participated. (vii) Refresher Course on UNFC was conducted on 20-21 November, 2013 at Bengaluru in which total 44 industry personnel participated.

(viii) Workshop-cum-Training programme on Selection & Use of Instruments for Chemical Analysis of Rock & Minerals was conducted on 04-05 March, 2014 at Nagpur in which total 34 industry personnel participated.

10.4 Training Programme for NER Personnel

(i) Workshop cum Meeting under North Eastern Special Assistance Programme was organized on 27-28 May, 2013 at Kolkata, in which a total 13 personnel from North-Eastern Region participated.

(ii) Training Programme on New MMDR Bill, MCR, MCDR and State Legislation was conducted for NER on 12-13 September, 2013 at Shillong in which total 16 industry personnel from NER participated.

(iii) Workshop-cum-Training programme on Environmental Impact Assessment (EIA), Reclamation & Rehabilitation was conducted on 24-26 March, 2014 at Nagpur in which total 07 personnel (01 from industry, 05 from NER and 01 from IBM) participated.

10.5 Formulation of Training Policy of IBM 2013

National Mineral Policy 2008 has given thrust on capacity building of regulatory authorities and creation of new training Centres in order to have wider coverage of the mineral sector. Further, as a part of Implementation of IBM Review and Restructuring Committee nonfinancial implication recommendations, IBM training Policy, in broad conformity with the National Training Policy, has been prepared and approved by Controller General, IBM on 20.11.2013.

The broad **objectives** of IBM training Policy are:

- To develop a professional and efficient skilled manpower to cater to the needs of the mineral sector.
- To design competent curriculum framework to develop the requisite knowledge, skills and attitude
- To evolve a system of monitoring and evaluation for measuring the success of training.
- To upgrade IBM training centre as a 'centre of excellence'
- To organize trainings for IBM employees, Industry personnel, State regulatory authorities, Recognized Qualified Persons (RQP) etc

The **Training Strategy** have been defined and Training **thrust areas** have been identified for IBM personnel and prospective clientele.
Chapter XI

North Eastern Region Assistance Programme

North Eastern States have initiated programmes to search for mineral resources and to establish mineral based industries. Therefore the feasibility of the development of mineral resources needs to be studied. As per the directives of the Government 10% of the allotted plan budget of IBM is being spent for the development of North-Eastern Region/States. For closer interaction with the NE States, a Subregional office of IBM is functioning at Guwahati since April 1998.

Status of on-going Projects in NER

The then Department of Mines of Ministry of Coal & Mines vide OM No.TPPC/19/2003 dated 12.7.2004 had constituted an 'Empowered Committee' on Mineral Development in North Eastern Region (NER) with a view to facilitate the fast decision making process and to ensure time-bound action for sustainable development in NER. Terms of Reference of the Empowered Committee on Mineral Development in North Eastern Region are as follows:

- 1. To formulate policy guidelines and to take decisions for accelerating pace of development of mineral and mining sector.
- 2. To ensure flow of resources from Ministry of Development of NER, Department of Mines and agencies for various other projects/schemes related to mineral and mining sector (including upgradation of infrastructure)
- 3. To provide assistance for technological upgradation & modernisation of mineral and mining industry

- 4. To ensure capacity building for training and skill development.
- 5. To strengthen Directorates of Mines & Geology in North Eastern States.
- 6. Any other issue related to mineral and mining development

Out of the above 6 terms of references of the Empowered Committee, IBM is providing assistance to NER States under:

- a) Terms of reference number 3: To provide assistance for technological upgradation & modernisation of mineral and mining industry
- b) Terms of reference number 4: To ensure capacity building for training and skill development

11.1 The IBM will continue to look after the conservation and development of mineral resources of NE States. The report of the Committee for Review and Restructuring of the functions and Role of IBM has recommended to upgrade the Guwahati sub-Regional Office into a full fledged Regional office. This will boost the mineral developmental activities in the NE States.

11.2 IBM carried out the following activities in North Eastern States in 2013-14.

1. The Sub-Regional Office of IBM at Guwahati continued to undertake inspection of mines in North-Eastern Region. During the year 2013-14, 36 mines/areas were inspected for enforcement of provisions of MCDR, 1988 and for processing and disposal.

2. Three training programmes viz.

(i) North-East Special Assistance Workshop at Kolkata on 27-28th May 2013,

(ii) Training Programme on New MMDR Bill, MCR, MCDR and State Legislation for NER at Shillong on 12-13 Sept 2013 and

(iii) Training programme on EIA, Reclamation & Rehabilitation at Nagpur on 24-26 March, 2014 were conducted, in which 34 industry personnel/Government officials from North- Eastern Region participated.

Expenditure of Rs.61.00 Lakhs have been made for technological upgradation & modernisation of mineral and mining industry of NER States including Sikkim by imparting training and supplying equipment/instruments and IT products.

GENERAL ADMINISTRATION

The General Administration under Planning and Coordination Division deals with the establishment matters related to recruitment, budget, finance and accounts, purchase of stores, disbursement of salary and other claims and internal audit.

12.1 It is organized into the following sections: 1. Establishment(i) Gazetted and(ii) Non-Gazetted 2.Budget 3.Cash, Accounts& contingent Expenditure 4) Stores 5)General Administration 6)construction work of office & residential buildings and maintenance thereof 7) Internal Audit and 8) Vigilance

It is headed by the Chief Administrative Officer under the overall supervision of Controller of Mines (P&C).

12.2 Sanctioned vis-a vis filled Strength of IBM as on 31.3.2014

Sr. No	Group	Sanctioned strength	Filled up	Vacant
1	Group 'A'	244	156	88
2	Group 'B' (Gaz.)	177	127	50
3	Group 'B' (Non- Gaz.)	362	292	70
4	Group 'C' (Tech)	260	199	61
5	Group 'C'	434	356	78
	Total	1477	1130	347

During the year 2013-14, 09 new appointments, 19 promotions, 28 retirement cases were dealt. Number of SC/ST, OBC, Minorities and Women employees as on 31.3.2014 are given in the following table.

Group	SC	ST	OBC	Minor ities	Women
Group 'A'	21	11	14	09	09
Group 'B' (Gaz.)	12	09	08	05	14
Group 'B' (Non- Gaz.)	42	19	17	32	58
Group 'C'	131	44	69	21	62
Total	206	83	108	67	143

Vigorous efforts were continued to fill up the vacancies reserved for Scheduled Castes, Scheduled Tribes and OBCs.

Reservation of Vacancies for persons with **Disabilities**

12.3 IBM is strictly following the various instructions of the Government issued from time to time regarding reservation of vacancies for persons with physical disabilities. As on 31st March 2014, 19 physically handicapped persons were under employment in IBM of which 04 are visually handicapped, 02 are hearing handicapped and 13 are orthopedically handicapped.

12.4 Budget estimates, Revised Estimates visà-vis actual expenditure for 2013-14 are as under:

		2013-20	14
Name of the	А	pproved C	Dutlay
Programme	BE	RE	Actual Expr.
Scheme No.1. Inspection of Mines for Scientific & Systematic mining, Mineral Conservation and Mine Environment	14.79	17.93*	13.24*
Scheme No.2. Mineral Beneficciation studies- Utilization of low grade & sub- grade ores and analysis of environmental samples	6.34	5.92	5.56
Scheme No.3. Technological upgradation & Modernization.	4.01	3.89	3.79
Scheme No.4. Collection, Processing, Dissemination of Data on Mines & Minerals through various publications.	2.50	2.32	1.90

SCHEME-WISE FINANCIAL PERFORMANCE OF IBM DURING 2013-14 (Ps. in lot-bs)

Total Non-Plan	52.50	49.00	48.88
T O T A L PLAN (I B M)	49.00	35.00	25.50
NER : Capital	3.88	0.00	0.00
Outlay (NER) : Revenue	1.12	0.00	0.00
Tribal Area Sub-Plan	1.96	1.40	0.00
**New Scheme 6: Capacity building of State Govts. Development of implementation of ore accounting software.	0.85	0.14	0.14
Scheme No.5. Computerisation online Register on Mining Tenement System.	13.55	3.40	0.87

Note: * Inclusive of NER (Both Capital & Revenue) Budget ** Scheme is proposed to be shelved.

67th 'Independence Day' celebrated in Indian Bureau of Mines

12.5 The 67th Independence Day of the Republic of India was celebrated with great fervor and enthusiasm in Indian Bureau of Mines. The main function was held at IBM headquarters at Indira Bhavan, Nagpur. Shri C.S. Gundewar, Controller General, IBM, unfurled the National flag. Speaking on the occasion, Shri Gundewar expressed his concern that Indian mineral sector is passing through a difficult stage showing negative growth rate. He attributed the main reasons towards the environmental issues, illegal mining and social problems etc. He urged the officers and staff of IBM to rise to the occasion and put their best to perform the assigned task.

He appealed to all the employees to maintain good discipline and perform with dedication for effective and quality work. The function was attended by the large number of officers and staff of IBM.

65TH 'REPUBLIC DAY' CELEBRATED IN INDIAN BUREAU OF MINES

12.6 The 65th Republic Day was celebrated with great fervor and enthusiasm in Indian Bureau of Mines on 26th January 2014. The main function was held at IBM headquarters at

Indira Bhavan, Nagpur. Shri C.S. Gundewar, Controller General, IBM, unfurled the National flag.

He appealed to all the employees to maintain good discipline and perform with dedication for effective and quality work. The function was attended by the large number of officers and staff of IBM. Shri Mujeeb U. Siddiqui, Deputy Mineral Economist (Int) conducted the proceedings in an impressive manner.

IBM Foundation day "Khanij Divas" celebrated

12.7 IBM observed 1st March 2014 as "Khanij Diwas". Constituted immediately after independence of India, Indian Bureau of Mines completed 66 years of its glorious service to the nation.

The Indian Bureau of Mines (IBM) celebrated its 67th Foundation Day on 1st March, 2014. On this occasion Shri G. P. Kundargi , CMD, Manganese Ore India Ltd., was the chief guest of the function and Shri C.S. Gundewar, Ex- Controller General was the guest of honour. The function was presided over by Shri K. Thomas, Controller General In-charge, Indian Bureau of Mines.

Speaking on the occasion Shri Kundargi accredited the contribution of IBM in the development of Indian mining sector and also appreciated IBM's proactive role in the field of mining industry as advisor, facilitator. regulator and He further acknowledged IBM's significant inputs in setting up of MOIL's beneficiation plants in central India. He stated that IBM's ambitious project on Online Mining Tenement System would trigger growth of mining sector.

While delivering his technical lecture on "Sustainable Development of Mining Industry", Shri Kundargi elaborated three aspects i.e. economic, social and environmental, of sustainable development and urged for maintaining the balance in all three aspects to ensure the sustainable growth of the country. He insisted to focus a thrust on the exploration of minerals particularly manganese ore, iron ore and bauxite considering the demand and consumption of steel and aluminium. He pointed out that the major bottleneck is meager exploration activities in our country. As a solution he suggested for commitments for exploration by earmarking adequate funds for the same as mandatory part of the Mining Plans. He stated that mining is inevitable however he urged for maintaining a fine balance between the exploitation of minerals and protection of environment.

Earlier, Shri C.S. Gundewar, former Controller General of IBM, in whose regime celebration of IBM Foundation Day initiated, explained the reason behind the idea of Khanij Divas. Shri Gundewar highlighted achievements of IBM all through these 66 years of IBM's existence and also cautioned IBM officers for effective development and regulation of mining sector with proper interpretation of the act and rules.

Shri K. Thomas, Controller General, In charge, IBM and president of the function praised the employees for their contribution to the organization and he also emphasized the requirement of being self-motivated in discharging their duties in an effective way. Shri M. Sengupta, Chief Mining Geologist, IBM, in his welcome address on the occasion briefed the journey of IBM since its inception to till date.

Senior retired officers of IBM were also present on this occasion in large number. In spite of 1st March being a holiday on account of Saturday, huge gathering of officers and staff of IBM made the celebration a grand success. A melodious song dedicated to IBM was sung by Shri Ashok Patel, AMG and his group which enthralled the audience. Shri Vinay Kumar Saxena compered the programme in lucid way. The enthusiasm of the employees was gaining momentum throughout the programme and wide applause to the vote of thanks proposed by Shri Abhay

Agarwal, Technical Secretary, IBM cast the happiest note.

24th All India IBM Sports Meet, Dehradun

12.8 24th All India IBM Sports Meet, 2013-14 was held from 11 to 13 February, 2014 at Dehradun, Uttarakhand. Sporting events including Athletics, Volley Ball, Table Tennis, Badminton. Carrom. and Chess were organized at sports complex of Indira Gandhi National Forest Academy which is located adjacent to dense forest having scenic beauty of Himalaya all around. About 160 participants from all the Zonal/ Regional offices, Regional Ore Dressing Laboratories spread all over India and Head Quarters of IBM (Nagpur) took active part in the sports meet.

The meet was inaugurated on 11th February. 2014 at the hands of Dr. Alok Saxena, Additional Director, Indira Gandhi National Forest Academy. In his inaugural address he appreciated that IBM is organizing sports successfully for last 23 year and highlighted the importance of such meets to develop harmonious and cooperative relations among employees and also to induce the determination to achieve goals in the life. Shri Ranjan Sahai, Controller of Mines and Chairman, Organising Committee for 24t All India IBM Sports Meet was the Guest of Honor on this occasion.

In this sport meet various title winners were Shri Ashwini Kumar (Aimer)-Best Shri Patil-Best Sportsman, S.R. Sportsman(Veteran), Miss Poonam Suyal (Nagpur)- Best Sportswoman, Mrs. S.S.Pawar (Nagpur)- Best Sportswoman (Veteran), Shri N.M.Bhave (Nagpur)- Best Table Tennis Player and Shri D.R.Nakashe (Nagpur)- Best Carrom Player. Volleyball championship was retained by Ajmer team and Overall Championship was awarded to Nagpur (HQ) team.

The concluding function was held on 13 February, 2014 wherein prizes were distributed to the winners and runners. Shri Vinod Chamoli, Mayor, Dehradun graced the occasion as Chief Guest. The sport meet was successfully organized by untiring efforts of all officers and staff of Dehradun Regional Office and Sports committees for various events under the guidance of Organising Committee.

Redressal of Grievances & Welfare Measures

12.9 Work Done Concerning Women (Perspective Plan for Women)

Indian Bureau of Mines work on principle of equal opportunity to all and based on this, out of a total filled up strength of employees, women employees constitute about 10 percent. Training is imparted to women employees in the field of technical as well as administrative matters. Women employees are also actively participating in various cultural and extracurricular activities organized by IBM from time to time.

International Women's Day in IBM

12.9.1 Under the National Policy for Women, а two day programme to celebrate International Women's Day was organized at IBM Headquarters, Nagpur on 12th and 13th March, 2014. On 12th March 2014 a interactive lecture was arranged by Dr. Smriti Sanjay Ramteke on "Causes of Rheumatism in Woman & Remedy". Dr. Sandhya Lal, Ore Dressing Officer presided over the lecture programme. The Lecture was followed by a cultural and quiz programme. The concluding day function was organized on 13th March, 2014 which was presided over by Shri K.Thomas, Controller General in charge and Shrimat Minaz Malik, Clinical Psychologist Lata Mangeshkar Medical College Nagpur was the Chief Guest. She spoke on the "Parent-child relationship". On the occasion, employees and officers women were felicitated on superannuation. Large number of women employees attended the programme with enthusiasm.

Committee to redress complaint regarding sexual harassment of women in the workplace

12.9.2 To ensure a safe, secure and healthy environment for women at the workplace, as per directions of Hon'ble Supreme Court, a complaint committee has been constituted in IBM. Committee functions to redress the complaint made by the victims of sexual harassment at work place in a time bound manner.

Dr.(Mrs.) M.N.Gaikwad, Deputy Ore Dressing Officer, Indian Bureau of Mines has been nominated as Chairperson of the committee. Contact address of Dr.(Mrs.) M.N.Gaikwad is as given below:

Dr.(Mrs.) M.N.Gaiky	wad, Telephone Nos.
2nd Floor, 'B' Block,	0712-2565024
Indira Bhavan,	0712-2565500-
PBX	
Civil Lines,	Extn. 1224
Nagpur - 440 001.	Fax.: 0712 2562631

Measures for persons with Disabilities

12.10 IBM is strictly following the various instructions of the Government issued from time to time regarding reservation of vacancies for persons with physical disabilities. As on 31st March 2014, 19 physically handicapped persons were under employment in IBM of which 04 are visually handicapped, 02 are hearing handicapped and 13 are orthopedically handicapped.

Liaison Officer for SC/ST/OBC and PWD

12.11 Shri D.W.Beck, Mineral Economist has been nominated as Liaison Officer for SC/ST/OBC and PWD to look after the welfare measures. Contact address of **Shri D.W.Beck, Mineral Economist** Liaison Officer for SC/ST/OBC and PWD is as given below:

Shri D.W.Beck,	Telephone Nos.
3rd Floor, 'D' Block,	0712-2565471

Indira Bhavan. 0712-2565500-PBX Nagpur - 440 001.

Redressal of Public Grievances

Civil Lines,

12.12 There is a Public Grievances Cell in IBM for taking care of Grievances of services matters of employees and also public. Shri A.M.Kamble, Regional Mining Geologist, Indian Bureau of Mines, is nominated as Director of Grievances. Contact address of Shri A.M.Kamble, Director of Grievances is as follows:

Shri A.M.Kamble, Telephone Nos. 7th Floor, 'D' Block, 0712-2562143 Indira Bhavan. 0712-2565496 2560544-PBX Civil Lines. Extn. 1702 Nagpur - 440 001 Fax. 0712 2562143 E mail mmcell ibm.gov.in

At the beginning of the year, 13 grievance cases were pending. During the year 2013-14, 07 cases were received, 04 cases were disposed off. Online facility for Registration for Public Grievances has already been provided by linking IBM website with the Grievance Portal of DoPT "Central PGRAMS".

Vigilance cases

12.13 During the year 2013-14. 13 complaints were received out of which 02 were brought to their logical conclusion after investigation, 05 cases were under investigation. In addition to this, 02 cases are under investigation with Inquiry Officer, IBM and 01 case is under scrutiny with Ministry of Mines. Besides, 232 Vigilance Clearance Certificates and 205 Integrity Certificates were issued in respect of officers and staff during the period. In 01 case, Hon'ble II nd Addl. Special Judge for CBI cases, Hyderabad has pronounced the judgment on 16.08.2013 and convicted the accused officer to undergo simple imprisonment for a period of 3 years each and also to pay a fine of Rs. 20,000/each for offence U/s 7 and 13 (2) r/w 13 (1) (d) of PC act, 1988. The court has also ordered that out of the total fine amount of Rs. 40,000/-, an amount of Rs.10,000/- is to be paid to the complainant as compensation.

12.13.1 Vigilance Awareness Week was observed in the IBM HQs at Nagpur and in all the Regional Offices during 29th October 2013 to 3rd November 2013. During the Week, essay and debate competitions for vigilance awareness were organized.

Sadbhavana Divas observed in IBM.

12.14 Sadbhavana Divas (Rajeev Gandhi Birth Anniversary day) for communal harmony was observed with great fanfare at IBM Headquarters and all its offices on 20th August 2013. The observance of Sadbhavana Pakhwara commenced on 20th August 2013. In the main function held at IBM Headquarters, the programme started with garlanding of the portrait of Late Shri Rajiv Gandhi, former Prime Minister of India by Shri. C.S. Gundewar, Controller General, Indian Bureau of Mines and by Shri Ranjan Sahai, Controller of Mines. On this occasion a pledge was administered by Shri. C.S. Gundewar, Controller General and by Shri Ranian Sahai in Hindi and English respectively to all officials to maintain communal harmony. During the Pakhwara various competitions were also organised.

National Integration (Quami Ekta) Week

12.15 As per directions of Government of India, 19th November, Birthday of Late Prime Minister of India, Mrs. Indira Gandhi was observed as National Integration (Quami Ekta) day. All the employees have taken pledge of National Integration. А number of programmes were organized from 19.11.2013 to 25.11.2013 on the themes of National Integration, Minority welfare, Weaker Section, Cultural Unity, Women & defence etc.

Right to Information Act, 2005

12.16 Consequent to the enactment of the Right to Information Act, 2005, IBM has been receiving various requests under RTI Act which are timely responded to. At the beginning of the year 2013-14, 31 applications were pending and during the year, 427 applications were received. 435 applications were disposed off within the stipulated time frame and out of this, 17 applications for information were rejected. Similarly, at the beginning of the year, 5 first appeals were pending and during the year 31 first appeals were received. 33 first appeals were disposed off within the stipulated time frame and out of this, 02 were rejected.

Similarly, at the beginning of the year, 17 second appeals were pending and during the year 06 second appeals were received. 7 second appeals were disposed off within the stipulated time frame and out of this, 05 were decided in favour of the appellant where as 02 were decided in favour of the organisation.

Warm Farewell to Shri C.S. Gundewar, CG IBM

12.17 IBM Family bid worm farewell to Shri C.S. Gundewar, Controller General, IBM, on his voluntary retirement on 31st January 2014 after an illustrious & expansive service span of more than thirty seven years. A grand farewell function was organized at IBM HQ on 19th February 2014 under the chairmanship of Shri K.Thomas, Controller General in charge IBM. Leaders of various Unions, Committees and Divisional Heads of IBM shared the memories of their association with Shri Gundewar. Mrs Gundewar was also invited as guest of honour on this occasion.

A Scroll of Honour was presented to Shri Gundewar from IBM family on this occasion, highlighting the achievements of IBM under his able leadership. Some of the notable achievements during his tenure as CG, IBM include Report of the Committee for Review & Restructuring the Function & Roles of IBM; acquisition of ISO 9001-2008 certification of six Regional Offices of the Bureau; Initiation of Khanij Divas to celebrate the "Foundation Day" of IBM on 1st March every year; effectuating implementation of Mining Tenement System ; Constitution of task force for inspection of mines to curb & mitigate illegal mining: venture into online administration working methods by engendering the concept of e-IBM-thereby facilitating speedy, transparent and effective dispensation in IBM's regulatory, advisory and Technical roles; enforcing notification of threshold values of 12 Minerals and notifing mineral bearing blocks available for the grant of Exploration Licence in the offshore waters 'Administering Authority' as an for implementation of Offshore Areas Minerals (Development & Regulation) Act, 2002.

Shri K.Thomas, CG in charge on behalf of IBM family presented shwal, shrifal and memento to Mrs. & Mr. Gundewar. The function was attended by a large number of officers and staff of IBM.



Presentation of Scroll of Honour

COMPUTERISATION in IBM

13.1 Historical Background of Computerization in IBM

The history of computerization in IBM can be traced back in early seventies of the previous century. The computerization in IBM started with a small punch card system under the control of the Mineral Statistics Section of the erstwhile Mineral Economics Division. The work of this erstwhile division grew many folds and a Mineral Statistics section was upgraded to Mineral Statistics Division.

13.2 Development of MRIS Database

After this era, the better version of computers and system software was introduced into the computer centre and working on client-server architecture was commenced through the local area network (LAN). During those days IBM had National Mineral Inventory (NMI), Mining Lease (ML), Mine-cum-Production (MCP), External Trade (ET), Mineral Consumption (MC) and World Mineral Intelligence (WMI) database modules.

13.3 Establishment of TMIS Database

The MCCM module was designed and developed as per the provisions of Mineral Conservation & Development Rules, 1988. The already existing database modules of the erstwhile MRIS were modified and the new relational database management system developed under client-server was architecture. This new system was named as Technical Management Information System (TMIS). There are seven databases in TMIS database system. TECHNICAL MANAGEMENT **INFORMATION** SYSTEM (TMIS). Under TMIS project the then existing data bases were upgraded to higher version of software. These databases are:

- 1. National Mineral Inventory (NMI)
- 2. Mines-cum-Production (MCP)
- 3. Mining Leases (ML)
- 4. Mineral Consumption (MC)
- 5. External Trade (ET)
- 6. World Mineral Intelligence (WMI)
- 7. MCCM Database.



1. National Mineral Inventory (NMI) Database: It is a database of mineral deposits. It contains inventory information of 65 mineral commodities. It covers about 16000 deposits including free-hold and lease-hold areas.

2. Mining Leases (ML)Database: This is a database of mining leases and prospecting licenses. It covers information on mining leases for major minerals. The database is based on the data received from the State Directorates of Geology and Mining.

3. Mineral Consumption (MC) Database: This database contains data pertaining to consumption of mineral raw material in different industries. Data is useful for projection of future demands, formulation of industrial policy, identifying priority areas for exploration, monitoring consumption norms, R&D activities in the field of substitution, etc. Mineral consumption data is collected from about 3000 consuming plants on non-statutory basis annually. 4. World Mineral Intelligence (WMI) Database: It contains information on foreign trade. mineral production. consumption, mineral resources of various Each countries. record of WMI database includes information on commodity name, country, exports, imports, prices, production, consumption, reserves, resources, beneficiation plant, source of information. etc.

5. **Mines-cum-Production** (MCP) **Database:** This data base is maintained by MMS Division. This data base maintains the information received, in the form of monthly, annual & explosive returns from 3000 mines in pre-specified formats, under Rule 45 of the MCDR, 1988. Data received are processed for input of various publications namely, Monthly Statistics of Mineral Production (MSMP), Statistical Profiles of Minerals, Indian Mineral Industry at a Glance, Indian Minerals Year Book (IMYB) & Mine Directory.

6. External Trade (ET) Database : Data received from DGCIS Kolkata, data compiled on Indian Trade Classification based on Harmonized Commodity Description and Coding System (ITC(HS)), exports and imports for about 1300 commodities for minerals, metals and selected mineral based products. Output generation of various output for importexport in respect of minerals, metals and selected mineral based products.

7. **MCCM database** is designed & developed to administer the MCDR'88 for monitoring the Mining activities of the country through MCCM division.

The main components of MCCM database are data contained in Prospecting License, Mining Plan, MCDR Inspection. In addition data generated through MCDR Inspection and information received through Statutory Notices and also the main aspect of activity of IBM officers (individual activity) and offices (collective results) are included in MCCM database.

Under TMIS, all these databases on mines and minerals are maintained and IBM website and Web portal are regularly updated.

The new web portal of IBM is updated regularly. Further, the Centre has developed a system of entering data from Regional Office to National Server at IBM Central Head Quarter and the same has been made operational using Wide Area Network. Back-up of National database server is also being studied by IBM to make the facility available to restore the data in case of crash.

13.4 Website

A new Web Portal of IBM as per the guidelines of Government of India was designed by National Informatics Centre (NIC) and hosted on its server in July, 2010 at www.ibm.gov.in. Information regarding IBM's history, functions, organization, divisions of IBM and its activities, jurisdiction of regional & zonal offices, services offered by IBM, Mining Plans guidelines/ formats/circulars thereof, ROPs guidelines/ formats thereof. UNFC guidelines. Mining Laws. Mineral Information like mineral reserves, value, and dead rent, details of royalty reconnaissance permits, threshold values, notices & returns under MCDR, 1988, Online submission of Returns / Guidelines, IBM restructuring committee report, RFD for 2013-14. Recruitment results / advertisements, Draft Seniority List of Staff, Mining Leases distribution data, Indian Mineral Year Book 2012, Various Bulletins/ Publications, Offshore Mineral Concession Rules, Notification & Form G thereof, Tenders, RTI information, Photo gallery, etc, has been displayed on the web portal. There is also provision for online submission of Vigilance Complaints and Grievances.



Website of Indian Bureau of Mines

13.5 Computerised Online Register of Mining Tenements System A scheme on Computerized Online Register of Mining Tenements system was taken up by the IBM during the programme year 2009-10. The objective of the Scheme is to develop an online National Mineral Information System for investors by linking Central and State organizations engaged in administration of mineral resources in the country. The project comprised of GIS and Registry parts. The approved funds will be utilised for implementation of the project in mineral i.e. Andhra rich states Pradesh. Goa, Gujarat, Jharkhand, Chhattisgarh, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu. The MTS has been envisaged by the Government to automate the various processes associated with the mineral concession regime. This would not only give an impetus to the decision making process but is also expected to meet the ends of transparency and openness. It is envisaged that MTS will not only enable online filing of applications but it will also be possible to identify online the areas for various types of mineral concessions. This would involve integration of web based technology services with Geographical Information System (GIS), so that information could be shown spatially in the form of maps. IBM has been nominated by the Ministry as the Nodal Implementing Agency for the project. A detailed consultative meeting with the

States, NIC and IBM was held on 20.9.2012 to solicit their views on draft DPR submitted by the consultant and implementation issues. Accordingly provisions for IT manpower and hardware support to the States and technical manpower support to IBM were included in the DPR. Thereafter the DPR was endorsed by the Central Co-ordinationcum-Empowered Committee (CEC) and finally approved by the core committee of MTS in its meeting on 31.10.2012. M/s Ernst & Young Pvt. Ltd. has been requested to prepare Expression of Interest (EoI) and Request for Proposal (RFP) as per the above approved DPR. Subsequently IBM submitted modified draft SFC proposal to Ministry. As part of the project, MoUs with respective State Governments, who are involved in the first phase of the system, are also being signed. So far State Governments of Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh and Maharashtra have signed the MoUs. The Project will be implemented in three phases. In phase I, the registry component of Central Database will be developed covering aspect of registration, returns, revision, inspection, mining plan approval and mine closure plan approval. The state specific registry components would be developed in phase II and phase III will be devoted for GIS component. Some parts of GIS components can be taken up simultaneously along with development of Phase I and Phase II. Umbrella software will be developed for all States. The project will be implemented by adopting the cafeteria approach wherein the system is developed for pilot locations and latter other States are free to choose the software package as per their requirements. As per the individual need and strategy of each State, the services can be opted and payment can be done for the limited package opted by the State. Request for proposal (RFP) in the form of Tender Notice for selection of an implementing agency for design, development, maintenance and operations of Mining Tenement System has been issued by IBM in leading newspapers, IBM website and on the website of Central Public

Procurement Portal on 03 December, 2013. The last date for receipt of e-bids was 17 February, 2014. However, no bids were being received. Re-tendering process is being taken up.

13.6 Development of Ore Accounting Software

As recommended by Sub Group III on Infrastructure and Financing of Twelfth Five Year Plan, Working Group on Mineral Exploration and Development, IBM has undertaken a New Scheme No. 6 titled "Capacity Building of State Governments -Development & Implementation of Ore Accounting Software". The broad objectives of the new scheme are implementation of Rule 45 by developing uniform ore accounting software with interface to Railways, Ports and Customs. As suggested Planning by the Commission, IBM appointed National Institute of Smart Government (NISG), Hyderabad for preparation of Proof of Consent (PoC). As per PoC submitted, NISG has concluded that the implementation of an Ore Accounting System may not be feasible in the present structural and operational set up. Further, the Technical Evaluation and Monitoring Committee constituted in IBM for evaluating the reports submitted by NISG in its meeting dated 15.10.2013 evaluated the PoC Report and agreed with the findings of NISG. Accordingly IBM requested Ministry of Mines for shelving of the scheme.

13.7 IBM has implemented "IT Infrastructure Security Policy (version 1.0 of 2006)" with a view to implementing Information Security to safeguard information infrastructure from possible attack through Internet or corruption, compromise of data etc,

Mineral Concession Approval System (MCAS)

IBM module of MCAS developed by NIC is related to data on RP/PL/ML areas as a part of the extension of existing mineral concession approval system, which is in operation at Ministry of Mines. This module covers data pertaining to letter of intent (LOI) MP/SOM, grant of concessions and renewals by State Govt., filing returns, etc. This online mineral concession system is mainly developed for monitoring the of Mineral Concession status granted/renewed by the Ministry of Mines. This system has already gone online from 2010 and can be accessed at www.mcas.nic.in. This Module is an online database which has to be logged in with appropriate user name & pass word and data has to be entered into certain sub modules. The main IBM Module comprises:

i) Add Concession (LOI)

ii) Update concession (extension of LOI, etc.)

iii) MP/SOM/PMCP/FMCP

iv) Grant of concession/renewals (RP/PL/ML)

v) Update grant/renewal

vi) Commencement of mining operation

vii) Annual returns (RP & PL)

viii) Current status of the Mineral Concession granted/renewed

IBM report Module was also developed to see the various outputs generated by the data entry made under IBM Module under this Module:

i) MP/SOM Status

- ii) PL/RP status
- iii) LOI status reports
- iv) Status of a concession/mine

IBM has already directed all its Regional Offices that "after disposal of mining plans/ modified mining plans, the necessary entries should invariably be made in the Mineral Concession Approval System (MCAS) database before it is issued to the respective applicant". Henceforth, all mining plan details including approvals, modifications, rejections etc will be available in the portal.

Online Return Submission System:

As a result of amendment to Rule 45 of MCDR, 1988 vide notification No. 75(E), dated 9th February, 2011, it was decided to

create a portal of IBM to facilitate online registration of miners, traders, stockiest, exporters and end users of mineral and submission of monthly and annual return thereon. Accordingly, after introduction of online submission of returns system, the mine owners have commenced submission of monthly returns online. The software for submission of Online Annual Return is completed and Shri R.H. Khwaja. Secretary, Ministry of Mines inaugurated Online Submission of Form 'O' & 'N' under rule 45 of MCDR, 1988 on 28.07.2013 at IBM, Nagpur. IBM is monitoring and guiding /encouraging the mine owners and their representatives for online submission of monthly returns. All queries received regarding the problems faced by the mine owners are resolved from time to time.

Month-wise Returns Submitted Online (up to March, 2014)

	omme (up to mui	
S1	Month	No. of
No.		Monthly
		Returns
		Received
		online
1.	April,2013	1421
2.	May,2013	1390
3.	June,2013	1384
4.	July,2013	1380
5.	August,2013	1371
6.	September,2013	1359
7.	October,2013	1363
8.	November,2013	1345
9.	December,2013	1332
10.	January,2014	1314
11.	February,2014	1276
12.	March,2014	1195

हिन्दी अनुभाग

2013 -14 के दौरान भारतीय खान ब्यूरो में हिंदी कार्य की विशिष्टियां

भारत सरकार की राजभाषा नीति के कार्यान्वयन में भारतीय खान ब्यूरो सतत प्रगतिशील पथ पर अग्रणीय है । ब्यूरो का मुख्यालय ख क्षेत्र में स्थित है । क क्षेत्र में 5 कार्यालय तथा शेष कार्यालय ग क्षेत्र क में स्थित हैं। जहां तक क क्षेत्र का सवाल है वहां सभी कार्यालयों द्वारा राजभाषा विभाग द्वारा निर्धारित लक्ष्य के अनुसार पत्राचार किया गया एवं हिन्दी के प्रचार एवं प्रसार के लिए अन्य विविध कार्यक्रमों का आयोजन किया गया । ख क्षेत्र मुख्यालय में भी हिंदी से संबंधित अनेक कार्यक्रम आयोजित किए गए तथा हिंदी पत्राचार का लक्ष्य लगभग प्राप्त कर लिया गया है ।उल्लेखनीय है कि भारतीय खान ब्यूरोके क एवं ख क्षेत्र स्थित सभी कार्यालय नियम 10(4) के अंतर्गत अधिसूचित हैं । ख क्षेत्र स्थित कार्यालय में भी सरकार द्वारा निर्धारित लक्ष्य के अन्सार हिंदी में पत्राचार किया तथा अन्य हिंदी से संबंधित गतिविधियां जैसे हिंदी पखवाड़ा आदि का आयोजन किया गया । ग क्षेत्र में ब्यूरो के दो कार्यालयों को छोड़कर सभी कार्यालय नियम 10(4) के अंतर्गत अधिसूचित हैं । वर्ष 2013 -14 के दौरान हिंदी से संबंधित प्रगति का विवरण निम्नवत है ।

1. मुख्यालय में विभागीय राजभाषा कार्यानवयन समिति की बैठक दृ

दिनांक 18/4/2013 को राजभाषा कार्यान्वयन समितिकी 89वीं बैठक का आयोजन महानियंत्रक भारतीय खान ब्यूरो की अध्यक्षता में किया गया ।इस बैठक में समिति द्वारा पिछली बैठक के कार्यवाही की पुष्टि की गई साथ ही अन्य महत्वपूर्ण विषयों जैसे हिंदी प्रगति रिपोर्ट की समीक्षा हिंदी शिक्षण एवं प्रशिक्षण की स्थिति हिंदी पुस्तकों की खरीद मुख्यालय एवं क्षेत्रीय कार्यशालाओं का आयोजन आदि पर विचार विमर्श किया गया तथा अध्यक्ष महोदय द्वारा उचित निर्देश भी दिए गए । साथ ही मुख्यालय सहित सभी क्षेत्रीय कार्यालयोंमें भी राजभाषा कार्यान्वयन समिति की बैठकों का नियमित आयोजन किया जाता है ओर रिपोर्ट मुख्यालय को भेजी जाती है ।

2. मुख्यालयमें हिंदी पखवाड़े का आयोजन : श्रीसी.एस. गुंडेवार महानियंत्रक भारतीय खान ब्यूरो नागपुर के मार्गनिर्देशन में दिनांक 2/9/2013 से 13/9/2013 तक हिंदी पखवाडा का आयोजन सफलतापूर्वक किया गया।पखवाडे के दौरान हिंदी निबंध टिप्पण आलेखन हिंदी सुलेखन परिसंवाद तात्कालिक भाषण एवं हिंदी प्रश्नमंच प्रतियोगिताओं का आयोजन किया गया।श्री सी. एस. गुंडेवार महानियंत्रक महोदय एवं श्री के. थॉमस उप महानिदेशक महोदय ने दिनांक 13/09/2013 को हिंदी प्रतियोगिताओं के विजेताओं को पुरस्कारों से सम्मानित किया।

3मुख्यालय में हिंदी दिवस का आयोजन: महानियंत्रक महोदय की अध्यक्षता में दिनांक 13 सितम्बर 2013 को हिंदी दिवस समारोह का आयोजन किया गया तथा इस अवसर पर श्री एम.वी. सहस्त्रबुद्धे राजभाषा अधिकारी द्वारा माननीय गृहमंत्री श्री सुशील कुमार शिंदे का संदेश वाचन कियागया।

4 खान मंत्रालय की हिंदी सलाहकार समिति की बैठक : खान मंत्रालय की हिंदी सलाहकार समिति की बैठक का आयोजन दिनांक 18/06/2013को टिम्बर ट्रेल हाईट्स परवाणु हिमाचन प्रदेश में माननीय खान राज्य मंत्री की अध्यक्षता में किया गया । इस बैठक में सांसद सदस्यों के अलावा खान मंत्रालय के उच्च अधिकारी एवं विभिन्न विभागोंके प्रमुख भी शामिल थे । भारतीय खान ब्यूरो की ओर से माननीयमहानियंत्रक महोदयश्री सी.एस. गुंडेवार एवं उप-निदेशक(राजभाषा) श्री आर.एन. शर्मा ने इस बैठक में भाग लिया ।

माननीय खान राज्य मंत्री (स्वतंत्र प्रभार) श्री दिनशा पटेल ने अपने अध्यक्षीय संबोधन में कहा कि केन्द्र सरकार के मंत्रालयों /विभागों में राजभाषा नीति के कार्यान्वयन को बढ़ावा देने में हिंदी सलाहकार समिति अपनी महत्वपूर्ण भूमिका निभाता है । सदस्यों के व्यापक विचार-विमर्श व सुझावसे राजभाषा हिंदी के प्रयोग प्रसार को नई दिशा और गति मिलती है ।उन्होंने कहा कि खान मंत्रालय और उसके सम्बद्ध और अधीनस्थ कार्यालय राजभाषा हिंदी के प्रयोग प्रसार को बढ़ाने के लिए कृत संकल्प है ।

5) अनुवाद कार्य : वर्ष के दौरान विभिन्न महत्वपूर्ण तकनीकी एवं प्रशासनिक दस्तावेजों का हिंदी का अनुवाद किया गया । वर्ष 2013 -14 के लिए आउट कम बजट एवं खान मंत्रालय की वार्षिक रिपोर्ट जो करीब 250 पृष्ठों का था का हिंदी अनुवाद किया गया । इसके अतिरिक्त 20 पृष्ठों का पार्लियामेंट एसोरेंस का हिंदी अनुवाद किया गया । साथ ही करीब एमएसएमपी के 20 पृष्ठों इस्टीमेट कमेटी से संबंधित 40 पृष्ठों और एमएमडीआर एक्ट के 45 पृष्ठों का हिंदी अनुवाद किया गया । साथ ही करीब परामर्शदात्री समिति से संबंधित बैठक हेतुतकरीबन 23-24 पृष्ठों का हिंदी अनुवाद माह नवम्बर 2013 में किया गया । इसके अलावा मंत्रालय में परामर्शदात्री समिति के समक्ष प्रस्तत किए जाने वाले मुद्दे पावर पाइंट हिंदी मेंतैयार कर दिए गए । इसके अतिरिक्त समय समय पर खान मंत्रालय से प्राप्त विभिन्न दस्तावेजों का भी हिंदी अनुवाद कर यथा समय खान मंत्रालय को प्रेषित किया गया ।

7 नराकास नागपुर के तत्वावधान में आयोजित प्रतियोगिताओं में भारतीयखान ब्यूरो की सहभागिता : नराकास नागपुर के तत्वावधान में आयोजित विभिन्न प्रतियोगिताओं में भारतीय खान ब्यूरो के अधिकारी एवं कर्मचारीयों ने भाग लिया एवं तीन अधिकारीयों ने पुरस्कार प्राप्त किये।

8 खान नियंत्रक (उत्तर) अजमेर का संसदीय राजभाषा समिति द्वारा निरीक्षण : दिनांक 1/4/2013 को संसदीय राजभाषा समिति की आलेख एवं साक्ष्य उपसमिति द्वारा खान नियंत्रक (उत्तर) अजमेर का राजभाषा निरीक्षण किया गया । मुख्यालय की ओर से निरीक्षण में श्री आर एन शर्मा, उप-निदेशक(राजभाषा) उपस्थित थे । भारतीय खान ब्यूरो के मुख्यालय एवं इसके क्षेत्रीय कार्यालयों में हिन्दी कार्यशालाओं का आयोजन :

वर्ष के दौरान निम्नलिखित कार्यालयों में हिंदी कार्यशालाओं का आयोजन किया गया दृ

1 बंगलोर स्थित तीनों कार्यालयों में हिंदी कार्यशाला का आयोजन : बंगलोर स्थित तीनों कार्यालयों में दो दिवसीय हिंदी कार्यशाला का आयोजन दिनांक 4 एवं 5 जून 2013 को किया गया जिसमें 20 अधिकारियों/कर्मचारियों ने भाग लिया । उक्त अवधि के दौरान राजभाषा निरीक्षण भी किया गया ।

2 अयस्क प्रसाधन प्रयोगशाला हिंगणा में हिंदी कार्यशाला का आयोजन : अयस्क प्रसाधन प्रयोगशाला हिंगणा में दिनांक 9/7/2013 एवं 10/07/2013 को दो दिवसीय हिंदी कार्यशाला का आयोजन किया गया जिसमें 20 कर्मचारियों ने भाग लिया।

3 दिनांक 17 एवं 18 अक्तूबर 2013 को गुवाहाटी एवं 21 एवं 22 अक्तूबर 2013 को कोलकाता क्षेत्रीय कार्यालय में दो दिवसीय हिंदी कार्यशाला का आयोजन किया गया । जिसमें 06 अधिकारी/कर्मचारी(गुवाहाटी)तथा 14 अधिकारीएवं कर्मचारी(कोलकाता) ने भाग लिया ।

₄दिनांक 23 एवं 24 जनवरी 2014 को उदयपुर क्षेत्रीय कार्यालय में दो दिवसीय हिंदी कार्यशाला का आयोजन किया गया जिसमें 20 अधिकारी एवं कर्मचारियों ने भाग लिया ।

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* Present composition of IBM Advisory Board as per Resolution No.35/1/2011-M.III dated 3rd July, 2012.

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED (APRIL, 2013 TO MARCH, 2014)

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МО	DERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR
<u>1993</u>	Bench Scale Beneficiation studies on a Beach sand sample from Ratnagiri deposits for
F/C	the recovery of heavy minerals for M/s Taurian Iron & Steel Co. Pvt. Ltd., Mumbai
1004	(M.S.).
<u>1994</u>	Bench scale beneficiation studies on low grade chrome ore fines (feed sample No. 10
F/NC	for M/s Balasore Alloys Ltd., Kaliapani, Dist. Jajpur, Odisha (Departmental studies).
<u>1995</u>	Bench scale beneficiation studies on a low grade chromite (feed) sample of M/s. TISCO
F/NC	Sukinda, Jajpur District, Odisha (Departmental Studies).
<u>1996</u>	Bond's Rod Mill work index determination on a Graphite sample (Ball Mill Feed) from
L/NC	Shivganga, Tamilnadu (for RODL, Ajmer) (Departmental Studies).
<u>1997</u>	Bench scale beneficiation studies on a low grade chromite ore plant tails sample from
F/NC	Kaliapani Chromite mine for M/s Balasore Alloys Ltd., Odisha (Departmental studies).
<u>1998</u>	Bench scale beneficiation studies on a Silica Sand sample from Sawa village, Distt.
F/C	Chittorgarh, Rajasthan for M/s Progressive and Popular Minerals Pvt. Ltd., Chittorgarh.
<u>1999</u>	Beneficiation of Limonitic Iron Ore sample from Ajitaburu Manganese and Iron Mine
F/NC	from Ghatkuri for M/s Devkabai Velji, Distt. Singhbhum (West), Jharkhand for RCOM,
2000	IBM, Kolkata.
$\frac{2000}{EMC}$	Bench Scale Beneficiation studies on a COB plant feed sample of M/s B.C. Mohanty
F/NC	and Sons Pvt. Ltd., Cuttack, Odisha (Under Regional Mineral Development Studies).
$\frac{2001}{P(0)}$	Bench scale beneficiation studies on a Copper Core sample from Banera Copper
F/C	Project, Bhilwara Dist., Rajasthan for MECL, Nagpur.
$\frac{2002}{5012}$	Bench scale beneficiation studies on Chrome feed sample of Ostapal Mines from M/s.
F/NC	FACOR Ltd., Bhubaneswar, Odisha (Under RMGS).
$\frac{2003}{F(G)}$	Bench scale beneficiation studies on a lean ore Copper sample from Malanjkhand.,
F/C	Balaghat dist., M.P. (for M/s Hindustan Copper Limited, Malanjkhand Copper project).
<u>2004</u>	Process development studies for value addition on a reject from clay recovery plant at
F/C	Sawa village, Chittorgarh, Rajasthan for M/s Progressive & Popular Minerals Pvt. Ltd.,
2005	Khhwajabagh, Sawa, Dist. Chittorgarh, Rajasthan.
$\frac{2005}{1000}$	Bench scale beneficiation studies on Chromite Tails Sample from COB Plant, Kamarda
F/NC	Mines for M/s B.C. Mohanty and Sons Pvt. Ltd., Odisha (Departmental Studies).
<u>2006</u>	Bench scale beneficiation studies on a low grade Chromite (Feed) sample from Jindal
F/NC	Chromite mines, Sukinda , Jajpur dist., Odisha for M/s Jindal stainless Ltd. (Under
2007	
$\frac{2007}{1000}$	Bench scale beneficiation studies on a low grade Chromite (Tailing) sample from Jindal
F/NC	Chromite mines, Sukinda, Jajpur dist., Odisha for M/s Jindal stainless Ltd. (Under
2000	RMGS).
$\frac{2008}{1000}$	Beneficiation of -10 mm iron ore times sample from Khasimda iron and manganese
F/NC	mines of M/s Shriram Minerals, West Singhbhum, Jharkhand (Under RMDS studies).
<u>2009</u>	Bench scale beneficiation studies on Chrome tail sample of Ostapal mines from M/s.
F/NC	FACOR Ltd., Bhubaneswar, Odisha (Under RMGS).
<u>2010</u>	Beneficiation studies on Bauxite sample No. 4 collected from mines of
L/NC	Lohardaga/Gumla dist., Jharkhand (Under Regional Mineral Development Study).

2011	Bench Scale beneficiation studies on a COB plant feed sample (South Kaliapani
F/NC	Mines) of M/s Orissa Mining Corporation Limited., Odisha (Under Regional Mineral
	Development Study).
2012	Bench Scale beneficiation studies on a COB plant tailings sample (South Kaliapani
F/NC	Mines) of M/s Orissa Mining Corporation Limited., Odisha (Under Regional Mineral
	Development Study).
2013	Bond's Ball mill work index determination on a Silica sand sample from M/s M. J.
L/C	Minerals, Shambhupura, Chittorgarh, Rajasthan.
<u>2014</u>	Bench Scale beneficiation studies on a Chromite tailing sample from M/s Tata Steel
F/NC	Limited, Sukinda, Jajpur dist., Odisha (Under Regional Mineral Development Study).
<u>2015</u>	Bench Scale beneficiation studies on a Combined slimes of an iron ore sample from
F/NC	Kiriburu, West Singhbhum dist., Jharkhand (Under Regional Mineral Development
	Study).
<u>2016</u>	Bench Scale beneficiation studies of Non-Mag generated by MIMS of an iron ore
F/NC	sample from Kiriburu, Singhbhum dist., Jharkhand for SAIL (Under Regional Mineral
	Development Study).

	REGIONAL ORE DRESSING LABORATORY, AJMER
<u>509</u>	Bench scale beneficiation studies for de-sulfurising of iron ore concentrate of Bhilwara
F/C	mines, Rajasthan for M/s Jindal saw Ltd ., Jaipur, Rajasthan.
<u>510</u>	Bench scale flotation test of Graphite Sample from Shivganga for Tamilnadu Minerals
F/C	Ltd. Kamraj Nagar, Salai, chepauk, Chennai for M/s M/s Tamilnadu Minerals Ltd.
	Chennai.
<u>511</u>	Testing of silica sand for Work Index of M/s J.K. White Cement.
L/C	
<u>512</u>	Testing of silica sand for Denver Grindability of M/s J.K. White Cement.
L/C	
<u>513</u>	Bench scale beneficiation studies for recovery of Glass/ Refractory grade Silica sand
F/NC	from clay mine overburden siliceous material (Sample No. 1) of Lithariya mines,
	Jaitaran tehsil, Pali district, Rajasthan for COM(NZ), IBM, Ajmer, Rajasthan.
<u>514</u>	Bench scale beneficiation studies for recovery of Glass/ Refractory grade Silica sand
F/NC	from clay mine overburden siliceous material (Sample No. 2) of Lithariya mines,
	Jaitaran tehsil, Pali district, Rajasthan for COM(NZ), IBM, Ajmer, Rajasthan.
<u>515</u>	Bench scale beneficiation studies for recovery of clay by particle size refining from a
F/NC	Clayey sample (No.1) from Gurha Lignite mines of M/s V.S. Lignite Power Pvt. Ltd.,
	Rajasthan for COM (NZ), IBM, Ajmer, Rajasthan.
<u>516</u>	Beneficiation of iron ore sample from Dudwa Iron ore mines of M/s.Sakambari Maa
F/NC	Minerals (for RCOM, IBM, Ajmer)
517	Beneficiation of iron ore sample from Papara Iron ore mine. (for RCOM, Ajmer)
F/NC	
<u>518</u>	Bench scale beneficiation study on composite Rock phosphate sample from Maton,
F/C	Udaipur Rajasthan. (for M/s. Hindustan Zinc Ltd.)
<u>519</u>	Determination of Bond's work index of a high grade Rock phosphate sample from
L/C	Maton Udaipur, Rajasthan (for M/s. Hindustan Zinc Ltd.).

<u>520</u>	Determination of Bond's work index of a Medium grade Rock phosphate sample from
L/C	Maton Udaipur, Rajasthan (for M/s. Hindustan Zinc Ltd.).
<u>521</u>	Determination of Bond's Ball Mill work index of a Lead-Zinc ore sample from Zawar
L/C	Mine, District Udaipur, Rajasthan (for M/s. Hindustan Zinc Ltd., Udaipur, Rajasthan).
<u>522</u>	Bench Scale beneficiation studies on Rock phosphate sample of mines Trinity of
F/C	Guedes, Cuba for M/s Aar ess exim pvt. Ltd. Noida.
<u>523</u>	Determination of Bond Ball Mill work index of a Feldspar sample for M/s J.K. White
L/C	Cement Ltd.
524	Determination of Denver Grindability of a Feldspar sample for M/s J.K. White Cement
L/C	Ltd.
525	Determination of Pond's Poll Mill work index of a Low grade Deak phosphote sample
$\frac{323}{L/C}$	from Moton, Udoipur, Poiosthan (for M/a Hinduston Zing Ltd.)
526	Determination of Rond's rod mill work index of Crophite sample from Shivganga for
$\frac{320}{L/C}$	Tamilandu Minarala I ta Kamrai Nagar Salai ahanauk Channai for M/a Tamilandu
L/C	Minerals Ltd. Chennai
527	Particle size refining bleaching and brightness measurement of China clay sample CH
$\frac{327}{F/NC}$	1 from I K White Cement I td Kantharia-I Chittorgarh (for RCOM IBM Udainur)
528	Particle size refining bleaching and brightness measurement of China clay sample CH-
<u>526</u> E/NC	2 from I K White Cement I td Kantharia-II Chittorgarh (for RCOM IBM Udaipur)
529	Limited bench scale beneficiation studies by flotation on a high grade Rock phosphate
$\frac{327}{L/C}$	sample from Maton Udainur Raiasthan for M/s Hindustan Zinc I to Udainur
530	Limited bench scale beneficiation studies by flotation on a medium grade Rock
550	Limited bench bears bencheration bladies by notation on a meanant stade Rock
L/C	phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd
L/C	phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur.
531	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate
L/C 531 L/C	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur.
L/C 531 L/C 532	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a
L/C <u>531</u> L/C <u>532</u> L/C	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur
L/C <u>531</u> L/C <u>532</u> L/C	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan.
L/C <u>531</u> L/C <u>532</u> L/C <u>533</u>	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur
L/C <u>531</u> L/C <u>532</u> L/C <u>533</u> F/C	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation
L/C <u>531</u> L/C <u>532</u> L/C <u>533</u> F/C	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur.
L/C <u>531</u> L/C <u>532</u> L/C <u>533</u> F/C <u>534</u>	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur. Thickening and Filtration studies on a Composite Rock phosphate sample from Maton,
$ \begin{array}{r} L/C \\ \frac{531}{L/C} \\ \frac{532}{L/C} \\ \frac{533}{F/C} \\ \frac{534}{F/C} \end{array} $	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur. Thickening and Filtration studies on a Composite Rock phosphate sample from Maton, Udaipur dist., Rajasthan for M/s Hindustan Zinc Ltd. Udaipur.
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$ \begin{array}{r} L/C \\ \frac{531}{L/C} \\ \frac{532}{L/C} \\ \frac{533}{F/C} \\ \frac{533}{F/C} \\ \frac{534}{F/C} \\ \frac{535}{L/NC} \\ \frac{536}{L/NC} \\ \frac{537}{L/NC} \\ \\ \frac{537}{L/NC} \\ \end{array} $	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur. Thickening and Filtration studies on a Composite Rock phosphate sample from Maton, Udaipur dist., Rajasthan for M/s Hindustan Zinc Ltd. Udaipur. Limited beneficiation tests on China Clay sample from Basani Mine, District Nagaur, Rajasthan for Regional Controller of Mines, IBM, Ajmer. Limited beneficiation tests on China Clay sample from Indawar Mine, District Nagaur, Rajasthan for Regional Controller of Mines, IBM, Ajmer.
L/C <u>531</u> L/C <u>532</u> L/C <u>533</u> F/C <u>534</u> F/C <u>535</u> L/NC <u>536</u> L/NC <u>537</u> L/NC <u>538</u>	 phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited bench scale beneficiation studies by flotation on a low grade Rock phosphate sample from Maton, Udaipur, Rajasthan for M/s Hindustan Zinc Ltd., Udaipur. Limited scale studies for Characterization and amenability to beneficiation on a Nickeliferous Laterite sample from Barbil area, Odisha for M/s Jindal Saw Ltd., Jaipur Rajasthan. Bench scale beneficiation studies on drill core sample of Copper ore from Muradpur Copper project, Dist. Jhunjhunu, Rajasthan for M/s Mineral Exploration Corporation Ltd., Nagpur. Thickening and Filtration studies on a Composite Rock phosphate sample from Maton, Udaipur dist., Rajasthan for M/s Hindustan Zinc Ltd. Udaipur. Limited beneficiation tests on China Clay sample from Basani Mine, District Nagaur, Rajasthan for Regional Controller of Mines, IBM, Ajmer. Limited beneficiation tests on China Clay sample (rejects) from Luniyas Mine, District Nagaur, Rajasthan for Regional Controller of Mines, IBM, Ajmer. Limited beneficiation tests on China Clay sample (rejects) from Luniyas Mine, District Nagaur, Rajasthan for Regional Controller of Mines, IBM, Ajmer.
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	REGIONAL ORE DRESSING LABORATORY, BANGALORE
<u>686</u> 1F & 4L/C	Beneficiation studies on a Shinas oxide copper ore sample from Sultanate of Oman for M/s Mawarid Mining, Sultanate of Oman.
<u>687</u> F/C	Characterization and Beneficiation studies on China clay samples from Mulbagal taluk, Kolar dist.,Karnataka state (Collaborative Project with Department of Mines and Geology, Karnataka State).
<u>688</u> F/C	Bench scale beneficiation studies on a silica sand sample from Halol, GIDC, Panchmahal District, Gujarat (For M/s. HNG Float Glass Ltd., Gujarat).
<u>689</u> F/C	Recovery of Silica Sand from Clay Sample from Raibazar, Rajmahal Mines, Sahibganj District, Jharkhand (for Hindustan National Glass & Industries Ltd., Kolkata).
<u>690</u> F/C	Beneficiation studies on an Iron Sand Sample from Rairangpur, Mayurbhanch District, Odisha for M/s Thriveni Earth Movers Private Limited, Odisha.
<u>691</u> F/C	Bench scale beneficiation studies on a low grade iron ore sample from Sitaramapuram mines, Sitaramapuram village, Betamcherlla (M), Kurnool dt., Andhra pradesh for M/s. Lakshmi Gayathri Industries Pvt. Ltd., A.P.
<u>692</u> L/C	Limited size analysis studies on a Rock sample from Thorapalli Site, Hosur for M/s Thriveni Earth Movers Pvt Ltd., Hosur.
<u>693</u> L/C	Determination Of Bond's Ball Mill Work Index on a low grade iron ore sample from Sitaramapuram Mines, Sitaramapuram Village, Betamcherlla (M), Kurnool Dt., Andhra Pradesh for M/s. Lakshmi Gayathri Industries Pvt. Ltd.
<u>694</u> F/NC	Beneficiation Studies on an Iron Ore Sample (Banded Hematite Quartzite) from Subbarayana Halli Mines, Sandur, Bellary District, Karnataka of M/s Mysore Minerals Ltd, Bangalore for Regional Controller of Mines, Bangalore.
<u>695</u> F &2L/C	Beneficiation studies and work index & grindability determination on a Chromite sample from Tagadur mines, Hassan disrict, Karnataka for M/s Mysore Minerals Pvt. Ltd., Bengaluru.
<u>696</u> 2L/C	Determination of Denver Grindability of sample from M/s S S Minerals, Chennai and M/s Riverways Mines & Minerals Ltd., Chennai.
<u>697</u> 1L/C	Limited wet size analysis of fly ash sample from Sponge iron plant at Kallambella village for M/s Sanvik steel Pvt. Ltd, Sira, Tumkur, Karnataka.
<u>698</u> F/C	Beneficiation studies on an Iron ore sample from Peru, South America for M/s Upakar Mining Pvt. Ltd., Bangalore.
<u>699</u> L/C	Determination of Bond's work index on a Pond's Fly Ash sample from Hyderabad Industries Limited, Chennai.
<u>700</u> L/C	Limited crushing and dry screening of Quartz sample from Nikshepa Industrial Minerals, Yelahanka New Town, Bangalore, Karnataka.
<u>701</u> F/C	Beneficiation studies on a Garnet sample from Togo, Africa for V S R Trading Limited, Hyderabad.
702 L/C	Limited Devis Tube testing of Sea sand sample from Losomos, Chilie for M/s Shiva Analyticals (India) Ltd., Hoskote, Bangalore.
<u>703</u> F/NC	Bench scale beneficiation studies on a Lime Kankar sample from Kalladevanahall Limekankar mine of M/s Khasagateswara Mineral Industry, Gulbarga dist. for Regional Controller of Mines, Bangalore.

704	Limited test on a Sand (Preconcentrated) sample from Jharkhand for M/s Sri Asia
L/C	Metal Corporation, Bangalore.
705	Bench scale beneficiation studies on Fly ash sample from Sponge iron plant of M/s
F/C	Sunvik Steel Pvt. Ltd., Kallambella village, Sira, Tumkur dist., , Karnataka.

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED FOR RCOM'S

MODE	MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR			
<u>1999</u>	Beneficiation of Limonitic Iron Ore sample from Ajitaburu Manganese and Iron Mine			
F/NC	from Ghatkuri for M/s Devkabai Velji, Distt. Singhbhum (West), Jharkhand for RCOM,			
	IBM, Kolkata.			
REGIO	NAL ORE DRESSING LABORATORY , AJMER			
<u>513</u>	Bench scale beneficiation studies for recovery of Glass/ Refractory grade Silica sand			
F/NC	from clay mine overburden siliceous material (Sample No. 1) of Lithariya mines, Jaitaran			
	tehsil, Pali district, Rajasthan for COM(NZ), IBM, Ajmer, Rajasthan.			
<u>514</u>	Bench scale beneficiation studies for recovery of Glass/ Refractory grade Silica sand			
F/NC	from clay mine overburden siliceous material (Sample No. 2) of Lithariya mines, Jaitaran			
	tehsil, Pali district, Rajasthan for COM(NZ), IBM, Ajmer, Rajasthan.			
<u>515</u>	Bench scale beneficiation studies for recovery of clay by particle size refining from a			
F/NC	Clayey sample (No.1) from Gurha Lignite mines of M/s V.S. Lignite Power Pvt. Ltd.,			
	Rajasthan for COM (NZ), IBM, Ajmer, Rajasthan.			
<u>516</u>	Beneficiation of iron ore sample from Dudwa Iron ore mines of M/s.Sakambari Maa			
F/NC	Minerals (for RCOM, IBM, Ajmer)			
517	Beneficiation of iron ore sample from Papara Iron ore mine. (for RCOM, IBM, Ajmer)			
F/NC				
<u>527</u>	Particle size refining, bleaching and brightness measurement of China clay sample CH-1			
F/NC	from J.K.White Cement Ltd., Kantharia-I, Chittorgarh (for RCOM, IBM, Udaipur).			
<u>528</u>	Particle size refining, bleaching and brightness measurement of China clay sample CH-2			
F/NC	from J.K.White Cement Ltd., Kantharia-II, Chittorgarh (for RCOM, IBM, Udaipur).			
<u>535</u>	Limited beneficiation tests on China Clay sample from Basani Mine, District Nagaur,			
L/NC	Rajasthan for Regional Controller of Mines, IBM, Ajmer.			
536	Limited beneficiation tests on China Clay sample from Indawar Mine, District Nagaur,			
L/NC	Rajasthan for Regional Controller of Mines, IBM, Ajmer.			
527	Limited hanaficiation tests on China Clay sample (rejects) from Lunivas Mina District			
$\frac{337}{1/NC}$	Nagaur Daiasthan for Dagional Controllar of Mines IBM Aimer			
L/INC	Nagaui, Kajasulan for Kegional Controller of Milles, IDM, Ajmer.			
REGIO	NAL ORE DRESSING LABORATORY , BANGALORE			
<u>694</u>	Beneficiation Studies on an Iron Ore Sample (Banded Hematite Quartzite) from			
F/NC	Subbarayana Halli Mines, Sandur, Bellary District, Karnataka of M/s Mysore Minerals			
	Ltd, Bangalore for Regional Controller of Mines, Bangalore.			
<u>703</u>	Bench scale beneficiation studies on a Lime Kankar sample from Kalladevanahall			
F/NC	Limekankar mine of M/s Khasagateswara Mineral Industry, Gulbarga dist. for Regional			
	Controller of Mines, Bangalore.			

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED (DEPARTMENTAL STUDIES)

MODE	MODERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR		
<u>1994</u>	Bench scale beneficiation studies on low grade chrome ore fines (feed sample No. 10		
F/NC	for M/s Balasore Alloys Ltd., Kaliapani, Dist. Jajpur, Odisha (Departmental studies).		
<u>1995</u>	Bench scale beneficiation studies on a low grade chromite (feed) sample of M/s. TISCO		
F/NC	Sukinda, Jajpur District, Odisha (Departmental Studies).		
<u>1996</u>	Bond's Rod Mill work index determination on a Graphite sample (Ball Mill Feed) from		
L/NC	Shivganga, Tamilnadu (for RODL, Ajmer) (Departmental Studies).		
<u>1997</u>	Bench scale beneficiation studies on a low grade chromite ore plant tails sample from		
F/NC	Kaliapani Chromite mine for M/s Balasore Alloys Ltd., Odisha (Departmental studies).		
<u>2005</u>	Bench scale beneficiation studies on Chromite Tails Sample from COB Plant, Kamarda		
F/NC	Mines for M/s B.C. Mohanty and Sons Pvt. Ltd., Odisha (Departmental Studies).		

LIST OF ORE DRESSING INVESTIGATIONS COMPLETED UNDER RMDS/ RMGS

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MO	DDERN MINERAL PROCESSING LABORATORY & PILOT PLANT, NAGPUR
2000	Bench Scale Beneficiation studies on a COB plant feed sample of M/s B.C. Mohanty and
F/NC	Sons Pvt. Ltd., Cuttack, Odisha (Under Regional Mineral Development Studies).
2002	Bench scale beneficiation studies on Chrome feed sample of Ostapal Mines from M/s.
F/NC	FACOR Ltd., Bhubaneswar, Odisha (Under RMGS).
2006	Bench scale beneficiation studies on a low grade Chromite (Feed) sample from Jindal
F/NC	Chromite mines, Sukinda, Jajpur dist., Odisha for M/s Jindal stainless Ltd. (Under
	RMGS).
2007	Bench scale beneficiation studies on a low grade Chromite (Tailing) sample from Jindal
F/NC	Chromite mines, Sukinda, Jajpur dist., Odisha for M/s Jindal stainless Ltd. (Under
	RMGS).
<u>2008</u>	Beneficiation of -10 mm iron ore fines sample from Khasimda iron and manganese mines
F/NC	of M/s Shriram Minerals, West Singhbhum, Jharkhand (Under RMDS studies).
2009	Bench scale beneficiation studies on Chrome tail sample of Ostapal mines from M/s.
F/NC	FACOR Ltd., Bhubaneswar, Odisha (Under RMGS).
<u>2010</u>	Beneficiation studies on Bauxite sample No. 4 collected from mines of Lohardaga/Gumla
L/NC	dist., Jharkhand (Under Regional Mineral Development Study).
2011	Bench Scale beneficiation studies on a COB plant feed sample (South Kaliapani Mines)
F/NC	of M/s Orissa Mining Corporation Limited., Odisha (Under Regional Mineral
	Development Study).
<u>2012</u>	Bench Scale beneficiation studies on a COB plant tailings sample (South Kaliapani
F/NC	Mines) of M/s Orissa Mining Corporation Limited., Odisha (Under Regional Mineral
	Development Study).
<u>2014</u>	Bench Scale beneficiation studies on a Chromite tailing sample from M/s Tata Steel
F/NC	Limited, Sukinda, Jajpur dist., Odisha (Under Regional Mineral Development Study).
<u>2015</u>	Bench Scale beneficiation studies on a Combined slimes of an iron ore sample from
F/NC	Kiriburu, West Singhbhum dist., Jharkhand (Under RMGS).
<u>2016</u>	Bench Scale beneficiation studies of Non-Mag generated by MIMS of an iron ore sample
F/NC	from Kiriburu, Singhbhum dist., Jharkhand for SAIL (Under RMDS).

Annexure III

Foreign	Deputation	during	2013-14
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S.	Name	Place of visit	Date	Purpose
1	Shri Saji George, Director (Stat.)	Moscow, Russia	17-18 September, 2013.	To attend Second Meeting of the Steering Committee of the Ulaanbaatar City Group on Statistics for Economics based on Natural Resources
2	Shri J. R. Chaudhary, Regional Controller of Mines	Cape Town, South Africa	03 to 06 February, 2014	As a member of the Indian Delegation led by Shri Arun Kumar, Joint Secretary (Mines) to participate in International Conference & Expo – 'MINING INDABA 2014'.
3	Shri B. Ram Mohan, Regional Controller of Mines	Toronto Canada	02 to 08 March, 2014	As a member of the Indian Delegation led by Shri R. Sridharan, Additional Secretary (Mines) to participate in PDAC 2014 Convention & Trade Show as well as to attend Joint Working Group meeting (India & Ontario Province) besides visit to a Gold mine and Geosciences Laboratory at Ontario, Canada.

Participation in Seminars/Symposia/Workshops etc.

during the Year 2013-14

- (i) The Federation of Indian Mineral Industries (FIMI) organized 'Sustainable Mining Summit at Goa on 22-23 April, 2013. The summit was aimed to deliberate on various legislations governing mining industry and to asses their effectiveness and need to challenge regulatory scenario. S/Shri S. Tiu, RCOM and Y. G. Kale, RCOM & TS participated in the summit as delegates from IBM and also participated as panelist. Shri Kale presented a paper titled "Important Provisions in MCDR, 1988 in respect of Mining Operations and Mine Environment & Protection thereof" jointly authored by him with me. The summit provided an opportunity drawing together thought leaders, top Government & Industry experts in the field of mining, environment, social aspects, etc.
- Shri A. B. Panigrahi, RCOM attended National Seminar on "Sustainable & Responsible Mining – The Only Way Forward" organized by the Indian School of Mines Alumni Association on 19 -20 April, 2013 at Kolkata.
- (iii) S/Shri M. Sengupta, CMG and A. D. Gupta, AMG attended 18th Convention of Indian Geological Congress and International Symposium on "Minerals & Mining in India – The Way Forward, Inclusive of Co-operative Mineral based Industries in SAARC Countries" organized by The Madhya Pradesh Council of Science & Technology, Bhopal during 27-29 April, 2013 at Bhopal.
- (iv) S/Shri A. B. Panigrahi, RCOM and M. Biswas, RCOM attended Workshop on "Clean Mining Technologies : Extraction, Beneficiation & Use – MineTECH'13" organised by the Indian Mining & Engineering Journal during 03-04 May, 2013 at Bubaneswar.
- (v) Vidarbha Productivity Council, Nagpur organised a two day workshop on 'Reservation Policy for Scheduled Castes/Scheduled Tribes & Other Backward Classes in Central Government, Central Public Sectors, State Government, State Public Sectors, Banks, Insurance & Autonomous Bodies' at Nagpur during 02-03 August, 2013. Shri G. S. Bihari, RMG & Liaison Officer for SC&ST attended the workshop as delegate from IBM.
- (vi) Federation of Indian Mineral Industries organised Mining Exploration Convention & Trade Show (Mining Mazma) during 19-21 September, 2013 at Bengaluru. Shri C.S.Gundewar, Controller General along with S/Shri R. K. Sinha, COM, B. Ram Mohan, RCOM, T. K. Rath, RCOM and Y. G. Kale RCOM & TS participated in the convention which was inaugurated by the Secretary (Mines). Shri Gundewar also chaired the First Technical Session of the Convention. Shri Y. G. Kale presented a paper on 'Policy Issues & Initiatives in Indian Non-Coal Mineral Sector' prepared in joint authorship of me and Shri Kale. IBM also put up a stall showcasing functions & activities as well displaying important publications of IBM.
- (vii) Indian Chamber of Commerce organised Second India Minerals & Metals Forum on 25 September, 2013 at New Delhi. Shri D. D. Bhardwaj, ACOM attended the same as delegate from IBM.

- (viii) At the insistence of Ministry of Mines, the Federation of Indian Mineral Industries organised a National Conference on 'Suastainable Mining and United Nations Framework Classification (UNFC) - Challenges & Opportunities in India during 29-30 October, 2013 at New Delhi. The conference was attended by S/Shri C.S.Gundewar, Controller General, Ranjan Sahai, COM, R. K. Sinha, COM, M. Sengupta, CMG, (Dr.) S. S. Bhake, CME, S. Tiu, RCOM, A. B. Panigrahi, RCOM, M. Bisws, RCOM, T. K. Rath, RCOM, J. R. Chaudhary, RCOM, P. N. Sharma, RCOM, Pankaj Kulshreshta, RCOM, Rajanish Purohit, RCOM, Y. G. Kale, RCOM & TS, B. Ram Mohan, RCOM, S. K. Adhikari, Sg.MG, R. N. Selven, Sg.MG, P. P. Chakravarty, DCOM, G. C. Meena, DCOM, Abhay Agrawal, DCOM, V. K. Misar, SMG, Parag Tadlimbkar, SMG, J. N. Patel DME and (Dr.) R. N. Meshram, Consultant. S/Shri Y.G. Kale and S. K. Adhikari made introductory remarks before one of the Technical Sessions on 30.10.2013. The technical papers presented during the conference from IBM included (i) Overview of Granting the Mining Tenement System in India – prepared in joint authorship of S/Shri Ranjan Sahai, V. K. Misar and A. Banerjee of M/s Ernst & Young (ii) Mapping of UNFC-1997 to UNFC-2009 - Indian Perspective prepared in joint authorship of /Shri M. Sengupta, S. K. Adhikari and (Dr.) V. G. K. Bhagwan Gumma, SMG (iii) Indian National Classification System its Evolution & Mapping with UNFC-1997/2004 prepared in joint authorship of S/Shri (Dr.) S. S. Bhake, J. N. Patel and (Dr.) R. N. Meshram and (iv) Sustainable Development Framework (SDE) for the Indian Mining Industry prepared in joint authorship of S/Shri P. N. Sharma and U. L. Gupta, JMG.
- (ix) Shri Junaid Farooqui, D (S) attended the National Workshop on Climate Change Statistics by MOSPI during 24-25 October, 2013 at Jadavpur University, Kolkata.
- (x) Mining Engineers Association of India and South African Institute of Mining & Metallurgy jointly organised IX International Heavy Minerals Conference-2013 at Visakhapatnam during 27-29 November, 2013. Dr. V.G.K. Bhagwan Gumma, SMG participated in the conference as delegate from IBM and presented a technical paper titled 'Fly Ash-An Alternate Source for Heavy Minerals with Special Reference to Sillimanite & Zircon' prepared by him.
- (xi) Dr. P.K. Jain, Sg.MG, attended Conference on 'Limestone & Cement Industry Opportunity & Challenges' organised by the Federation of Indian Mineral Industries on 25-26 November, 2013 at Raipur and presented a paper on "An Overview of Limestone & Other Calcareous Minerals".
- (xii) S/Shri M. Sengupta, CMG, M. K. Somani, SMG and A. D. Selokar, AME(I) attended International Seminar on 'Developments in Mineral Exploration Techniques – Strategy & Challenges' organised by the Society of Geoscientists & Allied Technologists at Bhubaneswar on 14-15 December, 2013.
- (xiii) S/Shri M. G. Bhattacharya, JMG and Gaurav Sharma, AME(I) attended a summit on 'Manganese/Chrome Ores Ferro Alloys' organised by the Federation of Indian Mineral Industries Ltd. in association with MOIL on 16-17 December, 2013 at Kolkata. Shri Gaurav Sharma presented a paper on "Chromite a Strategic Mineral – Demand & Supply Scenario in Context to Indian Chromite Industry" authored by him jointly with Dr. R.N. Meshram, Consultant and Shri Prabhat Sharma, DME.
- (xiv) Shri B. Ram Mohan, RCOM participated in the Conference on 'Mining in Karnataka' organised by the Associated Chambers of Commerce & Industry of India (ASSOCHAM) at Bengaluru on 22 January, 2014 and made a presentation on "Mines & Minerals (Development & Regulation) Bill 2011".

- (xv) S/Shri P. N. Sharma, RCOM, Rajanish Purohit, RCOM, Pankaj Kulshrestha, RCOM and Y. G. Kale, RCOM attended 2nd International Conference on 'Advanced Technology in Exploration & Exploitation of Minerals' organised by the Mining Engineers Association of India at Jodhpur on 10-11 January, 2014.
- (xvi) Shri P. N. Sharma, RCOM attended Workshop on 'Mine Cost Estimation' organised by the Earth Resource Technology Consultant at Jodhpur on 12 January, 2014.
- (xvii) Dr. P.K. Jain, Sg.MG attended an International Conference on 'Innovative Surface & Underground Mining Technology for Performance Enhancement' organised by the Journal of Mines, Metal & Fuels at Kolkata on 16-18 January, 2014 and presented a paper titled "Mineral Exploration, Present Sattus & Future Outlook in India".
- (xviii) Dr. V.G.K. Bhagavan Gumma, SMG attended a Workshop on 'Mining Reclamation in Maharashtra' organised by the National Afforestation & Eco-Development Board at Nagpur on 07-08 January, 2014 and presented a paper on "Reclamation & Rehabilitation of Mined out Areas – Statues & Best Practices".
- (xix) S/Shri Manish Mendiratta, DCOM, V.K. Misar, SMG, Khalillulah, SMG, (Dr.) Omkesha Murthy, SMG and Rajiv Ranjan, ACOM participated in the 'Symposium of Mining' organised by Geospatial Media Communications Pvt. Ltd. during 05-07 February, 2014 at Hyderabad.
- (xx) Dr. Maya N. Gaikwad, DODO attended International Conference on 'Global Opportunities for Latest Developments in Chemistry and Technology (GOLD-CT-2014)' organised by School of Chemical Sciences, North Maharashtra University during 06-08 February, 2014 at Jalgaon (Maharashtra). Dr. Gaikwad presented a paper prepared by her in the conference titled "Role of Chemical Reagents in Mineral Processing Technology."
- (xxi) S/Shri A. B. Panigrahi, RCOM, Y.G. Kale, RCOM and S. K. Adhikari, Sg.MG attended 'Fifth Asian Mining Congress' organised by the Mining, Geological and Metallurgical Institute of India (MGMI) during 13-15 February, 2014 at Kolkata. Shri Y.G. Kale presented a paper titled "Present Scenario of Mineral Industry in India with Special Reference to Non-Coal Minerals & Future Prospects for Growth" prepared by him in joint authorship of Shri C. S. Gundewar, CGIBM (Retd.).
- (xxii) Shri R. K. Sinha, COM attended (i) Seminar organised by the National Institute of Rock Mechanics (NIRM) on 'Innovative Practices in Rock Mechanics' during 06-07 February, 2014 at Bengaluru and (ii) International Workshop on the 'Best Practices for Mainstreaming Biodiversity Conservation in Mining Sector' during 19-20 March, 2014 at New Delhi organised by the International Unit for Conservation of Nature (IUCN).
- (xxiii) Shri Dayanand Upadhyay, ACOM attended National Conference on 'Advances in Explosive & Propellants' organised by Visvesvarayya National Institute of Technology on 22 March, 2014 at Nagpur.
- (xxiv) S/Shri Kewal Kishan, SMG and Ashish Mishra, ACOM attended State Level Workshop on 'Water Conservation in Hard Rock Areas' organised by Central Ground Water Board on 04 March, 2014 at Nagpur.

* * *

STATUS OF IMPLEMENTATIONS OF NON-FINANCIAL RECOMMENDATIONS OF THE IBM REVIEW &
RESTRUCTURING

S.	Recommendation	Status	Remarks
1	The IBM would evolve as a consultant for creation and improvement of State level regulatory mechanisms and to assure suitable support structures to the State Governments.	Action initiated for implementation.	It is an ongoing process.
2	To develop the micro level systems; process and guidelines in respect various statutory tools for effective administration of the mining sector To develop the monitoring systems and checks to ensure that the regulatory authority at the level of first tier (State Government) is working smoothly and to ascertain the efficacy of the systems.		
3	In each mineral rich State, a "Regional Co-ordination Committee" having interface between various regulatory authorities at state level shall be formed in all Regional Offices of Indian Bureau of Mines. Meetings of the "State Co-ordination Committees" may be held once in six months at Regional level and once in a year at IBM HQ level.		
4	Based on the internal analysis and interpretations, the IBM should coordinate with the State Governments on effective actions to be taken by the State Governments to curb illegal mining	Action initiated for implementation.	It is a continuous process.
5	To prepare detailed guidelines on various compliance issues such as preparations of statutory documents; filling up of various forms and notices, and working of the monitoring tools for field level officers to ensure achievement of the objectives of the systematic, scientific and sustainable mining operations.	 IBM prepared following guidelines: 1. UNFC guidelines 2. Guidelines for self-appraisal by Lessees/ Mine owners to ensure the extent of implementation of Mining Plan/ Scheme of Mining 3. Set of guidelines for online registration and submission of monthly and annual return as per the amended Rule 45 of MCDR 1988. 4. Do's and Don'ts for online registration with IBM 5. Guidelines and instructions to 	Action initiated for Implement ation. It is a continuous process.

6	A system of an internal audit of the tasks performed by the Regional Office at the level of Zonal level should be introduced. The Divisional office, based on the performance of the Regional office and audit report of the Zonal office would rate the performance of both Zonal as well as the Regional offices.	Regional offices for effective regulation and administration of MCDR 1988 and to RQPs and Mine owners for preparation of statutory documents; filling up of various forms and notices. 6. Final draft manual on appraisal of Mining Plan 2013 (uploaded on website for stakeholders' comments if any). Implemented and ongoing activity. During the year 2013-14, 125 internal audit inspections were completed by Zonal Heads.	It is considered as one of annual programm e of IBM.
7	The Mining Geologists should be involved in (a) Monitoring of Reconnaissance/Prospecting/Large Area Prospecting Licenses (b) Compliance with UNFC (c) Examination of Geological aspects of Mining Plan/ Scheme of Mining (d) Implementations of Threshold values of (e) Regional Mineral Development Study (RMDS) (f) Updating National Mineral Inventory and (g) Preparations of Mineral Maps. The Regional Mineral Development Study (RMDS) of multi-disciplinary approach should be revived in view of sustainable development concerns. The scope of the study needs to be properly enlarged to cover the standards, procedures and practical guidance for Sustainable Development of Mineral Resources	Implementedandongoingactivity.IBMGeologistshavebeenassignedMonitoringofReconnaissancePermit/Prospecting Licenses, Examinationof Mining Plan/ Scheme of Miningto ensure the compliance of UNFCand implementation of thresholdvaluesthrough site inspections,Updationof National MineralInventory,Regional MineralDevelopmentstudies(multi-disciplinary).	It is considered as one of the annual program - me of IBM.
8	Development of Mineral Resources. Inspections in respect of mechanized and underground mines should be carried out by a team of Mining Engineers, Geologists and OD officers. The thrust of the inspections should be to ascertain the efforts put in by a miner to adopt processes for mechanization, automation and computerization.	Implementedandongoingactivity.Multi-disciplinary inspections by ateam of mining engineers, mininggeologistsandOreDressingOfficershavebeenstartedAnnual Action plan 2013-14	It is considered as one of annual programm e of IBM.
9	Till the State Government's capacities	Action has been initiated for	Hence, the

	develop, IBM would continue to	implementation; however,	implementa
	undertake inspections of all mines.	difficulties are occurring in field	tion of this
	IBM should carry out:	level implementation.	recommend
	(1) In case of mechanized mines		ation may
	IBM would conduct		be
	(ii) in spectrons annually,		considered
	(ii) in case of mines with area more		as financial
	than 50 nectares, IBM would		mplicated
	(iii) in case of all other mines the		ation
	annual inspections would be		ation
	conducted in at least 40%		
	mines preferably on rotational		
	basis. The mines less than of 50		
	Ha would submit report on		
	compliance of rules to IBM on		
	prescriptive points, based on		
	which and depending on the		
	impact, IBM would carry out		
	inspections.		
	(iv) mines where violations are		
	observed should be inspected		
	compliance with rules		
10	To improve the quality of mining plan	Under process for	
10	the procedure for grant of recognitions	implementation.	
	to qualified persons (ROPs) to prepare	P	
	mining plans should be revisited.		
11	The outline and guidelines of mining	Draft IBM outline and guidelines	Under
	plan should be more objective and	of mining plan have been prepared	process for
	should cover the latest techno-	after detailed deliberations in the	implement
	economic parameters for various	stakenoider meetings and	ation.
	format of Mining Plan and Scheme of	of mining plan have been uploaded	
	Mining keeping in view the new	on website for stakeholders'	
	provisions of Mines & Minerals	comments if any	
	(Development & Regulation) Bill 2011		
	and the Framework of Sustainable		
	Development. IBM should identify the		
	mandatory items, factual items and		
	advisory items in a mining plan.		
12	The Regional Controller of Mines	Implemented.	It is
	should be empowered in all regulatory	Circular has been issued to	continuous
	activities and therefore, the Mining	regional neads on 20.11.2013	ongoing
	Closure Plans in respect of all	Controller of Mines to approve all	process
	categories of mines shall be dealt with	mining plans irrespective of	110 ₩•
	by the Regional office. Recommended	category of Mine.	
	time limit should be adhered to for	However for adhering to the time	
	processing of mining plan.	limit, additional human resources	
		are necessary as the flow of	

13	Closing down the Nellore sub-	mining plans/ schemes of mining are heavy in the regional offices. Therefore, this should be linked with the financial implications. Action initiated by seeking options	Under
	Regional office and transferring its activities into Hyderabad Regional Office.	from the existing officers and staff posted at Nellore.	process for implement ation.
14	To carry out regular inspection of operating plants to assess plant efficiency and loss of values in fines or tailing and suggest corrective measures to improve the performance of the plants. To examine for amendments in the statute for inspection of mineral beneficiation plants located outside mining lease areas.	Implemented. Ore Dressing officers are carrying out in plant Studies to suggest the corrective measures to improve the performance of the plants. This process will be continued after strengthening of Ore Dressing Division with required manpower. Hence this recommendation may be considered as linked with financially implicated recommendations.	Difficulties occurred in implement ation due to acute shortage of manpower in OD Division.
15	To enhance the consultancy charges by IBM to have level field amongst private and Government sectors.	IBM has notified revised Consultancy charges w. e. f. 01.03.2013. The same were uploaded in the IBM Website.	Implement ed.
16	To attract investments into mining sector in India, IBM should make available all its publications on the web portal for downloading free of cost to registered users. To display on its website, links to important publications by other agencies in the mineral sector, i.e. GSI, State Directorate of Mining and Geology, and Industry Associations.	IBM is hosting all its publications on its official web site at <u>www.ibm.nic.in</u> at free of cost to all public.	Implement ed. It is continuous ongoing process now.
17	To institutionalise National Awards in various fields for the mining industry in the field of Mineral Conservation/Environmental Protection/ Corporate Social Responsibility/ Mine Closure etc.	To prepare guidelines and modalities a committee has been constituted on 20.05.2013. The committee has prepared the draft guidelines and modalities and formats for proposed National Awards. However, as the budgetary & manpower provisions are necessary for instituting the awards, this recommendation may be considered as financial implication recommendation.	Under process for implement ation.
18	To develop a team to participate in various international events for display and dissemination of knowledge and capability of the organization.	So far, IC cell of Ministry of Mines decides the international participation.	Under process for implement ation

19	To develop a comprehensive web- enabled portal so that on-line submission of information and returns is made possible for facilitating faster processing and dissemination of information. The Regional offices should be the single authority where data should be filed and need to be designated as the concerned authority to ensure collection and maintenance of data.	Online registration of mine owners, stockiest, traders and end users etc., submission of monthly and annual returns are made operational from IBM website. Proposed IT Cell can handle the full-fledged implementation with the input of its IT based knowledge. Hence, it can be considered as an interlinked financial implicated recommendation.	Action initiated for implement ation
20	The frequency of updation of mineral inventory needs to be condensed. IBM should equip with necessary logistics in the form of structural changes, hardware and software for handling huge inventory database and for online and continuous updation of mineral inventory.	The frequency of updation of mineral inventory has been condensed. IBM has taken up 12 minerals for intermediate updation as on 01.04.2013 during the year 2013-14.	Action initiated for implement ation.
21	Adoption of New Charter of functions as suggested in the report.	Draft notification sent to Ministry of Mines vide letter No. T- 42009/2/IBM Strength/ CGBM/AR/2012 dated 14.11.2012 for approval and To be published in Part-I, Section-1 of the Gazette of India Extraordinary.	Under approval of Ministry
22	Renaming of Mines Control & Conservation of Minerals (MCCM) Division as "Minerals Development & Regulation Division".	Draft notification sent to Ministry of Mines vide letter No. T- 42009/2/IBM Strength/ CGBM/AR/2012 dated 14.11.2012 for approval and To be published in Part-I, Section-1 of the Gazette of India Extraordinary.	Under approval of Ministry
23	Ore Dressing Division may be renamed as "Mineral Processing Division"	Draft notification sent to Ministry of Mines vide letter No. T- 42009/2/IBM Strength/ CGBM/AR/2012 dated 14.11.2012 for approval and To be published in Part-I, Section-1 of the Gazette of India Extraordinary.	Under approval of Ministry
24	A National level "Mineral Processing Governing Council" headed by the Secretary (Mines) and Director (Ore Dressing) as Member Convener and involving various stake holders may be constituted. This council would explain the progress achieved and make plans for the next year. Statutory provisions may be made to	Draft notification sent to Ministry of Mines vide letter No. T- 42009/2/IBM Strength/ CGBM/AR/2012 dated 14.11.2012 for approval and To be published in Part-I, Section-1 of the Gazette of India Extraordinary. This is being examined at IBM for	Under approval of Ministry Under
	make it necessary to carry out	its implementation.	process for

	Amenability test in respect of exploration samples of drill cores for Prospecting and High Technology Reconnaissance cum Exploration Licence.		implement ation.
26	To make efforts to increase the coverage, by ensuring that all statutory returns are filed online by the concession holders. In case of Non- Statutory returns furnishing of information by mineral consuming industries should be made statutory. To this effect, the necessary amendment in the Rules may be carried out. With regard to the promotional exploration data, Rules may be amended to make it compulsory for the Government agencies to furnish data to the IBM on an annual basis. In case of Independent surveys, formal institutionalized mechanism for interacting with the domestic industries and regulatory agencies in other countries in a participatory model whereby the data is exchanged on mutually agreed terms may be created.	Online submission of statutory returns was made operational. Real time online database is possible once Mining Tenement System (MTS) is operational.	Action initiated for implement ation.

Nominations to the Committees, Working Groups, etc.

I. Representation of IBM on Central Geological Programming Board (CGPB) Sub-Committees

After 2009, some changes were taken place in Geology discipline in IBM due to retirements, promotions and recruitments at senior level posts. Keeping in view of all above, the Controller General, Indian Bureau of Mines, Nagpur has approved the revised nominations to act as members/ alternate members in the CGPB sub – committees with effect from 30th January 2014.

Sub- Committee number	Title of Sub-Committee	Principal Member	Alternate Member	
1	2	3	4	
I	Ferrous Minerals	Dr V.G.K. Bhagavan Gumma, Senior Mining Geologist, TS Section, IBM Nagpur.	Shri Kewal Kishan, Senior Mining Geologist, TMP Division, IBM, Nagpur.	
II	Precious Metals and Minerals	Shri O.P. Gopal, Senior Mining Geologist, GM Cell, IBM, Nagpur.	Shri D. Dash, Junior Mining Geologist, Regional Office, IBM, Hyderabad.	
III	Non-Ferrous and Strategic Minerals	Shri M.K. Somani, Senior Mining Geologist, Regional Office, IBM, Bhubaneswar.	Shri Jami Vijay Kumar, Deputy Ore Dressing Officer, RODL, Ajmer.	
IV	Industrial and Fertilizer Minerals	Shri M.U Siddiqui, Deputy Mineral Economist, ME Division, Nagpur.	ShriJ.N.Patel,DeputyMineralEconomist,MEDivision,IBM,Nagpur.	

1	2	3	4
VI	Marine Geology & Exploration and Coastal Geoscience	Shri Parag M. Tadlimbekar, Senior Mining Geologist, CCOM office, IBM, Nagpur.	Shri T.K. Sonarkar, Senior Mining Geologist, MM Cell, IBM, Nagpur
VII	Airborne Survey & Remote Sensing	Shri R.N. Selven, Superintending Mining Geologist, South Zonal Office, IBM, Bengaluru.	ShriP.S.Hegde,SeniorMiningGeologist,RegionalOffice,IBM,Bengaluru.
VIII	Geology & Mineral Resources of North Eastern Region	Dr P.K. Jain, Superintending Mining Geologist, TMP Division, IBM, Nagpur	Shri R. Mazumdar, Senior Mining Geologist, Nagpur Regional Office, IBM, Nagpur.
X	Fundamental and Multidisciplinary Geosciences	Dr. A.N. Murthy, Regional Mining Geologist, North Zonal office, IBM, Ajmer.	Shri Sanjay Girhe, Senior Mining Geologist, Regional Office, IBM, Udaipur.
XI	Geo-informatics and Data Management	Dr. Omkesheva Murthy M.G., Senior Mining Geologist, TMIS Cell, CCOM Office, IBM, Nagpur.	Shri Rajeev Ranjan, Assistant Controller of Mines, TMIS Cell, CCOM Office, IBM, Nagpur.
XII	Geoscience for Sustainable Development	ShriPushpendarGaur,DeputyController of Mines,RegionalOffice,IBM, Udaipur	Shri U.L. Gupta, Junior Mining Geologist, Central Zonal Office, IBM, Nagpur.

Note: No nominations for Sub-Committee V and IX.

II. Standing Committee under clause (a) of sub-section (1) of Section 26 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) of ministry of Coal

Controller General, IBM had earlier nominated Shri R.K.Sinha, Controller of Mines, IBM, Bengaluru on the above Standing Committee of Ministry of Coal vide letter dated 1.4.2013. Subsequently vide letter dated 3.7.2013, in place of Shri R.K.Sinha, Shri Pankaj Kulshreshtha, Regional Controller of Mines, IBM Ajmer was nominated on the said Committee of Ministry of Coal.
Annexure- VII

Publications Released during 2013-14

Sr.	Titles / Publications	Release Date
1	Monthly Statistics of Mineral Production (MSMP) September, 2012	15.5.2013
2	Monthly Statistics of Mineral Production(MSMP) October, 2012	13.6.2013
3	Annual Report of IBM 2011-12	28.6.2013
4	IBM NEWS October- December 2012 and January-March 2013	08.7.2013
5	Monthly Statistics of Mineral Production (MSMP) November, 2012	29.7.2013
6	Monthly Statistics of Mineral Production (MSMP) December, 2012	29.7.2013
7	National Mineral Inventory an Overview as on 1.4.2010	19.8.2013
8	Monthly Statistics of Mineral Production (MSMP), January 2013	22.8.2013
9	Bulletin of Mineral Information Volume 30 No.1 April-September 2012	23.8.2013
10	Monthly Statistics of Mineral Production (MSMP), February 2013	27.8.2013
11	Indian Mineral Industry at a Glance 2010-11	28.8.2013
12	Statistical Profile of Minerals 2011-12	01.10.2013
13	Monthly Statistics of Mineral Production (MSMP), March 2013	25.10.2013
14	Bulletin of Mineral Information Volume 30 No.2 October 2012- March 2013	07.11.2013
15	Indian Minerals Year Book, 2012 (Volume II)	27.11.2013
16	Monograph on Chromite	05.12.2013
17	Monthly Statistics of Mineral Production (MSMP), April 2013	21.1.2014
18	IBM NEWS April –June 2013 and July – September 2013	27.1.2014
19	Monthly Statistics of Mineral Production (MSMP), May 2013	14.2.2013
20	Indian Mineral Industry at a Glance 2011-12	24.3.2014
21	Monthly Statistics of Mineral Production (MSMP), June 2013	28.3.2014
22	Monthly Statistics of Mineral Production (MSMP), July 2013	28.3.2014
23	Monthly Statistics of Mineral Production (MSMP), August 2013	28.3.2014
24	Monthly Statistics of Mineral Production (MSMP), September 2013	28.3.2014

ANNEXURE-VIII A SCHEME WISE PHYSICAL PERFORMANCE OF IBM DURING 2013-14

Scheme	Activity	Target in 2013-	Achievements 2013-
		14	14
1	2	3	4
Scheme No. 1.	Inspection of Mines	2500 Inspections	2512
Inspection of Mines for			Inspections
Scientific and Systematic Mining,	Mining Geological Studies	8 Studies	8 studies completed.
Mineral Conservation	Approval Mine	As and when	167 Mining Plans/604
and Mine Environment.	Plan/Schemes/ Mine	received	Schemes of Mining /26
	Closure Plans		Mine Closure Plans
		(1)	approved
Scheme No. 2. Mineral	Ore Dressing	60	55
Beneficiation Studies,	Investigations	40.000	41 402
Grade and Sub grade	Mineralagiaal	40,000	41,465
ores and Analysis of	Examinations	2500	2550
Environmental Samples	In Plant Studies	As and when	Nil
Environmental bumples.	In Flant Studies	required	
Scheme No. 3.	Updation of National	Intermediate	completed
Technological	Mineral Inventory	updation as on	I I I I I I I I I I I I I I I I I I I
Upgradation and		1.4.2013 for 12	
Modernization		minerals.	
	Preparations of Multi	Updation of 100	In progress.
	mineral leasehold	Maps for	
	maps with forest	A.Pradesh and	
	overlays.	Bihar	
	TC Assignments	5-7 Assignments	4 assignment
	(Mining & Geological)		completed.
	MR Assignments	3 1 Assignments	3 assignments
	(Environmental &	5-4 Assignments	completed
	Geo-technical)		completed
	Training	16 Courses	16 courses conducted
Scheme No. 4.	Statistical Publication	S	
Collection, Processing,	(i) MSMP	(i) MSMP 12	12 issues released
Dissemination of Data		Issues	
of Mines and Minerals	(ii) Mineral Industry	(ii) 1 Annual	1 issue released
through various	at a Glance	Issue	
Publications.	(iii) Statistical	(iii) 1 Annual	1 issue released
	Profiles of Minerals	Issue	
	(iv) Yearly Updation	(iv) Updation as	Updated.
	of Directory of Mines	on 31.3.2013	
	(v) Yearly Updation	(v) Updation as	Updated.
	of Directory of	on 31.3.2013	
	Mining Leases		

1	2	3	4
	Technical Bulletins		
	(i) IMYB	(i) IMYB 2012	Finalized and hosted on
			IBM website
	(ii) Monograph	(ii) Monograph	Finalized
		on Chromite	
	(iii) Bulletins on	(iii) (a) Bulletin	Under Printing
	topical interest	on Application of	
		Rock Mechanics	
		Surface and	
		Under ground	
		Excavations.	
		(b) Manganese	
		Ore- Vision 2020	Finalized.
		& Beyond	
	(iv) Bulletins on	(iv) 2 Issues	One issue released and
	Mineral Information		another finalized & hosted
			on website.
	(v) Bulletin on ML &	(v) 2012 Issue	Finalized and hosted on
	PL		IBM website
	(vi) Market Survey	(vi) Markat	Market Survey on
	(VI) Market Survey	(VI) Market	Manganasa completed
		Manganasa and	and on Pock Phosphate
		Pock Phosphoto	is in progress
		ROCK Phosphate	is in progress.
	Advisory Role		
	Parliament Questions	As & When	163 replied
		Received	
	Ministry References	-Do-	530 replied
Scheme No. 5	Completion of the	Publishing of EOI	DPR prepared, SFC
Computerized Online	Project	& tendering for	proposal approved & RFP
Register of Mining		identifying System	finalized and tender
Tenements System		Integrator (SI) will	floated. Process for re-
		be done and work	tendering initiated as no
		order will be	bias received on due date.
		awarded to	
Scheme No. 5 Computerized Online Register of Mining Tenements System	 (iii) Bulletins on topical interest (iv) Bulletins on Mineral Information (v) Bulletin on ML & PL (vi) Market Survey Advisory Role Parliament Questions Ministry References Completion of the Project 	on Chromite (iii) (a) Bulletin on Application of Rock Mechanics Surface and Under ground Excavations. (b) Manganese Ore- Vision 2020 & Beyond (iv) 2 Issues (v) 2012 Issue (v) 2012 Issue (vi) Market Survey on Manganese and Rock Phosphate As & When Received -Do- Publishing of EOI & tendering for identifying System Integrator (SI) will be done and work order will be awarded to qualified SI.	Under Printing Finalized. One issue released and another finalized & hosted on website. Finalized and hosted on IBM website Market Survey on Manganese completed and on Rock Phosphate is in progress. 163 replied 530 replied DPR prepared, SFC proposal approved & RFF finalized and tender floated. Process for retendering initiated as no bids received on due date

ANNEXURE-VIII B

SCHEME WISE FINANCIAL PERFORMANCE OF IBM DURING 2013-14 (Rs. In crores)

		2013-2014	
	Ар	proved Ou	tlay
Name of the Schemes/project/ Programme	BE	RE	Actual Expr.
1	7	8	9
Scheme No.1. Inspection of Mines for Scientific & Systematic mining, Mineral Conservation and Mine Environment	14.79	17.93*	13.24*
Scheme No.2. Mineral Beneficciation studies- Utilization of low grade & sub-grade ores and analysis of environmental samples	6.34	5.92	5.56
Scheme No.3. Technological upgradation & Modernization.	4.01	3.89	3.79
Scheme No.4. Collection, Processing, Dissemination of Data on Mines & Minerals through various publications.	2.50	2.32	1.90
Scheme No.5. Computerisation online Register on Mining Tenement System.	13.55	3.40	0.87
**New Scheme 6: Capacity building of State Govts. Development of implementation of ore accounting software.	0.85	0.14	0.14
Tribal Area Sub-Plan	1.96	1.40	0.00
Outlay (NER) : Revenue	1.12	0.00	0.00
NER : Capital	3.88	0.00	0.00
T O T A L PLAN (I B M)	49.00	35.00	25.50
Total Non-Plan	52.50	49.00	48.88

Note: 1. FE for 2013-14 has not yet received from Ministry.
2. * Inclusive of NER (Both Capital & Revenue) Budget
3. ** Scheme is proposed to be shelved.

Annexure IX

Major Minerals									
States	No of Cases	Quantum of mineral / Ore excavated / stacked / Transported (in lakh tonnes)	Value of Mineral (Rs. lakh)	FIR lodged (Nos.)	Court Cases filed	Fines realised (Rs. lakh)			
ANDHRA PRADESH	486	0.064	36.380	2	0	165.70			
ARUNACHAL PRADESH	0	0.000	0.000	0	0	0.000			
ASSAM	0	0.000	0.000	0	0	0.000			
CHHATTISGARH	208	0.020	45.84	2	135	80.61			
GOA*	1	0.000	0.000	0	0	0.000			
GUJARAT	270	0.934	257.560	8	0	189.55			
HARYANA	0	0.000	0.000	0	0	0.000			
JHARKHAND	161	0.137	228.240	129	1	1.04			
KARNATAKA	342	0.127	16.260	5	5	82.31			
KERALA	18	0.008	4.830	0	0	5.36			
MADHYA PRADESH*	112	0.000	180.395	0	112	27.43			
MAHARASHTRA	0	0.000	0.000	0	0	0.000			
MIZORAM	0	0.000	0.000	0	0	0.000			
ODISHA	75	2.778	31.75	0	4	54.4			
RAJASTHAN	607	0.778	42.852	372	1	154.11			
SIKKIM	0	0.000	0.000	0	0	0.000			
TAMILNADU	6	1.378	207.535	0	0	37.75			
UTTAR PRADESH	0	0.000	0.000	0	0	0.000			
Total	2286	6.2244	1051.642	518	258	798.26			
*Note :Quantity of mine Goa: 20.00 cu.mt. Mad	eral /ore excaveration /ore excave	vated/stacked/transported 56705.81 cu.mt	is in cu.mt fo	or Goa & N	И.Р.,				

Return on Illegal Mining for the Year 2013-14

Goa: 20.00 cu.mt., Madhya Pradesh : 56705.81 cu.mt

States	No of Cases	Quantum of mineral / Ore excavated / stacked / Transported (in lakh tonnes)	Value of Mineral (Rs. lakh)	FIR lodged (Nos.)	Court Cases filed	Fines realised (Rs. lakh)
	•	Minor Mineral	s			
ANDHRA PRADESH	7206	3.426	499.05	0	1	1026.03
ARUNACHAL PRADESH	0	0.000	0.000	0	0	0.000
ASSAM	0	0.000	0.000	0	0	0.000
CHHATTISGARH	3788	2.418	584.55	0	3788	415.12
GOA	0	0.000	0.000	0	0	0.000
GUJARAT	5177	31.631	4092.01	93	19	3036.35
HARYANA	3589	4.844	409.780	88	0	824.59
JHARKHAND	740	0.895	196.100	415	3	61.99
KARNATAKA	8167	2.189	664.07	93	229	2259.22
KERALA	4430	35.441	14629.00	0	0	668.36
MADHYA PRADESH*	6613	0.000	4044.16	0	6610	2347.78
MAHARASHTRA	36476	0.000	0.000	0	0	5083.93
MIZORAM	21	0.000	0.000	0	0	0.486
ODISHA	1	0.000	0.000	0	0	1.12
RAJASTHAN	2346	19.893	404.98	487	16	972.65
SIKKIM	0	0.000	0.000	0	0	0.000
TAMILNADU	1072	35.306	996.06	2155	0	3304.44
UTTAR PRADESH	6777	0	621.18	0	0	3105.86
Total	86403	136.043	27140.94	3331	10666	23107.926
*Note :Quantity of mine	eral /ore exca	vated/stacked/transported	for Madhya I	Pradesh is	2209955	5.80 cu. mt

3. खनिज उत्पादन, मार्च 2014 (परमाणु खनिजों और गौण खनिजों को छोडकर) खनिजवार 3. MINERAL PRODUCTION, MARCH 2014 (Excluding Atomic Minerals and Minor Minerals) MINERAL-WISE

(मूल्य '000 रुपये / Value in Rs.'000)

			मार्च	2014	फरवरी	2014	अप्रेल 2013	. मार्च 2014	अप्रेल 2012	. मार्च 2013
खनिज	Mineral	इकाई	March	n 2014	Februar	ry 2014	Apr 2013	- Mar 2014	Apr 2012	- Mar 2013
		Unit	मात्रा / Qty.	मूल्य / Val.						
सभी खनिज	All Minerals			229752420		196632892		2256596818		2333211384
ईंधन खनिज	Fuel Minerals			175273069		150665787		1760812879		1826892354
कोयला	Coal	'000t	65413	88122484	52263	70075300	563085	735230398	556402	747186600
लिग्नाइट	Lignite	'000t	4952	6345674	3979	5194705	44275	54346583	46453	55114100
प्राकृतिक गैस (उपभुक्त)	Natural Gas (ut.)	m c m	2795	23115008	2675	22122592	34412	284591544	40679	336420537
पेट्रोलियम (अपरिष्कृत)	Petroleum (crude)	'000t	3174	57689903	2931	53273190	37778	686644354	37862	688171117
धात्विक खनिज	Metallic Minerals			48061047		39845749		426539736		431673020
बॉक्साइट	Bauxite	t	1703130	759354	1722760	746272	21666011	9513943	16611610	7994557
कोमाइट	Chromite	t	461075	3650422	321109	2541981	2852854	23175932	2833895	22627633
ताम्र अयस्क	Copper Ore	t	311459	0	292267	0	3777764	0	3635751	0
ताम्र सान्द्र	Copper Conc.	t	12078	597287	11749	588087	139306	6798108	123654	6288969
सोना अयस्क	Gold Ore	t	32467	0	34556	0	420777	0	502831	0
सोना (कुल)	Gold (total)	kg	246	673108	158	437486	1564	4225315	1588	5172517
सोना (प्राथमिक)	Gold (primary)	kg	246	673108	158	437486	1564	4225315	1588	5172517
सोना (उप उत्पाद)	Gold (by-product)	kg	0	0	0	0	0	0	0	0
लोह अयस्क (कुल)	Iron Ore (total)	'000t	16490	36003312	14030	30709676	152433	320314998	136618	328244402
लोह अयस्क (ढेले)	Iron Ore (lumps)	'000t	5837	17314239	5239	15648507	58699	172121878	54270	185636387
लोह अयस्क (चूरा)	Iron Ore (fines)	'000t	10556	18342858	8714	14759586	93014	146070131	82025	142218195
लोह अयस्क सान्द्र	Iron Ore Conc.	'000t	97	346215	77	301583	720	2122989	323	389820
सीसा व जस्त अयस्क	Lead & Zinc Ore	t	713902	0	574044	0	9252137	0	8633411	0
सीसा सान्द्र	Lead Conc.	t	18090	446500	15736	395978	194426	4303052	184486	3300883
जस्त सान्द्र	Zinc Conc.	t	121689	2619872	93870	1902106	1490662	27421597	1492781	23948683
मेंगनीज अयस्क	Manganese Ore	t	252558	1552473	234120	1406845	2588313	14985417	2342169	12836200
चांदी	Silver	kg	39193	1756107	25193	1114484	349774	15778713	374046	21234214
टिन सान्द्र	Tin Conc.	kg	4068	2612	3999	2834	34851	22661	47774	24962
अधात्विक खनिज	Non-metallic Minerals			6418304		6121356		69244203		74646010
अगेट	Agate	t	0	0	0	0	100	50	493	247
एपेटाइट	Apatite	t	80	172	100	215	1300	2768	572	1208
फॉस्फोराइट	Phosphorite	t	177714	517235	112853	528968	1383998	4389012	1941158	6807233
एस्बेस्टोस	Asbestos	t	0	0	1	30	227	8823	389	17057
सुघट्टय मृतिका	Ball Clay	t	126477	61199	163160	76892	1874049	902647	1750559	780732
बेराइट्स	Barytes	t	74063	223825	104055	311674	1136814	3604933	1789431	5314116

(कमश: / Contd.....)

3. खनिज उत्पादन, मार्च 2014 (परमाणु खनिजों और गौण खनिजों को छोडकर) खनिजवार 3. MINERAL PRODUCTION, MARCH 2014 (Excluding Atomic Minerals and Minor Minerals) MINERAL-WISE

(मूल्य '000 रुपये / Value in Rs.'000)

खनिज Mineral कुलाई Mar:>211 Apr 2013 Mar 2013 Mar 2013 Mar 2013 Mar 2013 br br mar /Qr Mar mar /Qr				मार्च	2014	फरवरी	2014	अप्रेल 2013	. मार्च 2014	अप्रेल 2012	. मार्च 2013
Unit गाता / Qrg गाता / Qrg / Val. गाता / Qrg / Zrg /	खनिज	Mineral	इकाई	March	n 2014	Februar	ry 2014	Apr 2013	- Mar 2014	Apr 2012	- Mar 2013
πλεπιας Calcite tt 11371 4112 8810 3182 92146 33825 74488 27309 απεαι Chalk t 117461 5365 14513 7381 126431 64885 175516 68303 απτα Clay (others) t 179067 31537 247083 40027 2360871 447713 2680726 3353628 απτατ Diamond crt 2228 4924 2372 5398 14781 23506 116222 25742 απατατ Diaspore t 2228 24999 66777 235662 7106869 97197 88274 92841 απτατ Testpar t 13514 31555 67150 14701 706539 999509 992163 142518 415317 145908 428633 11251 3459 92 633 122 42633 1426 909 18533 1226 909 1263 125 3459 92 633 </th <th></th> <th></th> <th>Unit</th> <th>मात्रा / Qty.</th> <th>मूल्य / Val.</th>			Unit	मात्रा / Qty.	मूल्य / Val.						
वसिवा Chalk t 12441 5365 14513 7381 126431 64885 175516 88300 व्रोरेडम Corundum kg 0	केल्साइट	Calcite	t	11371	4112	8810	3182	92146	33625	74488	27309
पुरिका अप्र कोरेडम Clay (others) t 17907 31537 247083 40297 236071 407713 2680726 353628 कोरेडम Diamond crt 118 85330 3199 49714 37515 614084 31988 366471 उवरमपोर Diaspore t 2228 4992 2372 5338 14781 23960 16222 25742 दुवरुताहर Donite t 689626 220099 66777 23662 7100869 257991 723358 2618906 दुवरुताहर Dunite t 63357 37197 156010 43968 141218 413317 1459008 428633 अतेन्त गुरोका Fileslam t 62 46 38 28 549 4449 1266 999925 182739 प्रेकराता र Filsite t 62 46 38 28 549 4449 1266 90925 182739 प्रेकराते र Filsite	खडिया	Chalk	t	12481	5365	14513	7381	126431	64885	175516	88301
πλτεσι Corundum kg 0	मृतिका अन्य	Clay (others)	t	179067	31537	247083	40297	2360871	407713	2680726	353628
शैगा Diamond crt 5118 8330 3199 49714 37515 614084 31988 366471 द्यायसोर Dolomite t 2228 4924 2372 5398 14781 22360 16222 25742 देशतेगायर Pelspar t 8348 11051 5330 8299 65098 97197 88274 92841 उत्तेत्रायर Felspar t 8348 11051 5330 8299 65098 97197 88274 92841 अतिम मृतिक (r) Fireclay (1) t 69357 13585 67150 14701 706639 159859 999925 182739 प्रेक्याइट Felsite t 62 46 38 28 549 4449 1266 9099 प्रेक्याइट (आपई) Fluorite (graded) t 505 2378 183 891 2486 11646 3092 13818 गार्नट (quruf) Garnet (gen) kg 0 0	कोरंडम	Corundum	kg	0	0	0	0	0	0	5000	75
उपरेशेला प्रदेश प्रियंता कि	हीरा	Diamond	crt	5118	85330	3199	49714	37515	614084	31988	366471
डोलोगाइट Dolomite t 669826 220099 687277 235662 7108696 2576921 7233958 2618906 दुसुनाइट Dunite t 8348 11051 5330 8299 66098 97197 88274 92841 अलिम तृतिका (r) Fireclay (1) t 69357 13585 67150 14701 706639 159859 999925 182739 केलसाइट Felsite t 62 46 633 28 549 449 1266 9099 केलसाइट Felsite t 62 3 153 3 459 92 633 192 registrage Garnet (grand) t 505 2378 1183 891 2486 11646 3092 13818 urgstrage Garnet (grand) Kg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <	डायस्पोर	Diaspore	t	2228	4924	2372	5398	14781	29360	16222	25742
बुयुनाइटDunitet8348110515330829965098971978827492841फेल्सपारFelspart13514237197156010439681412518415317145008428633अतिम मुतिका (r)Fireclay (1)t66257135856715014701706639159859999925182739फेलसाइटFelsitet624638285494491266909पिलन्ट ररोनFlint Stonet15315345992633192पल्योगद्रद (क्षेपीब्र)Garnet (graded)t5052378183891248611646309213818गानेट (खपाणे)Garnet (gem)kg00 <th>डोलोमाइट</th> <th>Dolomite</th> <th>t</th> <th>669626</th> <th>220099</th> <th>687277</th> <th>235662</th> <th>7108696</th> <th>2576921</th> <th>7233958</th> <th>2618906</th>	डोलोमाइट	Dolomite	t	669626	220099	687277	235662	7108696	2576921	7233958	2618906
फेलसापर Felspar t 135142 37197 156010 43968 1412518 415317 1459008 428633 फेलसाइट Felsite t 66357 13585 67150 14701 706639 159859 999925 182739 फेलसाइट Felsite t 662 46 38 28 549 4449 1266 99925 1833 192 पलुओपाइट (शेगीकून) Fluorite (graded) t 555 2378 183 891 2486 11646 3092 13818 गार्गेट (सापापी) Garnet (gem) kg 0	ड्यूनाइट	Dunite	t	8348	11051	5330	8299	65098	97197	88274	92841
अपिन प्रतिका (1) Fireclay (1) t 69357 13585 67150 14701 706639 159859 999925 182739 फेलसाइट Felsite t 62 46 38 28 549 449 1266 909 एक्झोराइट (शेणीकृत) Fluorite (graded) t 505 2378 183 891 2486 11646 3092 13818 पानेट (सपाय) Garnet (abrasive) t 505 2378 183 891 2486 11646 3092 13818 पानेट (सपाय) Garnet (abrasive) t 505 2378 1833 891 2486 11646 3092 13818 पानेट (सपाय) Garnet (abrasive) t 5249 2400 10812 6617 146009 81651 134735 84133 जिल्म Gypsum t 317601 150252 230055 108877 292912 138553 3556723 169908 आपोक Jasper t 0	फेल्सपार	Felspar	t	135142	37197	156010	43968	1412518	415317	1459008	428633
फेलाइट Felsite t 62 46 38 28 549 449 1266 909 पितनट ररोन Flint Stone t 15 3 15 3 459 92 633 192 प्रतुशोपहुट (श्रेणीकूत) Garnet (graded) t 505 2378 183 891 2486 11646 3092 13818 गानेट (श्राप्रप्र) Garnet (gem) kg 0	अग्नि मृतिका (1)	Fireclay (1)	t	69357	13585	67150	14701	706639	159859	999925	182739
पितन्द स्टोन File Stone t 15 3 15 3 459 92 633 192 पल्डुशोपहुद (श्रोपहुत) Fluorite (graded) t 505 2378 183 891 2486 11646 3092 13818 गानेंद (grapt) Garnet (abrasive) t 5249 2070 0 <t< th=""><th>फेल्साइट</th><th>Felsite</th><th>t</th><th>62</th><th>46</th><th>38</th><th>28</th><th>549</th><th>449</th><th>1266</th><th>909</th></t<>	फेल्साइट	Felsite	t	62	46	38	28	549	449	1266	909
पलुवोराघुट (श्रेणीकृत)Fluorite (graded)t552378183891248611646309213818पानेट (अपघर्ष)Garnet (abrasive)t8715607808269649234576269588217882489924683पानेट (रला)Graphite (r.o.m.)t524924001081266171460098165113473584133जिपसमGypsumt3176011502522300551088772929912138553835567231699808आयोलाइटJaspert000000000केजोतिन (खुर)Kaolin (total)t294247888063803851049054752643115913542586971157392केजोतिन (खुरी)Kaolin (natural) (6)t286707639643732948431946680459675714157343857871कोजोतिन (खुरी)Kaolin (processed) (7)t757024842709120586665981915641035429521कोयनाइटSillimanitet8755511966589405816159737348843736352062तेराइटLateritet375823688222596745166534915106516944121192702753कुया त्राइटSillimanitet8755511966589405816159737348843736352062तेराइटLateritet37582368822259674516653491510 </th <th>फिलन्ट स्टोन</th> <th>Flint Stone</th> <th>t</th> <th>15</th> <th>3</th> <th>15</th> <th>3</th> <th>459</th> <th>92</th> <th>633</th> <th>192</th>	फिलन्ट स्टोन	Flint Stone	t	15	3	15	3	459	92	633	192
गानेंट (अपघर्ष)Garnet (abrasive)t871560780826964923457626958821768248924683गानेंट (रत्न)Garnet (gem)kg00000000ग्रेफाइट (खान निर्गत)Graphite (r.o.m.)t524924001081266171460098165113473584133जिपसमGypsumt317601150252230055108877292991213855383556723169908आयोलाइटIolitekg0000000000जैपसरJaspert00000000000जैयोतिन (म्रज्वृतिक) (s)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केशेलिन (मंत्रावित) (r)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केशेलिन (मंत्रावित) (r)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केशेलिन (मंत्रावित) (r)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केशोलेन (मंत्रावित) (r)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केशोलेन (मंत्रावित) (r)Kao	फ्लूओराइट (श्रेणीकृत)	Fluorite (graded)	t	505	2378	183	891	2486	11646	3092	13818
गानेंट (रला)Garnet (gem)kg00 <th>गार्नेट (अपघर्ष)</th> <th>Garnet (abrasive)</th> <th>t</th> <th>8715</th> <th>60780</th> <th>8269</th> <th>64923</th> <th>457626</th> <th>958821</th> <th>768248</th> <th>924683</th>	गार्नेट (अपघर्ष)	Garnet (abrasive)	t	8715	60780	8269	64923	457626	958821	768248	924683
प्रेफाइट (खान निर्गत)Graphite (r.o.m.)t524924001081266171460098165113473584133जिपसमGypsumt317601150252230051088772929912138553835567231699808आयोलाइटlolitekg000000000केसोलिन (कुल)Kaolin (total)t294247888063803851049054752643115913542586971157392केसोलिन (कुल)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केसोलिन (संसाधित) (7)Kaolin (processed) (7)t754024842709120586665981915641013542999212केसोलिन (संसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521केसोलिन (संसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521केसोलन (संसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521केसोलन (संसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521केसोलन (संसाधित) (7)Kaolin (processed) (7)t8758261659309762527872468995732850347973173कुपा	गार्नेट (रत्न)	Garnet (gem)	kg	0	0	0	0	0	0	0	0
जिपसमGypsumt3176011502522300551088772929912138553835567231699808आयोलाइटIolitekg0000000000जैरपपJaspert000<	ग्रेफाइट (खान निर्गत)	Graphite (r.o.m.)	t	5249	2400	10812	6617	146009	81651	134735	84133
आयोलाइटlolitekg000000000जैसपJaspert0000000000केओलिन (कुल)Kaolin (total)t294247888063803851049054752643115913542586971157392केओलिन (फ्राक्तिक) (s)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केओलिन (फ्रांसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521कायनाइटKaolin (processed) (7)t7540248427091205866159737348843736352062लोरेसिनेनाइटSillimanitet8755511966589405816159737348843736352062लेरेराइटLateritet375823698222596745166534915106516944121192702753चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना केकडLimekankart2865841271556229571400882848119242643564लाइन शैलLimeshellt2865841271556229571400882848119242643564नाइन शैलLimeshellt286733908714942330161951053976	जिप्सम	Gypsum	t	317601	150252	230055	108877	2929912	1385538	3556723	1699808
जैसपरJaspert00000000000केओलिन (कुल)Kaolin (total)t294247888063803851049054752643115913542586971157392केओलिन (प्राकृतिक) (6)Kaolin (natural) (6)t286707639643732948431946880459675714157343857871केओलिन (प्रांकृतिक) (6)Kaolin (processed) (7)t75402484270912058666598191564101354299521कायनाइटKyanitet5217066218621922572010481248शिलिनेनाइटSillimanitet8755511966589405816159737348843336352062लेटेराइटLateritet37582369822259674516653491510651694412192707753चूना परथरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimeshellt2823436416292540118786349052404441930मंगरेगाइटMagnesitet1876339087149423016195105397612224315459178मार्वMarlt367311345963258562485832541622648344337009269366अग्र (आरोर्ब, (waste & Scrap) (2)kg1094513095110823140160907<	आयोलाइट	lolite	kg	0	0	0	0	0	0	0	0
केओलिन (कुल)Kaolin (total)t294247888063803851049054752643115913542586971157392केओलिन (प्राकृतिक) (6)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केओलिन (प्राकृतिक) (6)Kaolin (processed) (7)t75402484270912058666598191564101354299521कायनाइटKyanitet5217066218621922572010481248सिलिमेनाइटSillimanitet875551196658940581615973734843736352062लेटेराइटLateritet375823698222596745166534915106516944121192702753चूना परथरLimestone'000t261024352887237933975625278725468995732850047973173चूना कंकडLimestone'000t26102435287115262957140882848119242643564लाइम शैलLimeshellt282343641629254018786349052244441930मंगेसाइटMagnesitet18763390871494233016195105337612224315459178जाक प्राMarlt367311345963258562485832541622648344337009269366अग्र (au Reark3673113459630951109823140	जैस्पर	Jasper	t	0	0	0	0	0	0	0	0
केओलिन (प्राकृतिक) (6)Kaolin (natural) (6)t286707639643732948431946860459675714157343857871केओलिन (प्रांसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521कायनाइटKyanitet5217066218621922572010481248सिलिमेनाइटSillimanitet8755511966589405816159737348843736352062लेटेराइटLateritet375823698222596745166534915106516944121192702753चूना फंकडLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt286731390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अग्रक (अपरिष्टकृत)Mica (crude)kg10945130951109823140160990746226125581339963अग्रक (अपरिष्ट रुकेप) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	केओलिन (कुल)	Kaolin (total)	t	294247	88806	380385	104905	4752643	1159135	4258697	1157392
केओलिन (संसाधित) (7)Kaolin (processed) (7)t75402484270912058666598191564101354299521कायनाइटKyanitet5217066218621922572010481248सिलिमेनाइटSillimanitet8755511966589405816159737348843736352062लेटेशइटLateritet375823698222596745166534915106516944121192702753चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimeshallt2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178पार्लMarlt367311345963258562485832541622648344337009269366अग्रक (अपशिष्ट स्केप) (2)Mica (crude)kg10945130951109823140160990746226125581339963अग्रक (अपशिष्ट स्केप) (2)Mica (waste & Scrap) (2)kg2151496015659601754370162545440	केओलिन (प्राकृतिक) (6)	Kaolin (natural) (6)	t	286707	63964	373294	84319	4686045	967571	4157343	857871
कायनाइटKyanitet5217066218621922572010481248सिलिमेनाइटSillimanitet8755511966589405816159737348843736352062लेटेराइटLateritet375823698222596745166534915106516944121192702753चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178पार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपरिष्कृत)Mica (crude)kg1094513095110982314016090746226125581339963अप्रक (अपरिष्कृत)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	केओलिन (संसाधित) (7)	Kaolin (processed) (7)	t	7540	24842	7091	20586	66598	191564	101354	299521
सिलिमेनाइटSillimanitet8755511966589405816159737348843736352062लेटेराइटLateritet375823698222596745166534915106516944121192702753चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रारेष्ट्रन)Mica (crude)kg1094513095110982314016090746226125581339963अप्रारेष्ट स्केप) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	कायनाइट	Kyanite	t	52	170	662	1862	1922	5720	1048	1248
लेटेराइटLateritet375823698222596745166534915106516944121192702753चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपश्चिद्ध का)Mica (crude)kg10945130951109823140160990746226125581339963अप्रक (अपश्चिद्ध कर) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	सिलिमेनाइट	Sillimanite	t	8755	51196	6589	40581	61597	373488	43736	352062
चूना पत्थरLimestone'000t2610243528872379339756252787254689957328503047973173चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपरिष्कृत)Mica (crude)kg10945130951109823140160990746226125581339963अप्रक (अपरिष्कृत)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	लेटेराइट	Laterite	t	375823	69822	259674	51665	3491510	651694	4121192	702753
चूना कंकडLimekankart2865841271556229571400882848119242643564लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपश्चिक्त)Mica (crude)kg1094513095110982314016090746226125581339963अप्रक (अपश्चिष्ट स्केप) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	चूना पत्थर	Limestone	'000t	26102	4352887	23793	3975625	278725	46899573	285030	47973173
लाइम शैलLimeshellt282343641629254018786349052404441930मैग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपरिष्कृत)Mica (crude)kg10945130951109823140160990746226125581339963अप्रक (अपशिष्ट स्केप) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	चूना कंकड	Limekankar	t	28658	4127	15562	2957	140088	28481	192426	43564
मैंग्नेसाइटMagnesitet18763390871494233016195105397612224315459178मार्लMarlt367311345963258562485832541622648344337009269366अप्रक (अपरिष्कृत)Mica (crude)kg10945130951109823140160990746226125581339963अप्रक (अपशिष्ट स्केप) (2)Mica (waste & Scrap) (2)kg2151496015659360175454370162545440	लाइम शैल	Limeshell	t	2823	4364	1629	2540	18786	34905	24044	41930
माले Marl t 367311 34596 325856 24858 3254162 264834 4337009 269366 अग्रक (अपरिष्कृत) Mica (crude) kg 109451 3095 110982 3140 1609907 46226 1255813 39963 अग्रक (अपशिष्ट स्केप) (2) Mica (waste & Scrap) (2) kg 2151496 0 1565936 0 17545437 0 16254544 0	मैग्नेसाइट	Magnesite	t	18763	39087	14942	33016	195105	397612	224315	459178
अम्रक (अपरिष्कृत) Mica (crude) kg 109451 3095 110982 3140 1609907 46226 1255813 39963 अम्रक (अपशिष्ट स्केप) (2) Mica (waste & Scrap) (2) kg 2151496 0 1565936 0 17545437 0 16254544 0	मार्ल	Marl	t	367311	34596	325856	24858	3254162	264834	4337009	269366
अम्रक (अपशिष्ट स्केप) (2) Mica (waste & Scrap) (2) kg 2151496 0 1565936 0 17545437 0 16254544 0	अभ्रक (अपरिष्कृत)	Mica (crude)	kg	109451	3095	110982	3140	1609907	46226	1255813	39963
	अम्रक (अपशिष्ट स्केप) (2)	Mica (waste & Scrap) (2)	kg	2151496	0	1565936	0	17545437	0	16254544	0

(कमश: / Contd.....)

3. खनिज उत्पादन, मार्च 2014 (परमाणु खनिजों और गौण खनिजों को छोडकर) खनिजवार 3. MINERAL PRODUCTION, MARCH 2014 (Excluding Atomic Minerals and Minor Minerals) MINERAL-WISE

(मूल्य '000 रुपये / Value in Rs.'000)

			मार्च	2014	फरवरी	2014	अप्रेल 2013	. मार्च 2014	अप्रेल 2012	. मार्च 2013
खनिज	Mineral	इकाई	March	n 2014	Februa	ry 2014	Apr 2013 -	Mar 2014	Apr 2012	- Mar 2013
		Unit	मात्रा / Qty.	मूल्य / Val.						
मोल्डिंग सैन्ड	Moulding Sand	t	420	90	530	122	29961	3525	3118	564
गेरू	Ochre	t	139353	28965	255120	71080	1554680	482810	1833783	582998
परलाइट	Perlite	t	0	0	0	0	0	0	0	0
पायरोफाइलाइट	Pyrophyllite	t	20139	15454	25696	19618	208454	151089	247968	156004
पायरोक्सोनाइट	Pyroxenite	t	0	0	0	0	2985	806	58562	17980
र्क्वाट्ज	Quartz	t	139565	34465	151120	36549	1395452	345695	1384155	341129
र्क्वाट्जाइट	Quartzite	t	33798	17628	42689	22694	529988	301094	501399	276777
सिलिका बालू	Silica Sand	t	299402	75734	220070	64865	3346114	864066	4303883	1002046
बालू (अन्य)	Sand (others)	t	298669	33179	296071	33950	2552918	253458	2638424	201821
नमक (सैंधा)	Salt (rock)	t	0	0	0	0	0	0	0	0
शैल	Shale	t	289929	16525	214311	10822	2990579	162793	3067718	165924
स्लेट	Slate	t	0	0	0	0	339	319	278	263
स्टियटाइट	Steatite	t	94285	105528	86870	101846	865126	905216	971778	888390
सेलेनाइट	Selenite	t	0	0	0	0	532	708	7577	10226
गंधक (3)	Sulphur (3)	t	36407	0	32687	0	390325	0	449004	0
वर्मिकुलाइट	Vermiculite	t	2441	2059	866	850	10176	8518	7947	5010
वोलेस्टोनाइट	Wollastonite	t	10623	9037	11991	10091	192642	157047	145667	127468

(समाप्त / Concld.)

6 : ALL INDIA MINERAL RESERVES/RESOURCES AS ON 01.04.2010 - SUMMARY

Sl. No	Mineral	Unit	Reserves	Remaining Resources	Total Resources
1	Alexandrite	-	N. E.	N. E.	N. E.
2	Andalusite	'000 tonnes	-	18,450	18,450
3	Antimony				
	Ore	tonne	-	10,588	10,588
	Metal		-	174	174
4	Apatite	tonne	2,090,216	22,138,530	24,228,746
5	Asbestos	tonne	2,510,841	19,655,762	22,166,603
6	Ball clay	tonne	16,777,842	66,615,662	83,393,504
7	Barytes	tonne	31,584,128	41,149,746	72,733,874
8	Bauxite	'000 tonnes	592,938	2,886,682	3,479,620
9	Bentonite	tonne	25,060,508	543,306,838	568,367,346
10	Borax	tonne	-	74,204	74,204
11	Calcite	tonne	2,664,338	18,281,110	20,945,448
12	Chalk	'000 tonnes	4,332	585	4,917
13	China clay	'000 tonnes	177,158	2,528,049	2,705,207
14	Chromite	'000 tonnes	53,970	149,376	203,346
15	Cobalt (Ore)	Million tonnes	-	44.91	44.91
16	Copper				
	Ore	'000 tonnes	394,372	1,164,086	1,558,458
	Metal		4,768.33	7,518.34	12,286.67
17	Corundum	tonne	597	740,194	740,792
18	Diamond	carats	1,045,318	30,876,432	31,921,750
19	Diaspore	tonne	2,859,674	3,125,144	5,984,818
20	Diatomite	'000 tonnes	-	2,885	2,885
21	Dolomite	'000 tonnes	738,185	6,992,372	7,730,557
22	Dunite	'000 tonnes	17,137	168,232	185,369
23	Emerald	-	N. E.	N. E.	N. E.
24	Feldspar	tonne	44,503,240	87,832,212	132,335,452
25	Fire clay	'000 tonnes	30,104	683,415	713,519
26	Fluorite	tonne	4,712,316	13,501,588	18,213,904
27	Fullers Earth	tonne	58,200	256,593,879	256,652,079
28	Garnet	tonne	19,324,793	37,638,032	56,962,824
29	Gold				
	Ore (Primary)	tonne	24,124,537	469,570,375	493,694,912
	Metal (Primary)		110.54	549.30	659.84
	Ore (Placer)		-	26,121,000	26,121,000
	Metal (Placer)		-	5.86	5.86
30	Granite (Dimension Stone)	'000 cu m	263,692	45,966,608	46,230,300
31	Graphite	tonne	8,031,864	166,817,781	174,849,645
32	Gypsum	'000 tonnes	39,096	1,247,402	1,286,498
33	Iron Ore (Heamatite)	'000 tonnes	8,093,546	9,788,551	17,882,097
34	Iron Ore (Magnetite)	'000 tonnes	21,755	10,622,305	10,644,060
35	Kyanite	tonne	1,574,853	101,670,767	103,245,620
36	Laterite	'000 tonnes	24,714	446,119	470,833

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	No	Mineral	Unit	Reserves	Remaining	Total Resources
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					Resources	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	37	Lead and Zinc				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Ore	'000 tonnes	108,980	576,615	685,595
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Lead metal		2,245.01	9,304.38	11,549.39
		Zinc metal		12,453.26	24,211.64	36,664.90
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Lead +Zinc metal		0	118.45	118.45
	38	Limestone	'000 tonnes	14,926,392	170,008,720	184,935,112
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	39	Magnesite	°000 tonnes	41,950	293,222	335,172
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	40	Manganese ore	'000 tonnes	141,977	288,003	429,980
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	41	Marble	'000 tonnes	276,495	1,654,968	1,931,463
43 Mica Kg. 190,741,448 341,495,531 532,236,979 0re tonne - 19,286,732 19,286,732 Contained MOS2 12,640 12,640 12,640 45 Nickel Ore Million tonnes - 189 189 46 Ochre tonne 54,942,176 89,319,089 144,261,265 47 Perlite '000 tonnes 428 1,978 2,406 48 Platinum Group of tonnes of metal content - 1,57 1,57 49 Potash Million tonnes - 1,674,401 1,674,401 51 Pyrophyllite tonne 34,778,650 261,57,01 29,62,84,351 53 Quartzite 0000 tonnes 16,026 - 16,026 54 Rock Phosphate tonne 34,778,650 261,507,01 29,62,84,351 54 Rock Salt '000 tonnes 15,331 580 15,911 55 Rock Salt '000 tonnes 0	42	Marl	tonne	139,976,150	11,704,870	151,681,020
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	43	Mica	Kg.	190,741,448	341,495,531	532,236,979
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	44	Molybdenum				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Ore	tonne	-	19,286,732	19,286,732
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Contained MOS ₂			12,640	12,640
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	45	Nickel Ore	Million tonnes	-	189	189
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	46	Ochre	tonne	54,942,176	89,319,089	144,261,265
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	47	Perlite	'000 tonnes	428	1,978	2,406
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	48	Platinum Group of	tonnes of metal	-	15.7	15.7
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Metals (PGM)	content			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	49	Potash	Million tonnes	-	21,816	21,816
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	50	Pyrite	'000 tonnes	-	1,674,401	1,674,401
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	51	Pyrophyllite	tonne	23,275,451	32,807,451	56,082,902
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	52	Quartz/ Silica Sand	'000 tonnes	429,223	3,069,808	3,499,031
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	53	Quartzite	000' tonnes	86,599	1,164,649	1,251,248
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	54	Rock Phosphate	tonne	34,778,650	261,505,701	296,284,351
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	55	Rock Salt	'000 tonnes	16,026	-	16,026
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	56	Ruby	Kg	236	5,112	5,348
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	57	Sapphire	Kg	-	450	450
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	58	Shale	'000 tonnes	15,331	580	15,911
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	59	Sillimanite	tonne	4,085,052	62,902,385	66,987,437
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	60	Silver				
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Ore	tonne	187,558,668	279,426,291	466,984,959
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Metal] [8,039.57	19,588.68	27,628.25
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	61	Slate	'000 tonnes	0	2,369	2,369
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	62	Sulphur (Native)	'000 tonnes	-	210	210
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	63	Talc/Steatite/Soapstone	'000 tonnes	90,026	178,996	269,022
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	64	Tin				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Ore	tonne	7,131	83,719,066	83,726,197
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Metal	1	1,132.43	101,142.41	102,274.84
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	65	Titanium minerals	tonne	22,030,223	371,965,694	393,995,917
$ \begin{array}{ c c c c c c c c } \hline Ore & tonne & - & 87,387,464 & 87,387,464 \\ \hline Contained WO_3 & - & 142,094.35 & 142,094.35 \\ \hline & Vanadium & & & & & \\ \hline Ore & tonne & 410,955 & 24,307,933 & 24,718,888 \\ \hline Ore & tonne & 410,955 & 24,307,933 & 24,718,888 \\ \hline & Contained V_2O_5 & & & & & & \\ \hline & 68 & Vermiculite & & & & & & & & \\ \hline & 69 & Wollastonite & & & & & & & & & & & \\ \hline & 70 & Zircon & tonne & & 1,347,470 & & 1,786,482 & & & & & & & & \\ \hline \end{array} $	66	Tungsten				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Ore	tonne	-	87,387,464	87,387,464
		Contained WO ₃		-	142,094.35	142,094.35
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	67	Vanadium				
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Ore	tonne	410,955	24,307,933	24,718,888
68Vermiculite1,704,007803,0032,507,01069Wollastonite2,487,12214,082,75116,569,87370Zircontonne1,347,4701,786,4823,133,952		Contained V ₂ O ₅	1 1	1,602.72	63,284.45	64,887.17
69Wollastonite2,487,12214,082,75116,569,87370Zircontonne1,347,4701,786,4823,133,952	68	Vermiculite	1 F	1,704.007	803.003	2,507.010
70 Zircon tonne 1,347,470 1,786,482 3,133,952	69	Wollastonite	1 1	2,487,122	14,082,751	16.569.873
	70	Zircon	tonne	1,347,470	1,786,482	3,133,952

Figures rounded off.

N.E. :- Not Estimated

खान मंत्रालय / Ministry of Mines भारतीय खान ब्यूरो / Indian Bureau of Mines मुख्य खान नियंत्रक का कार्यालय / Office of the Chief Controller of Mines ******

No. R-11013/1/MISC/MP-SOM(SZ)/2006-CCOM-Vol-III Nagpur,dated : 04/11-2013 los

CCOM'S CIRCULAR NO. 5/2013

Subject: Approval of Mining Plan for the applications filed with State Government prior to 24-06-2009-withdrwal of CCOM Circular No. 7/2011 dated 06-09-2011.

Ministry of Mines, Government of India vide letter No. 7/60/2006-MIV dated 24/06/2009 issued guidelines regarding submission of mineral concession proposals under Section 5(1) of the Mines and Minerals (Development & Regulation) Act, 1957. The guidelines, inter alia, specified, that-

• "in future the establishment of the existence of mineralization should not merely be indicative but should be sufficiently quantified through documentary evidence, etc., so as to enable preparation of an optimal and scientific mining plan. In other words, even if not formally prospected, the detail should be of a level akin to prospecting" (para 4.2) and "as such details indicating proven/probable reserves as per UNFC and grade of ore, along with documentary proof of mineralization are to be enclosed with the proposal". (para 4.3)

The CCOM's Circular No. 7/2011 dated 06-09-2011 states that for applications for grant of Mining Lease applied prior to 2008 for homogenous mineral deposits wherein the mineral resources could not be estimated with the UNFC codes in its totality, the mining plan may be approved subject to the fulfillment of certain technical conditions as prescribed in the circular.

It is seen that this instruction is not in conformity with the guidelines circulated by the Ministry of Mines, as extracted above. In view of this reason, and since the guidelines dated 24-06-2009 issued by Ministry cover all types of minerals, including homogenous minerals, the CCOM circular no. 7/2011 dated 06-09-2011 stands withdrawn.

(Ranjan Śahai) Controller of Mines

Copy to :-

- 1) The Controller of Mines (NZ/CZ/SZ), Indian Bureau of Mines, Ajmer/ Nagpur / Bangalore for information.
- 2) The Regional Controller of Mines/DCOM-OIC, Indian Bureau of Mines, Ajmer / Bangalore / Bhubaneshwar / Chennai / Dehradun / Goa / Hyderabad / Jabalpur / Kolkata / Nagpur / Ranchi / Udaipur for information & circulation to all ROP's.
- 3) Shri. Ajay Kadian, Under Secretary to the Government of India, Ministry of Mines, New Delhi with reference to letter No. 10/32/2013-MV dated 11th October, 2013.
- 4) The Technical Secretary, IBM, Nagpur.

(Ranjan Sahai) Controller of Mines

SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES RENDERED BY <u>MINING RESEARCH CELL</u> INDIAN BUREAU OF MINES (with effect from- 01.03.2013)

Sr. No.		Category of Personnel		Rates for A-Category Mines (Rs.)	Rates for B-Category Mines (Rs.)
1.	A	A DCOM / RMG / SMG / Sr. ACOM /ACOM / JMG		4,200/-	2,500/-
	В	AME	/ AMG / STA / JTA / D'Man	2,400/-	1,500
	С	Group)°C'	1,500/-	900/-
2.	Cha	arges foi	Sub-contractor's services		
		1. Sub-contractor's Fee		Actual charges contractor.	by the sub-
	2. Service Charges of IBM		5% of sub-contrac subject to minimu	tor's fee m Rs.5,000/-	
3.	Cha	arges	 First Three Copies 	20,000/-	10,000/-
	for		 Each additional copy 	5,000/-	1,500/-
	repo	ort	 Each additional copy at later stage after completion of the project 	10,000/- 5,000/-	
4.	Due	e diligen	ce of Mineral Property	5% of the total cos	st.
5.	Service Taxes Service Tax & Educational Constraints		ucational Cess		
6.	Agr	eement	Registration Charges	Actual to be borne	e by the party.
7.	Sample analysis (Water & Soil) Rates as notified by CPCE MOEF.		by CPCB &		
8.	Monitoring charges for Air Quality / Station / Season		Rs.19,716/- say Rs.20,000/-	Rs.15,816/- say Rs.16,000/-	

NOTE :

For the purpose of levying the above charges for consultancy services of Mining Research Cell, the following clarifications will apply :

- 1. Charges towards installation / depreciation of instruments / equipment and consumable required for the field study will be borne by the client.
- 2. In case of B-Category Mines, no charge will be leviable for the days spent in journey from the IBM Headquarter to the mine and from the mine to the IBM Headquarter.
- 3. In addition to the charges mentioned above, the client will be required to pay for the expenses of TA & DA admissible to the individuals for the entire period of their tour undertaken in connection with the services, except in the case of B-Category Mines who will not be charged the TA & DA expenses.
- 4. If the client wants, the personnel of IBM may undertake journey by air even if they are not entitled for the same under general rules of the Government, provided that the client pays for the same.
- 5. For field work, transport has to be provided by the client. But, if he is unable to do so and if departmental vehicle is available, this may be provided on payment of actual for POL and other contingent expenses etc.

- 6. The rates mentioned above are exclusive of labour charges in connection with the cleaning of bushes, assistance in survey work, drawing of samples etc. These are to be charged for separately at actual if the labour is not provided by the client.
- 7. Any other ancillary work such as Chemical analysis, Mineralogical and other tests of Ore dressing investigation, if done in the IBM Laboratory / Pilot Plant / other recognized laboratories will be payable by the client separately as per the Schedule of charges fixed by the Government in this respect from time to time.
- 8. In case of long term investigations, (i.e. which has not been completed within one year from the date of receipt of advance), the above schedule will apply for the work done within one year from the date of receipt of advance and for the work done during each successive period of one year or part thereof, the schedule of charges as prevailing at the beginning of the period concerned will apply.

Mines will be categorised as follows:

- **A-Category** : A mine where the average employment exceeds 75 in workings below ground or 150 in all the mine or a mine where work is being carried on by a system of deep hole blasting and / or with the help of heavy machinery for drilling, excavation and transport of earth, stone, minerals etc.
- **B-Category** : Any other mine than that covered under A-Category Mine.

Explanation : The expression 'average employment' means the average per day of the total employment of the mine during the preceding quarter (obtained by dividing the number of working days excluding rest days and other non-working days).

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GOVERNMENT OF INDIA MINISTSRY OF MINES INDIAN BUREAU OF MINES ORE DRESSING DIVISION

SCHEDULE OF CHARGES FOR THE ORE DRESSING DIVISION, INDIAN BUREAU OF MINES WITH EFFECT FROM 1st MARCH, 2013

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)	
А.	LABORATORY SCALE ORE DRESSING INVESTIGATIONS:			
Ι	Full Scale Laboratory Investigations (Involving Physical , Chemical and Mineralogical characterisation)			
1.	Complete Laboratory Scale Ore Dressing investigation involving studies for recovery of one mineral by various physical beneficiation methods (per sample)	2,05,000	1,45,000	
2	Complete Laboratory Scale Ore Dressing investigation involving studies for recovery of two or more minerals by various physical beneficiation methods (per sample)	4,10,000	2,90,000	
II	Amenability Tests Involving Single Preparation, Chemical Analysis and	Beneficiation Technique Mineralogy)	e (Including Sample	
1.	Flotation	1,65,000	1,20,000	
2.	Gravity Separation (Jigging, Tabling, Heavy Media Separation, etc.)	1,65,000	1,20,000	
3.	Magnetic Separation	1,65,000	1,20,000	
4.	Deflocculation and bleaching studies (with PSA, Brightness, Chemical Analysis)	1,65,000	1,20,000	
5.	Thickening / Filtration Studies	1,65,000	1,20,000	
6.	Air Classification /Wet Classification	1,65,000	1,20,000	
7.	Electrostatic Separation	1.65.000	1.20.000	

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
III	II Single Ore Dressing Unit Operation Under Specified Conditions Including Chemics Analysis and Mineralogy (Per Test)		ons Including Chemical
1.	Flotation	35,000	25,000
2.	Gravity Separation (Jigging, Tabling, Humphreys Spiralling, Heavy Media Separation, Floatex Density Separation, Stub Cycloning etc)	35,000	25,000
3.	Magnetic Separation , Dry or Wet	35,000	25,000
4.	Bond's Work Index Determination (Ball / Rod Mill) (Per sample)	40,000	28,000
5.	Grindability Index Determination (Per Sample)	25,000	18,000
6.	Cyclosizing	25,000	18,000
7.	Attrition Scrubbing followed by Sizing	25,000	18,000
8.	Tumbler Index Determination	25,000	18,000
9.	Shatter Index Determination	25,000	18,000
10.	Screening	17,000	12,000
11.	Particle Size Analysis (Sub micron sizes) (Per Test)	7,000	5,000
12.	Brightness Measurement (Per sample)	1,700	1,200
13.	Surface Area by BET Technique per sample (Minimum 10 samples)	5,000	3,500
14.	Bottle Roll Cyanidation and CIP (Per test)	70,000	50,000

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)	
В	PILOT PLANT SCALE INVESTIGATIONS:			
Ι	Complete Pilot Plant Investigation (Quantity of ore to be specified by IBM depending on the complexity of the sample)			
а	Studies for recovery of one mineral	4,10,000	2,90,000	
b	Studies for recovery of two or more minerals	6,15,000	4,35,000	
II	Pilot Plant Test comprising of a single Ore Dressing Unit Operation under specified conditions including chemical and mineralogical analysis. (Quantity of Ore to be specified by IBM)			
1.	Gravity Separation viz Heavy Media Separation, Jigging, Tabling with Classification, Spiralling, Bowl Concentration, GEC Duplex Table, Centrifugal Separator, Floatex Density Separator etc.)	2,05,000	1,45,000	
2.	Magnetic Separation	2,05,000	1,45,000	
3.	Column Floatation	3,30,000	2,35,000	
4.	Scrubbing and Classification	2,05,000	1,45,000	
5.	Classification / Hydrocycloning	2,05,000	1,45,000	
6.	Crushing and Screening	1,65,000	1,20,000	
7.	Sintering Studies	3,30,000	2,35,000	
8.	Pelletisation Studies	3,30,000	2,35,000	
III	Techno-Economic Pre-Feasibility Studies on the basis of available laboratory and pilot plant report (for selection of equipment and operating costs)	4,10,000		
NOTE	:			
1.	The above charges do not include cost	of production of concentra	ate for end use testing.	
2.	The charges for Indian companies/ organizations which are directly involved in consultancy jobs in mining and exploration for foreign samples are to be levied Twice the charges of "A" Category Mines.			
3.	The charges for overseas companies/organizations which are directly involved in consultancy jobs in mining and exploration are to be levied Three times the charges of "A" Category Mines.			
4.	Service Taxes and Education Cess Extra (as applicable).			
5.	'B' category charges would be applicable only after producing the 'B' category certificate of recent time/date issued by respective Regional Controller of Mines, Indian Bureau of Mines.			

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
C.	SCHEDULE OF CHARGES FOR (CHEMICAL ANALYSIS	:
1.	Quantitative chemical analysis of radicals by Classical Wet Analysis method	Rs.850/- for the first radical and Rs.600/- for each of the subsequent radical	Rs.600/- for the first radical and Rs.450/- for each subsequent radicals
2.	Elemental Analysis using instruments viz. XRF, AAS, ICPA, FTIR, IonRs.600/- for the firs Chromatograph, Mercury Analyser, radical and Rs.300/- for Flame Photo Meter, Isotope each of the subsequen Analyser, UV / VIS Spectrometer, radical C & S Analyser etc.		Rs.450/- for the first radical and Rs.210/- for each of the subsequent radicals
3.	XRF Scanning per sample	Rs.1,000/-	Rs. 700/-
4.	Proximate Analysis of Coal or Determination of Fixed Carbon in Coal	Rs. 600/-	Rs.450/-
5.	Determination of Volatile Matter / Ash / Moisture in Coal	Rs.200/- for each radical	Rs. 140/- for each radical
6.	Platinum Group of Minerals for one element of PGM Analysis, Estimation of Gold by Fire Assay	Rs.4,000/- for the first radical and Rs.350/- for subsequent radicals	No concession for small mines.
7.	Estimation of Gold by Fire Assay	Rs.1,200/- per radical	Rs. 850/- per radicals
8.	Sample preparation upto 500 gm including crushing, grinding and drawing 25 gm representative sample of minus 300# size for Chemical Analysis	Rs. 175/- per sample	Rs.130/- per sample
9.	Environmental Analysis	Standard cost as proposed by Central Pollution Control Board	No concession for 'B' Category mines

NOTE:

The Controller General, Indian Bureau of Mines shall have the discretionary power to charge 50% of that of 'B' Category mines for **Chemical Analysis** for academic & research students on production of recommendation letter from their respective head of academic institutions.

Sl.No.	Item of Work	Charges for 'A' Category Mines (Rs.)	Charges for 'B' Category Mines (Rs.)
D	SCHEDULE OF CHARGES FOR N	MINERALOGICAL STU	DIES:
1.	Mineralogical examination on rocks, ores, minerals and sinters etc. by microscopic studies (only mineral identification).	2,000	1,400
2.	* Detailed mineralogical studies for identification and quantitative estimation of minerals and liberation characteristics involving mineral separation by heavy liquid and magnetic separation	6,000	4,200
3.	* Mineralogical studies to assess the amenability to mineral beneficiation involving size analysis, Frantz Isodynamic Magnetic Separation including necessary Chemical Analysis	10,000	7,000
4.	*Electron Probe Micro Analyser (EPMA) studies (Per hour per sample)	5,000	3,500
5.	Identification of mineral phases in ore and rock samples by X-Ray Diffraction / DTA / DTG (Per sample).	3,000	2,100
6.	Photomicrographs (three prints)	1,000	700
7.	Determination of specific gravity (by Walker steel yard balance)	200	140
8.	Determination of Hardness by Mohs Scale	165	120

NOTE:

The Controller General, Indian Bureau of Mines shall have the discretionary power to charge 50% of that of 'B' Category mines for **Mineralogical Studies** to be carried out for academic research students on production of recommendation letter from a respective head of academic institutions.

* The investigation will be considered as one limited ore dressing investigation.

E. <u>SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES PER DAY</u> <u>RENDERED BY OFFICERS OF ORE DRESSING DIVISION, INDIAN</u> <u>BUREAU OF MINES IN INDIA AND FOREIGN ASSIGNMENTS</u>

Sl.No.	ITEM OF WORK	CONSULTANCY CHARGES (FOR INDIAN ASSIGNMENTS)	CONSULTANCY CHARGES (FOR FOREIGN ASSIGNMENTS)
1.	Officers of Group 'A ' Category'	4,200	12,000
2.	Officers of Group 'B' Category'	2,400	7,200
3.	Officers of Group 'C' Category'	1,500	4,500
		I	

NOTE:

1.	Actual travel expenses (to and fro) of the officers including hotel accommodation		
	as per their entitlement is to be borne by the client.		
2.	If the client prefers, the technical personnel may be allowed to travel by higher class		
	even if they are not allowed under the Govt. rules		
3	The daily rates are payable for the total period of absence from the head quarter		
	inclusive of the period of journey.		
4.	The following job will be carried out under consultancy services and the		
	charges will be calculated based on the quantum of work, actual man-power		
	involved in the job and man-days.		
	Plant Auditing studies of a mineral processing plant.		

SCHEDULE OF CHARGES FOR CONSULTANCY SERVICES RENDERED BY <u>TECHNICAL CONSULTANCY</u>, INDIAN BUREAU OF MINES (With effect from- 01.03.2013)

1.	Charges for Services of IBM personnel (Basic Rate Per Day)			
	Category of personnel	Rates for	Rates for	
		Category-A	Category-B	
		Mines	Mines	
		(Rs.)	(Rs.)	
		Revised	Revised	
	Group-A Officers	4,200/-	2,500/-	
	Group-B Officers	2,400/-	1,500/-	
	Group-C Officers	1,500/-	900/-	
2.	Bulk Sample Collection	As per actual	As per actual	
		Man-days	Man-days	
3.	Geological Mapping on 1:1000 / 1:2000 Scale	46,000/-		
4.	Geological Logging of boreholes (Charge per meter)	200/-		
5.	Topographic / Mine Survey	46,000/-		
6.	Mine Excavation / Dump Measurement	46,000/-		
7.	Connection of Mining Lease with National Grid	46,000/-		
8.	Mine Planning & Designing	As per actual	As per actual	
		Man-days	Man-days	
9.	Preparation of Pre-feasibility Report	As per actual	As per actual	
		Man-days	Man-days	
10.	Due diligence of Mineral Property	5% of total cost	5% of total cost	
11.	Charges for the Report*			
	First 3 copies.	20,000/-	10,000/-	
		5 000/	4 500/	
		5,000/-	1,500/-	
	• Each additional copy requested at the time of	40.000/	5 000/	
	work order.	10,000/-	5,000/-	
	Additional copy requested at a later stage after			
	completion			
	or the project.			

* For Plates, extra charges, as per actual may be levied considering the volume of work.

NOTE : For the purpose of levying the above charges for technical consultancy services, the following clarifications will apply :

- 1. Service Tax, Education Cess and Agreement Registration Charges extra.
- 2. The cost of deployment of IBM personnel depending on the nature of terrain and quantum of work involved in the assignment will be charged extra for Item Numbers at Sr. Nos. 2, 3, 5, 7, 8 & 9 as per the Basic Rate per day mentioned at Sr.No.1.
- 3. In case of B-Category Mines, no charge will be leviable for the number of days spent in journey from the IBM Headquarter, Nagpur, to the mine-site and from the mine-site to IBM Headquarter, Nagpur.

4. If the client wants, the personnel of IBM may undertake journey by air even if they are not entitled for the same under general rules of the Government, provided that the client pays for the same.

2

- 5. The rates mentioned above are exclusive of labour charges for field work assistance for Items at Sr. Nos.2, 3, 4, 5, 6, 7, 8 & 9. These are to be charged for separately at actual if the labour is not provided by the client.
- 6. Any other ancillary work such as Chemical analysis, Mineralogical and other tests of Ore dressing investigation, if done in the IBM Laboratory / Pilot Plant, will be payable by the client separately as per the Schedule of charges fixed by the Government from time to time, in this respect.
- 7. In addition to the charges mentioned above, the client will be required to pay the expenses of TA & DA admissible to the individual for the entire period of their tour undertaken in connection with the services, except in the case of B-Category Mines who will not be charged the TA & DA expenses.
- 8. Mines will be categorised as follows :
- **A-Category** : A mine where the average employment exceeds 75 in workings below ground or 150 in all the mine or a mine where work is being carried on by a system of deep hole blasting and / or with the help of heavy machinery for drilling, excavation and transport of earth, stone, minerals etc. OR prospect area covering more than 75 Hect.
- **B-Category**: Any other mine than that covered under A-Category OR Prospect area upto 75 Hect.

Explanation: The expression 'average employment' means the average per day of the total employment of the mine during the preceding quarter (obtained by dividing the number of working days excluding rest days and other non-working days).

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Annexure - XIV-A

State	Total No. of RPs granted by the State Government till date (as on 31.03.2014)	No. of RPs where final exploration data submitted to IBM
Andhra Pradesh	53	41
Arunachal Pradesh	01	00
Chhattisgarh	42	21
Gujarat	04	00
Jharkhand	04	01
Karnataka	66	26
Kerala	01	00
Madhya Pradesh	91	24
Maharashtra	10	08
Manipur	01	00
Orissa	26	19
Rajasthan	74	27
Uttar Pradesh	21	08
West Bengal	04	01
All India	398	176

Status of Reconnaissance Permits in India as on 31.03.2014

Annexure - XIV-B

State	Total No. of PLs granted by the State Government from Nov. 2007 to 31.03.2014)	No. of PLs where final exploration data submitted to IBM
Andhra Pradesh	90	30
Arunachal Pradesh	08	00
Chhattisgarh	22	16
Gujarat	16	00
Himachal Pradesh	03	02
Jharkhand	18	01
Karnataka	05	04
Kerala	01	00
Madhya Pradesh	405	23
Maharashtra	38	01
Manipur	14	00
Odisha	01*	01
Rajasthan	135	04
Tamil Nadu	10	00
Uttarakhand	35	00
All India	801	82

Status of Prospecting Licenses in India as on 31.03.2014

* Granted on 17th August, 2006 i.e. prior to November, 2007

State Wise Summary of Lease Distribution
As On 31/03/2013
(All India)

SI.	State	No. of	Lease area
NO.		Leases	(Hect.)
1	Andhra Pradesh	2001	68009.35
2	Assam	7	889.50
3	Bihar	9	1382.66
4	Chhattisgarh	308	22723.20
5	Goa	337	24522.12
6	Gujarat	1104	29607.04
7	Himachal Pradesh	45	2546.68
8	Haryana	110	10974.99
9	Jammu & Kashmir	57	2450.92
10	Jharkhand	294	35028.70
11	Karnataka	594	48841.60
12	Kerala	87	3071.82
13	Manipur	2	610.17
14	Meghalaya	18	606.19
15	Madhya Pradesh	1117	34455.74
16	Maharashtra	261	16061.86
17	Odisha	490	74694.74
18	Rajasthan	3185	106139.13
19	Sikkim	3	96.32
20	Tamil Nadu	924	9890.98
21	Uttar Pradesh	23	3964.70
22	Uttarakhand	86	1280.51
23	West Bengal	42	400.41
	Total	11104	498249.33

Annexure - XIV-D

MINERAL WISE SUMMARY OF LEASE DISTRIBUTION As on 31/03/2013 (All India)

Sl.	Mineral	No. of	Lease Area
No.		Leases	(Hect.)
1	Agate	3	59.62
2	Amethyst	4	10.63
3	Apatite	2	20.17
4	Asbestos	33	1566.25
5	Ball Clay	75	2744.59
6	Barytes	164	2541.54
7	Bauxite	337	30329.10
8	Borax	1	159.00
9	Calcite	90	1573.49
10	Chalk	156	639.79
11	China clay	516	15612.20
12	Chromite	35	9432.58
13	Clay (others)	99	1186.11
14	Copper Ore	16	9862.96
15	Corundum	11	66.62
16	Diamond	2	275.96
17	Diaspore	12	94.38
18	Dolomite	542	7536.87
19	Dunite	1	14.28
20	Epidote	2	10.00
21	Felsite	6	102.29
22	Felspar	947	7271.79
23	Fireclay	248	5071.75
24	Flint Stone	2	11.87
25	Fluorite	16	1670.71
26	Garnet	100	1664.37
27	Garnet(Gem)	3	51.03
28	Gold	13	7186.41
29	Graphite	110	3762.07
30	Gypsum	106	19102.32
31	Iolite	11	104.35
32	Iron ore	774	93790.37
33	Jasper	5	211.70
34	Kyanite	32	3151.89
35	Laterite	193	2428.61
36	Lead & Zinc ore	14	7791.41
37	Lime kankar	7	43.63

Sl.	Mineral	No. Of	Lease Area
No.		Leases	(Hect.)
38	Limeshell	26	3985.54
39	Limestone	2013	155452.96
40	Magnesite	32	1923.81
41	Manganese ore	323	21745.52
42	Marl	2	9.15
43	Mica	264	5613.52
44	Moulding sand	40	904.18
45	Ochre	168	3290.09
46	Perlite	1	144.88
47	Phosphorite	15	2831.78
48	Pyrophyllite	94	1299.25
49	Pyroxenite	11	95.39
50	Quartz	2193	16506.59
51	Quartzite	83	1456.78
52	Ruby	6	130.00
53	Sand (others)	48	10026.07
54	Sapphire	1	673.40
55	Shale	45	566.22
56	Silica sand	475	14494.11
57	Sillimanite	6	2823.26
58	Slate	18	683.31
59	Steatite	476	15355.65
60	Tin	15	320.95
61	Vermiculite	15	259.64
62	White clay	25	210.92
63	White shale	14	71.63
64	Wollastonite	7	222.02
	Total	11104	498249.33

for which royalty is chargeable on ad valorem basis not linked to any international benchmark price

Month : March 2014

State / Mineral / Grades		Avg. Price	State / Mineral / Grades	А	vg. Price
India		-	Felspar	Rs./t	264
Bauxite	Rs./t		Fireclay	Rs./t	198
Non-Metallurgical			Felsite	Rs./t	738
Cement		441	Flint Stone	Rs./t	200
Abrasive		346	Fluorite (graded)	Rs./t	
Refractory		757	Up to 30% CaF2		NA
Chemical		744	30-70% CaF2		4595
Chromite	Rs./t		70-85% CaF2		8405
Lumps			Above 85% CaF2		NA
Up to 40% Cr2O3		NA	Garnet (abrasive)	Rs./t	6974
40 - 52% Cr2O3		NA	Garnet (gem)	Rs./kg	NA
Above 52% Cr2O3		NA	Graphite (r.o.m.)	Rs./t	
Fines		2 1 5 2	With less than 40% fixed carbon		457
Up to 40% Cr2O3		2452	With 40% or more fixed carbon		NA
40 - 52% Cr2O3		11670	Gypsum	Rs./t	473
Above 52% Cr2O3		14353	Jasper	Rs./t	NA
Concetrates	D (10407	Kaolin (natural)	Rs./t	232
Iron Ore (lumps)	Rs./t	1024	Kaolin (processed)	Rs./t	3343
Below 55% Fe		1034	Kyanite	Rs./t	
55 - 58% Fe		2239	Up to 40% Al2O3		NA
58 - 60% Fe		2095	Above 40% Al2O3		3269
60 - 62% Fe		5148 4191	Sillimanite	Rs./t	5848
65% Fe & showe		4101	Laterite	Rs./t	
Use Ore (fines)	De /t	4020	Non-Metallurgical		
Below 55% Fe	13.71	1215	Cement		194
55 58% Fe		1213	Abrasive		NA
58 - 60% Fe		1990	Chemical		500
60 - 62% Fe		1990	Refractory		NA
62 - 65% Fe		2307	Magnesite	Rs./t	2244
65% Fe & above		3115	Marl	Rs./t	NA
Iron Ore Conc.	Rs./t	NA	Mica (crude)	Rs./kg	28
Manganese Ore	Rs./t		Mica (waste & Scrap)	Rs./kg	NA
MnO2		33000	Moulding Sand	Rs./t	215
Up to 25% Mn		2354	Perlite	Rs./t	NA
25 - 35% Mn		4661	Pyrites	Rs./t	NA
35 - 46% Mn		11302	Pyrophyllite	Rs./t	772
Above 46% Mn		15118	Pyroxenite	Rs./t	NA
Agate	Rs./t	NA	Quartz	Rs./t	248
Apatite	Rs./t	2145	Ouartzite	Rs./t	450
Phosphorite	Rs./t		Silica Sand	Rs./t	272
Up to 25% P2O5		442	Sand (others)	Rs./t	NA
25 - 30% P2O5		NA	Salt (rock)	Rs./t	NA
Above 30% P2O5		7147	Shale	Rs/t	152
Asbestos	Rs./t		Slate	Rs /t	NA
Amphibole		NA	Steatite	Rs/t	1.171
Ball Clay	Rs./t	495	Insecticide (Filler) grade	10.70	677
Barytes	Rs./t		Other than insecticide (Filler) grade		1548
White		5753	Selenite	Rs/t	NA
Off Colour		3008	Vermiculite	Rs /t	858
Calcite	Rs./t	362	Wollastonite	Rs /t	851
Chalk	Rs./t	430	Aluminium (Ime Price)*	\$/mt	1704
Clay (others)	Rs./t	194	Conner (Ime Price)*	\$/mt	6668
Corundum	Rs./kg	NA	Load (Imo Price)*	\$/mt	2056
Corundum (ruby)	Rs./kg	NA	Nickal (Imo Drice)*	\$/mt	15660
Diamond	Rs./crt	16673	Tin (Ime Price)*	\$/mt	22000
Diaspore	Rs./t	2259	Time (Interfice)*	\$/111L €/mat	20098
Dunite	Rs./t	263	Linc (line Frice)*	\$/1ft	2014

NA : Not Available lme: London Metal Exchange (U) : Under Reference lbm: London Bullion Market

mt : Metric Tonne t : Tonne tr oz : Troy Ounce

\$: Dollar c:Cents

* : Average Sale Price for March 2014, Source - MINERALS & METALS REVIEW, April 2014. Daily average prices have been taken for Gold & Silver.

for which royalty is chargeable on ad valorem basis not linked to any international benchmark price

Month : March 2014

State / Mineral / Grades	А	vg. Price	State / Mineral / Grades		Avg. Price
Silver (lbm Price)*	c/tr oz	2074	Non-Metallurgical		
Gold (lbm Price)*	\$/tr oz	1336	Abrasive		NA
Andhra Pradesh			Refractory		NA
Iron Ore (lumps)	Rs./t		Iron Ore (lumps)	Rs./t	
Below 55% Fe		624	Below 55% Fe		NA
55 - 58% Fe		NA	55 - 58% Fe		NA
58 - 60% Fe		NA	58 - 60% Fe		NA
60 - 62% Fe		NA	60 - 62% Fe		NA
62 - 65% Fe		NA	62 - 65% Fe		4157
Iron Ore (fines)	Rs./t		65% Fe & above		4782
Below 55% Fe		356	Iron Ore (fines)	Rs./t	
55 - 58% Fe		NA	Below 55% Fe		NA
60 - 62% Fe		NA	55 - 58% Fe		2001
62 - 65% Fe		NA	58 - 60% Fe		2246
Manganese Ore	Rs./t		60 - 62% Fe		2503
MnO2		NA	62 - 65% Fe		2810
Up to 25% Mn		2188	Clay (others)	De /t	5114 NA
25 - 35% Mn		2895	Craphite (r.e.m.)	NS./1	INA
35 - 46% Mn		2895	With loss than 40% fined and an	K8./t	450
Above 46% Mn	D (NA 2145	With less than 40% lixed carbon	Da /t	450
Apatite	Rs./t	2145		KS./L	213
Asbestos	Ks./t			NS./1	400
Amphibole	D (NA 152	Quarizite	KS./L	1050
Ball Clay	Rs./t	452	Steatite	Ks./t	274
Barytes	Rs./t		Insecticide (Filler) grade		NA
White		6820	Goa	D //	
Off Colour	D - 4	3017	Bauxite	KS./t	
Clay (others)	Rs./t	106	Non-Metallurgical		NT 4
Feispar	Rs./t	283	Linen One (Jumine)	Da /t	NA
Fireclay	Rs./t	291	Polow 55% Fo	K8./t	NLA
Garnet (abrasive)	Rs./t	1257	55 58% Eq		INA NA
Kaolin (natural)	Rs./t	1/0	55 - 58% PC		NA
Sillimanite	Rs./t	5694	60 - 62% Fe		NA
Laterite	Rs./t		62 - 65% Fe		NA
Non-Metallurgical			65% Fe & above		NA
Cement	D (1	151	Iron Ore (fines)	Rs./t	
Mica (crude)	Rs./kg	28	Below 55% Fe		NA
Mica (waste & Scrap)	Rs./kg	NA	55 - 58% Fe		NA
Pyrophyllite	Rs./t	701	58 - 60% Fe		NA
Quartz	Rs./t	214	60 - 62% Fe		NA
Quartzite	Rs./t	346	62 - 65% Fe		NA
Silica Sand	Rs./t	169	65% Fe & above		NA
Sand (others)	Rs./t	NA	Iron Ore Conc.	Rs./t	NA
Shale	Rs./t	148	Manganese Ore	Rs./t	
Steatite	Rs./t		Up to 25% Mn		NA
Insecticide (Filler) grade		256	25 - 35% Mn		NA
Other than insecticide (Filler) grade		1157	35 - 46% Mn		NA
Vermiculite	Rs./t	524	Above 46% Mn		NA
Bihar			Gujarat		
Mica (waste & Scrap)	Rs./kg	NA	Bauxite	Rs./t	
Pyrites	Rs./t	NA	Non-Metallurgical		
Quartz	Rs./t	NA	Cement		526
Quartzite	Rs./t	454	Abrasive		346
Steatite	Rs./t		Refractory		757
Insecticide (Filler) grade		NA	Manganese Ore	Rs./t	
Chhattisgarh			Up to 25% Mn		NA
Bauxite	Rs./t		Agate	Rs./t	NA

NA : Not Available

lme: London Metal Exchange (U) : Under Reference

c:Centslbm: London Bullion Market

* : Average Sale Price for March 2014, Source - MINERALS & METALS REVIEW, April 2014. Daily average prices have been taken for Gold & Silver.

mt : Metric Tonne t : Tonne \$: Dollar tr oz : Troy Ounce

for which royalty is chargeable on ad valorem basis not linked to any international benchmark price

Month : March 2014

State / Mineral / Grades		Avg. Price	State / Mineral / Grades	Α	vg. Price
Ball Clay	Rs./t	NA	Kaolin (processed)	Rs./t	NA
Chalk	Rs./t	430	Kyanite	Rs./t	
Clay (others)	Rs./t	168	Up to 40% Al2O3		NA
Fireclay	Rs./t	71	Above 40% Al2O3		NA
Fluorite (graded)	Rs./t		Laterite	Rs./t	
Up to 30% CaF2		NA	Non-Metallurgical		
Gypsum	Rs./t	NA	Cement		NA
Kaolin (natural)	Rs./t	167	Mica (crude)	Rs./kg	NA
Kaolin (processed)	Rs./t	1352	Mica (waste & Scrap)	Rs./kg	NA
Laterite	Rs./t		Pyroxenite	Rs./t	NA
Non-Metallurgical			Quartz	Rs./t	289
Cement		NA	Quartzite	Rs./t	NA
Abrasive		NA	Silica Sand	Rs./t	NA
Chemical		NA	Steatite	Rs./t	
Marl	Rs./t	NA	Insecticide (Filler) grade		NA
Perlite	Rs./t	NA	Karnataka		
Quartz	Rs./t	185	Bauxite	Rs./t	
Silica Sand	Rs./t	122	Non-Metallurgical		
Steatite	Rs./t		Cement		253
Insecticide (Filler) grade		NA	Chromite	Rs./t	
Haryana			Lumps		
Slate	Rs./t	NA	Up to 40% Cr2O3		NA
Himachal Pradesh			40 - 52% Cr2O3		NA
Salt (rock)	Rs./t	NA	Fines		
Shale	Rs./t	NA	Up to 40% Cr2O3		NA
Jammu & Kashmir			40 - 52% Cr2O3		NA
Gypsum	Rs./t	300	Linen Ore (Jumps)	Do /t	INA
Jharkhand			Delow 55% Fe	K8./t	660
Bauxite	Rs./t		55 58% Eq		2000
Non-Metallurgical			55 - 58% Fe		3259
Cement		NA	60 - 62% Fe		3317
Iron Ore (lumps)	Rs./t		62 - 65% Fe		3971
Below 55% Fe		1657	65% Fe & above		3971
55 - 58% Fe		3300	Iron Ore (fines)	Rs./t	
58 - 60% Fe		3300	Below 55% Fe		1717
60 - 62% Fe		3704	55 - 58% Fe		2805
62 - 65% Fe		3704	58 - 60% Fe		2805
65% Fe & above		NA	60 - 62% Fe		2805
Iron Ore (fines)	Rs./t		62 - 65% Fe		3499
Below 55% Fe		741	65% Fe & above		3850
55 - 58% Fe		1278	Iron Ore Conc.	Rs./t	NA
58 - 60% Fe		1278	Manganese Ore	Rs./t	
62 65% Fe		2204	Up to 25% Mn		1699
65% Fe & above		2294 NA	25 - 35% Mn		4177
Manganese Ore	Rs/t		35 - 46% Mn		4177
MnO2	10.70	NA	Above 46% Mn		NA
Up to 25% Mn		2500	Clay (others)	Rs./t	NA
25 - 35% Mn		6500	Dunite	Rs./t	245
35 - 46% Mn		NA	Felspar	Rs./t	NA
Above 46% Mn		NA	Fireclay	Rs./t	800
Felspar	Rs./t	294	Felsite	Rs./t	738
Fireclay	Rs./t	NA	Kaolin (natural)	Rs./t	NA
Flint Stone	Rs./t	200	Kaolin (processed)	Rs./t	2800
Graphite (r.o.m.)	Rs./t		Laterite	Rs./t	
With less than 40% fixed carbon		445	Non-Metallurgical		
Kaolin (natural)	Rs./t	NA	Cement		389

NA : Not AvailableIme: London Metal Exchange(U) : Under Referencelbm: London Bullion Market

t : Tonne mt : Metric Tonne

c : Cents \$: Dollar tr oz : Troy Ounce

* : Average Sale Price for March 2014, Source - MINERALS & METALS REVIEW, April 2014. Daily average prices have been taken for Gold & Silver.

for which royalty is chargeable on ad valorem basis not linked to any international benchmark price

Month : March 2014

State / Mineral / Grades		Avg. Price	State / Mineral / Grades		Avg. Price
Chemical		500	Steatite	Rs./t	
Refractory		NA	Insecticide (Filler) grade		NA
Magnesite	Rs./t	3509	Other than insecticide (Filler) grade		466
Quartz	Rs./t	357	Maharashtra		
Quartzite	Rs./t	490	Bauxite	Rs./t	
Silica Sand	Rs./t	419	Non-Metallurgical		
Shale	Rs./t	NA	Cement		365
Kerala			Iron Ore (lumps)	Rs./t	
Clay (others)	Rs./t	119	Below 55% Fe		1265
Kaolin (natural)	Rs./t	370	55 - 58% Fe		1327
Kaolin (processed)	Rs/t	5615	58 - 60% Fe		2239
Sillimanite	Rs/t	8935	60 - 62% Fe		2914
Laterite	Rs/t		62 - 65% Fe		NA
Non-Metallurgical	10.70		Iron Ore (fines)	Rs./t	
Cement		448	Below 55% Fe		824
Abrasive		NA	55 - 58% Fe		871
Chemical		NA	58 - 60% Fe		1838
Silica Sand	Rs./t	2088	62 - 65% Fe		NA
Madhya Pradesh			Manganese Ore	Rs./t	
Bauvite	Rs /t		MnO2		NA
Non-Metallurgical	13.71		Up to 25% Mn		2038
Cement		678	25 - 35% Mn		4981
Refractory		NA	35 - 46% Mn		11891
Chemical		744	Above 46% Mn		14915
Iron Ore (lumps)	Rs/t	/	Corundum	Rs./kg	NA
Below 55% Fe	13.71	962	Fireclay	Rs./t	150
55 - 58% Fe		1100	Fluorite (graded)	Rs./t	
58 - 60% Fe		NA	30-70% CaF2		4595
60 - 62% Fe		NA	70-85% CaF2		8405
Iron Ore (fines)	Rs./t	1.1.1	Above 85% CaF2		NA
Below 55% Fe		488	Kyanite	Rs./t	
55 - 58% Fe		750	Up to 40% Al2O3		NA
58 - 60% Fe		NA	Above 40% Al2O3		3269
60 - 62% Fe		2000	Sillimanite	Rs./t	1500
Manganese Ore	Rs./t		Laterite	Rs./t	
MnO2		NA	Non-Metallurgical		
Up to 25% Mn		2062	Cement		NA
25 - 35% Mn		3982	Pyrophyllite	Rs./t	594
35 - 46% Mn		10799	Quartz	Rs./t	711
Above 46% Mn		15170	Quartzite	Rs./t	885
Phosphorite	Rs./t		Silica Sand	Rs./t	389
Up to 25% P2O5		1104	Sand (others)	Rs./t	NA
25 - 30% P2O5		NA	Shale	Rs./t	NA
Above 30% P2O5		NA	Odisha		
Calcite	Rs./t	335	Chromite	Rs./t	
Clay (others)	Rs./t	246	Lumps		
Diamond	Rs./crt	16673	Up to 40% Cr2O3		NA
Diaspore	Rs./t	2507	40 - 52% Cr2O3		NA
Fireclay	Rs./t	129	Above 52% Cr2O3		NA
Kaolin (natural)	Rs./t	NA	Fines		
Laterite	Rs./t		Up to 40% Cr2O3		2452
Non-Metallurgical			40 - 52% Cr2O3		11670
Cement		242	Above 52% Cr2O3		14353
Pyrophyllite	Rs./t	899	Concetrates		10407
Quartz	Rs./t	NA	Iron Ore (lumps)	Rs./t	
Sand (others)	Rs./t	NA	Below 55% Fe		1906
Shale	Rs./t	500	55 - 58% Fe 58 - 60% Fe		2368 2862

NA : Not AvailableIme: London Metal Exchange(U) : Under Referencelbm: London Bullion Market

t : Tonne mt : Metric Tonne

c : Cents \$: Dollar tr oz : Troy Ounce

* : Average Sale Price for March 2014, Source - MINERALS & METALS REVIEW, April 2014. Daily average prices have been taken for Gold & Silver.

for which royalty is chargeable on ad valorem basis not linked to any international benchmark price

Month : March 2014

State / Mineral / Grades		Avg. Price	State / Mineral / Grades		Avg. Price
60 - 62% Fe		2977	Mica (waste & Scrap)	Rs./kg	NA
62 - 65% Fe		4325	Pyrophyllite	Rs./t	NA
65% Fe & above		4517	Ouartz	Rs./t	236
Iron Ore (fines)	Rs./t		Ouartzite	Rs./t	300
Below 55% Fe		1015	Silica Sand	Rs./t	561
55 - 58% Fe		1015	Steatite	Rs /t	001
58 - 60% Fe		1015	Insecticide (Filler) grade	1(5.7)	316
60 - 62% Fe		1297	Other than insecticide (Filler) grade		1567
62 - 65% Fe		1909	Selenite	Rs/t	NA
65% Fe & above		2139	Wollastonite	Rs /t	851
Iron Ore Conc.	Rs./t	NA	Tamil Nadu	10000	001
Manganese Ore	Rs./t			Rs /t	NΔ
MnO2		33000	Clay (others)	Do /t	NA
Up to 25% Mn		3258	Dramite	RS./L	1NA 250
25 - 35% Mn		7346	Dunite Falanan	KS./l	330
35 - 46% Mn		11247	Feispar	KS./L	395
Above 46% Mn		18105	Fireclay	Rs./t	157
Corundum (ruby)	Rs./kg	NA	Garnet (abrasive)	Rs./t	6382
Garnet (abrasive)	Rs./t	5946	Graphite (r.o.m.)	Rs./t	
Graphite (r.o.m.)	Rs./t		With less than 40% fixed carbon		NA
With less than 40% fixed carbon		625	Gypsum	Rs./t	399
With 40% or more fixed carbon		NA	Magnesite	Rs./t	2428
Kaolin (processed)	Rs./t	NA	Marl	Rs./t	NA
Sillimanite	Rs./t	6419	Quartz	Rs./t	852
Pyrophyllite	Rs./t	483	Silica Sand	Rs./t	1200
Pyroxenite	Rs./t	NA	Steatite	Rs./t	
Quartz	Rs./t	700	Insecticide (Filler) grade		NA
Quartzite	Rs./t	NA	Vermiculite	Rs./t	2243
Rajasthan			Uttar Pradesh		
Iron Ore (lumps)	Rs./t		Diaspore	Rs./t	2035
Below 55% Fe		264	Pyrophyllite	Rs./t	348
55 - 58% Fe		NA	Quartz	Rs./t	NA
Manganese Ore	Rs./t		Silica Sand	Rs./t	NA
25 - 35% Mn		NA	Uttarakhand		
Phosphorite	Rs./t		Magnesite	Rs./t	1493
Up to 25% P2O5		277	Steatite	Rs./t	
25 - 30% P2O5		NA	Insecticide (Filler) grade		1754
Above 30% P2O5		7147	Other than insecticide (Filler) grade		1754
Ball Clay	Rs./t	500	West Bengal		
Barytes	Rs./t		Apatite	Rs./t	NA
White		813	Felspar	Rs./t	522
Off Colour		610	Fireclay	Rs./t	172
Calcite	Rs./t	362	Kaolin (natural)	Rs/t	550
Clay (others)	Rs./t	430	Kaolin (processed)	Rs /t	2165
Felspar	Rs./t	244	Moulding Sand	Rs /t	NA
Fireclay	Rs./t	250	Quartz	Rs./t	372
Fluorite (graded)	Rs./t			Rs./t	305
Up to 30% CaF2		NA	Silice Send	Do /t	427
30-70% CaF2		NA	Sinca Sanu	1X5./1	427
70-85% CaF2		NA			
Garnet (abrasive)	Rs./t	1230			
Garnet (gem)	Rs /ko	NA			
Gypsiim	Rs/t	475			
Iasper	Rs /t	NA			
Kaolin (natural)	Re /t	254			
Kaolin (nrocessed)	Re /+	4002			
Mica (gruda)	Ro./1/20	4992 NA			
mila (ci uuc)	15./Kg	INA			

NA : Not AvailableIme: London Metal Exchange(U) : Under Referencelbm: London Bullion Market

c : Cents \$: Dollar tr oz : Troy Ounce

* : Average Sale Price for March 2014, Source - MINERALS & METALS REVIEW, April 2014. Daily average prices have been taken for Gold & Silver.

CENTRAL INFORMATION COMMISSION

	**** *	
F.No.CIC/AT/A/2009/000816	F.No.CIC/AT/A/2009/000817	F.No.CIC/AT/A/2009/000818
F.No.CIC/AT/A/2010/000003	F.No.CIC/AT/A/2010/000010	F.No.CIC/AT/A/2010/000029
F.No.CIC/AT/A/2010/000058	F.No.CIC/AT/A/2010/000059	F.No.CIC/AT/A/2010/000060
F.No.CIC/AT/A/2010/000078	F.No.CIC/AT/A/2010/000127	F.No.CIC/AT/A/2010/000169
F.No.CIC/AT/A/2010/000184		Total : 13 Appeals

Dated, the 07th June, 2010

Appellants : Dr.D. Dhaya Devadas (Appeal No.816-818, 3, 10, 29, 58-60 8, 127) Shri Milind B. Nijsure (Appeal No.78/10) Shri Ashok G. Naik (Appeal No. 169/10) Shri R.Y. Kutumbe (Appeal No.184/10)

Respondents : Indian Bureau of Mines (IBM)

These 13 second-appeals have been clubbed for disposal by Commission due to the fact that the matter for decision in all these cases is the disclosure-liability of Mining Plans.

Matter was heard on 24.05.2010 pursuant to Commission's notice 2. dated 26.04.2010.

Presence:

(ii)

Appellants:

- Dr.D. Dhaya Devadas : Through rep., Shri Sudalayandi (i)
 - Shri Milind B. Nijsure : Present in person
- Shri Ashok G. Naik : Through rep., Shri Bhobe (iii)
- Shri R.Y. Kutumbe : Absent (iv)

Respondents:

- Shri Anil Subramaniam, Under Secretary, Ministry of Mines. (i)
- Shri R.K. Sinha, COM, Indian Bureau of Mines, Bangalore. (ii)
- Shri Tuhin Ray, CPIO, Indian Bureau of Mines, Chennai. (iii)
- Shri U.L. Gupta, CPIO, Indian Bureau of Mines, Nagpur. (iv)
- Shri S.K. Adhikari, CPIO, Indian Bureau of Mines, Goa. (\vee)

Earlier, Commission, through its interim-order dated 04.02.2010; 3. had observed as follows:-

A question has arisen whether the information contained in a "2. Mining Plan as submitted by a private party was liable to be disclosed, Dr.D.D. Devadas & Ors. Vs. IBM-Appeal Nos. 816-818 (2009), -3, 10, 29, 58-60, 127 78, 184, 169 (2010).doc



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especially in the face of the private party's plea that that would compromise his commercial confidence and the opposite side's plea that mining of mineral resources of the country could not be a matter exclusively between a commercial entity and the public authority. It was a matter of national resources and the citizens in general have had the right to know all about it.

3. Since the issue involved in these three appeals has larger ramifications, the views of the Ministry of Mines should be obtained about whether disclosure of the type of information requested by the appellant could be authorized."

4. Accordingly, assistance of the Ministry of Mines, Government of India was sought through Commission's references dated 05.02.2010 and 19.03.2010.

5. Accordingly, the Ministry of Mines, through a letter dated 22.03.2010 from Shri Anil Subramaniam, Under Secretary, have advised that except certain parts of the Mining Plan — which had elements whose disclosure would be prejudicial to commercial / competitive interest of a third-party (Mining Lease applicants) — the following parts of the Plan could be disclosed:-

"(i) 'General information', and 'Location and accessibility' in Chapter 1 & 2 in Introductory Notes of the Mining Plan.

'Mine Drainage', 'Skating of Mineral rejects and Disposal of waste', 'Use of Mineral' and 'Other information' in Chapters 6, 7, 8 and 9 respectively of the Part 'A' of the Mining Plan.

(iii) 'Environmental Management Plan' in Chapter 11 of Part 'B' of the Mining Plan."

6. During the hearing on 24.05.2010, Sudalayandi, representing one of the appellants, Dr.D.Dhaya Devadas, agreed that disclosure of the Mining Plan could be authorized as per Ministry of Mines' advice. Shri Milind B. Nijsure (one of the appellants) insisted that the Mining Plan be made public *in-toto* in public interest.

7. On considering all aspects of the case, I consider it appropriate that disclosure of the Mining Plans — as requested in the 13 RTI-applications corresponding to these second-appeals — be authorized

Dr.D.D. Devadas & Ors. Vs. IBM-Appeal Nos.816-818 (2009), 3,10, 29, 58-60, 127 78, 184, 169 (2010).doc

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on the lines advised by the Ministry of Mines. It is observed that Ministry has advised exclusion of only those portions of the Mining Plans which included details specific to a lessee – mobilization of resources, technology employed and so on. While these being specific to the lessee seem obvious, it is not yet clear as to how public interest would be served by its disclosure. It seems fairly apparent that the interests of the lessees – and their competitive position vis-à-vis other competitors – could be seriously jeopardized on account of such disclosures. Thus, the classification of disclosable and non-disclosable information in the Mining Plans as suggested by the Ministry of Mines seems rational and practical. These (non-disclosable parts) are covered by provisions of Sections 11(1), 8(1)(d) and 8(1)(j) of the RTI Act.

8. It is, therefore, directed that the parts (as paraphrased at paragraph 5 above) in the Mining Plans be disclosed to the appellants in these 13 second-appeals as per their requests in the corresponding RTI-applications.

9. It is also noted that the appellant, Dr.D.Dhaya Devadas, through his RTI-applications dated 03.02.2009, (in Appeal No.CIC/AT/A/2010/00059), dated 11.06.2009 (in Appeal No.CIC/AT/ A/2010/000817) and dated 01.06.2009 (in Appeal No.CIC/AT/A/2010/000818) has also requested information relating to illegal mining and the report of the Deputy Controller of Mines, Chennai Region submitted to Indian Bureau of Mines. These items of information were already disclosed to the appellant through Commission's decision in Appeal No.F.No.CIC/AT/A/2010/000138; Date of Decision: 10.05.2010. As such, there shall be no further disclosure obligation as regards these.

10. The Ministry of Mines is advised – under Section 25(5) of the RTI Act – to have all public authorities under it put-up the above (disclosable) parts of the Mining Plans on their respective websites to obviate repeated RTI-queries in the matter. Time for action – 2 months.

11. Appeals disposed of with the above directions.

12. Copy of this direction be sent to the parties.

(A.N. TIWARI)

Dr.D.D. Devadas & Ors. Vs. IBM-Appeal Nos.816-818 (2009) 371815 58-60, 127 78, 184, 169 (2010).doc



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Case Nos. CIC/AT/A/2009/000816, 817, 818 A-10/03, 10, 29, 58, 59, 60, 78, 127, 169 & 184

Authenticated by

(D.C. Singh) Deputy Registrar

Copy forwarded to:



 Shri A.K. Ghoshal, Jr. Mining Geologist & CPIO Regional Office,Indian Bureau of Mines 6th Floor, A- Block, Indira Bhawan, Civil Lines, NAGPUR – 440 102.

3. Controller of Mines (SZ) & AA, Indian Bureau of Mines No. 29, Industrial Suburb, Goraguntepalya, Tumkur Road, BANGALORE.

4. Shri S.K. Adhikari, JMG & CPIO, O/o Regional Controller of Mines, Indian Bureau of Mines, Opp. R.T.O's Office, P.O. – Fatorda MARGAO –GOA - 403 602.

 Shri Ranjan Sahai, Controller of Mines (CZ) & AA, Indian Bureau of Mines
 6th Floor, A- Block, Indira Bhawan, Civil Lines, NAGPUR – 440 102.

6. The Secretaty, Ministry of Mines, Room No. 320, 3rd Floor, A- Wing, Shastri Bhavan, New Delhi – 110 001

- For Compliance of Para -10.



7	. Dr. D. Dhaya Devadas,
	President, Federation of India Placer
	Mineral Industries, 1S, Prasad Street
	Seethapathy Nagar, Velachery,
	CHENNAI - 600 042

8. Shri Milind B. Nijsure A/P: Velas, Tal: Mandangad, Distt.- Ratnagiri (Maharashtra)

- Appellant

- Appellant

- Appellant

- Appellant

 Shri Ashok G. Naik. Advocate & Notary,
 50, 1st Floor, Apna Bazar Building,
 Vasco-da-Gama, GOA.

10. Shri R.Y. Kutumbe
62, East High Court Road, New Ramdashpeth,,
NAGPUR - 10 (Maharashtra).

11. M/s. Ashapura Minochem Ltd., Near Madarsa Aarchi, Taluka – Sriburdhan, Distt. Raigarh 402 110 (Maharashtra)

- Representatives of 3rd Parties

12. M/s V. V. Minerals, C/o R. Anand Padmanabhan, Advocate, D-23, Navkunj Apartments, Plot No. 87, Patparganj,
DELHI – 110 092

13. M/s Salitho Ores Pvt. Ltd., Salgaocar Chambers, P.O.Box No. 114 Margao –GOA – 403 601.

- 3rd Party

- 3rd Party
| | | | | | | | Target / Criteria Value | | | | | Perform | | | |
|--|--|--------|--|--|--------|--------|-------------------------|------------|------------|------|------|----------|-------|--------|----------------|
| Objectiv | ve | Weight | Action | Success Indicator | Unit | Weight | Excellent | Very Good | Good | Fair | Poor | Achiev- | Raw | Weigh- | As
Approved |
| | | | | | | | 100% | 90% | 80% | 70% | 60% | Ciliciti | Score | Score | by HPC |
| 1 Inspection of | Mines | 15.00 | Inspection of Mines for
enforcement of Provisions of
MCDR,1988, Inspections for
processing of Mining Plans
and Scheme of Mining
including Mine Closure Plan
and inspections for
processing of FMCP/PMCP | Completion of 2500
inspections | Number | 15.00 | 2500 | 2250 | 2000 | 1750 | 1500 | 2512 | 100.0 | 15.0 | 2512 |
| 2 Regional Min
Studies (RMI | eral Development
DS) | 5.00 | Regional Mineral
Development Studies. | Completion of 12 RMDS | Number | 5.00 | 12 | 11 | 10 | 9 | 8 | 12 | 100.0 | 5.0 | 12 |
| 3 Preparation c
with Forest O | of Mineral Maps
Overlays | 5.00 | Updation of Multi-Mineral
leasehold maps with
corresponding forest
overlays on a scale
1:50,000. | Completion of 100 Mineral
Maps | Number | 5.00 | 100 | 90 | 80 | 70 | 60 | 100 | 100.0 | 5.0 | 100 |
| 4 Development
computerized
Mining Tener
(MTS) | t of Project on
d online register of
ment System | 10.00 | Selection of System
Integrator and issue of Work
Order | Selection of System
Integrator and issue of
Work Order for MTS | Date | 10.00 | 31/01/2014 | 28/02/2014 | 31/03/2014 | | | | N/A | N/A | |
| 5 Ore Dressing | Investigations | 10.00 | Ore Dressing Investigations | Completion of 60 OD investigations | Number | 10.00 | 60 | 54 | 48 | 42 | 36 | 55 | 91.67 | 9.17 | 55 |
| 6 Indian Minera
(IMYB) | als Year Book | 10.00 | IMYB 2012 - Preparation of
reviews, technical editing,
general editing and
formatting. | Publication of IMYB 2012
with 80 reviews | Number | 5.00 | 80 | 72 | 64 | 56 | 48 | 80 | 100.0 | 5.0 | 80 |
| | | | IMYB 2013- Finalization of
end use mineral
consumption Data and
generation of tables | Preparation of 50 tables for
IMYB 2013 | Number | 5.00 | 50 | 45 | 40 | 35 | 30 | 50 | 100.0 | 5.0 | 50 |
| 7 Compilation of
Statistics on I
(MSMP) | of Monthly
Mineral Production | 5.00 | Receipts of returns,
processing and data entry
and final submission to IBM
press for publication | Publication of 12 issues of MSMP | Number | 5.00 | 12 | 11 | 10 | 9 | 8 | 13 | 100.0 | 5.0 | 13 |

	Target / Criteria Value Performance													
Objective	Weight	Action	Success Indicator	Unit	Weight	Excellent	Very Good	Good	Fair	Poor	Achiev-	Raw	Weigh-	As Approved
						100%	90%	80%	70%	60%	ement	Score	Score	by HPC
8 ISO 9001-2008 Certification for Regional Offices of IBM	9.00	Documentation for ISO	Certification of 3 IBM Regional Offices	Number	9.00	3	2	1			2	90.0	8.1	2
9 Development of ore accounting software through Detailed Project Report (DPR).	3.00	Selection of System Integrator and issue of Work Order	Selection of System Integrator and issue of Work Order for OAS	Date	3.00	31/01/2014	28/02/2014	31/03/2014				N/A	N/A	
10 Technical Consultancy and Mining Research Studies	3.00	Techno-economic evaluation studies, feasibility studies and other mining research studies	Completion of 04 Technical and Mining Research Studies	Number	3.00	4	3	2	1		7	100.0	3.0	7
11 Implementation of IBM Review and Restructuring Committee Recommendations.	4.00	Preparation of manual, guidelines and criteria for multi discipline inspections for mechanized mines and amendment in necessary statutes for authorization of OD officers to make field inspections.	Preparation of manual, guidelines for inspections	Date	1.00	31/08/2013	30/09/2013	31/10/2013	30/11/2013	31/12/2013		N/A	N/A	
		Preparation of Vision document for Manganese mineral by OD Division.	Preparation of Vision document for Manganese	Date	1.00	31/12/2013	31/01/2014	28/02/2014	15/03/2014	31/03/2014	31/12/2013	100.0	1.0	31/12/20 13
		Preparation of criteria for Standing Committee with specific term and references as proposed in Committee report for review of IMYB publication in the lines of USGS/ BGS.	Preparation of criteria for Standing Committee for review of IMYB publication	Date	1.00	30/06/2013	31/07/2013	31/08/2013	30/09/2013	31/10/2013	18/09/2013	74.0	0.74	18/09/20 13
		Preparation of IBM's training policy, in lines with National Training Policy, guidelines, curriculum for various training programmes/	Preparation of IBM's training policy, curriculum modules etc	Date	1.00	01/02/2014	15/02/2014	28/02/2014	15/03/2014	31/03/2014	20/11/2013	100.0	1.0	20/11/20 13

							Target	t / Criteria	a Value			Perfor	mance	
Objective	Weight	Action	Success Indicator	Unit	Weight	Excellent	Very Good	Good	Fair	Poor	Achiev-	Raw	Weigh-	As Approved
						100%	90%	80%	70%	60%	ement	Score	ted Score	by HPC
		modules, selection of faculty etc.												
12 Internal audit for MCDR Inspections.	5.00	Internal audit by Zonal offices for MCDR Inspections carried out by Regional offices.	5% of 2500 Inspections	Number	5.00	125	113	100	88	75	125	100.0	5.0	125
13 Scrutiny and processing of Statutory Returns.	5.00	Scrutiny and Processing of Monthly and Annual Returns submitted by the lease holders.	Scrutiny of 25000 statutory returns	Number	5.00	25000	22500	20000	17500	15000	32398	100.0	5.0	32398
* Efficient Functioning of the RFD System	3.00	Timely submission of Draft RFD (2013-14) for approval	On-time submission	Date	2.0	15/05/2013	16/05/2013	17/05/2013	20/05/2013	21/05/2013	08/05/2013	100.0	2.0	08/05/2013
		Timely submission of Results for RFD (2012-13)	On-time submission	Date	1.0	01/05/2013	02/05/2013	05/05/2013	06/05/2013	07/05/2013	01/05/2013	100.0	1.0	01/05/2013
* Administrative Reforms	4.00	Implement ISO 9001 as per the approved action plan.	% Implementation	%	2.0	100	95	90	85	80	100	100.0	2.0	100
		Prepare an action plan for Innovation	On time submission	Date	2.0	30/07/2013	10/08/2013	20/08/2013	30/08/2013	10/09/2013	04/07/2013	100.0	2.0	04/07/2013
* Improving Internal Improving Internal Efficiency /responsiveness / service delivery of Ministry / Department	4.00	Implementation of Sevottam	Independent Audit of Implementation of Citizen's Charter	%	2.0	100	95	90	85	80		N/A	N/A	
			Independent Audit of implementation of public grievance redressal system	%	2.0	100	95	90	85	80		N/A	N/A	

* Mandatory Objective(s)

							Target	/ Criteria Value				Performance	
Objective	Weight	Action	Success Indicator	Unit	Weight	Excellent	Very Good	Good	Fair	Poor	Achiev-	Raw Weigh-As	proved
						100%	90%	80%	70%	60%		Score led by Score by	HPC
	-							Tota	I Compo	osite Sco	ore :	80.01	
								PM	Compo	osite		80.0	

Annexure- XVIII

S1.	State	Mini	ng Plan	Scheme	Of Mining	Final Mi P	ne Closure lan
No.	State	Approved	Not Approved	Approved	Not Approved	Approved	Not Approved
1	Andhra Pradesh	4	5	45	59	1	0
2	Assam	0	1	0	2	0	0
3	Bihar	0	0	0	0	0	0
4	Chhattisgarh	7	5	41	6	1	0
5	Goa	0	3	0	190	0	3
6	Gujarat	3	1	61	3	0	0
8	Himachal						
	Pradesh	1	0	4	0	4	1
7	Haryana	0	0	0	0	0	0
9	Jammu&						
10	Kashmir	2	0	10	1	0	0
10	Jharkhand	6	1	12	3	3	0
11	Karnataka	10	4	51	9	2	6
12	Kerala	1	1	10	2	3	0
13	Madhya Pradesh	19	9	90	10	0	0
14	Maharashtra	3	1	21	4	1	0
16	Meghalaya	0	1	1	1	0	0
17	Orissa	4	7	34	6	4	0
18	Rajasthan	79	7	59	10	7	2
19	Sikkim	0	0	0	0	0	0
20	Tamil Nadu	17	9	149	61	0	0
21	Uttarakhand	10	0	14	0	0	0
22	Uttar Pradesh	1	0	2	0	0	0
23	West Bengal	0	0	0	0	0	0
	Total	167	55	604	367	26	12

State Wise Plans/ Schemes Approved By IBM in Year 2013-14

Jurisdiction of Zonal/Regional Offices

North Zone

Ajmer Regional Office

STATE : RAJASTHAN (27)

Districts : Ajmer, Alwar, Baran, Barmer , Bharatpur, Bhilwara, Bikaner, Bundi, Churu, Dausa, Dholpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Sawai Madhopur, Sikar, Sirohi , Tonk.

Dehradun Regional Office

STATE : DELHI (1) Districts : Delhi **UNION TERRITORY: Chandigargh STATE : HARYANA (21)** Districts : Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendargarh, Mewat, Palwal, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonepat, Yamuna Nagar. **STATE : HIMACHAL PRADESH (12) Districts** : Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kulu, Lahul & Spiti, Mandi, Shimla, Sirmaur, Solan, Una. **STATE : JAMMU & KASHMIR (22)** Districts : Anantnag, Bandipore, Baramula, Badgam, Doda, Ganderbal, Jammu, Kargil, Kathua, Kishtwar, Kulgam, Kupwara, Ladakh, Poonch, Pulwama, Rajauri, Ramban, Reasi, Samba Srinagar, , Shupiyan, Udhampur. **STATE : PUNJAB (22)** Districts : Amritsar, Barnala, Bhatinda, Faridkot, Fatehgarh Sahib, Fazilka Ferozpur, Gurdaspur, Hoshiarpur, Jallandur, Kapurthala, Ludhiana, Mansa, Moga, Muktsar, Nawan Shehar, Pathankot Patiala, Rup Nagar, Sangrur, Sahibzada Ajit Singh Nagar (Mohali), Taran.

STATE : UTTAR PRADESH (65)

Districts : Agra, Aligarh, Ambedkar Nagar, Amroha, Auraiya, Azamgarh, Badaun, Baghpat, Bahraich, Ballia, Balrampur, Bara-Banki, Bareilly, Basti, Bijnor, Bulandshahr, Chandauli, Chitrakut, Deoria, Etah, Etawah, Faizabad, Farrukhabad, Fatehpur, Firozabad, Gautam Buddha Nagar, Ghaziabad, Gazipur, Gonda, Gorakhpur, Hapur, Hardoi, Hathras, Jalaun, Jaunpur, Kannauj, Kanpur Dehat, Kanpur Nagar, Kasganj, Kushinagar, Lakhimpur Kheri, Lucknow, Maharajganj, Mainpuri, Mathura, Mau, Meerut, Moradabad, Muzaffarnagar, Pilibhit, Pratapgarh, Raebareli, Rampur, Saharanpur, Sambhal, Sant Kabir Nagar, Sant Ravidas Nagar, Shahjahanpur, Shamli, Shravasti, Siddarth Nagar, Sitapur, Sultanpur, Unnao, Varanasi.

STATE : UTTARAKHAND (13)

Districts : Almoda, Bageshwar, Chamoli, Champawat, Dehradun, Haridwar, Nainital, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garhwal, Udhamsing Nagar, Uttar Kashi.

Udaipur Regional Office

UNION TERRITORY: DADRA & NAGAR HAVELI UNION TERRITORY: DAMAN & DIU

STATE : GUJARAT (33) Districts : Ahmedabad, Amreli, Anand, Aravalli, Banaskantha, Bharuch, Bhavnagar, Botad, Dahod, Dang, Devbhoomi Dwarka, Gandhinagar, Gir Somnath, Jamnagar, Junagarh, Kheda, Kuchch, Mahisagar, Mehesana, Morbi, Narmada, Navasari, Panchmahals, Patan, Porbandar, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara, Valsad, Tapi. STATE : RAJASTHAN (6) **DISTRICTS :** Banswara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand, Udaipur.

South Zone

Hyderabad Regional Office (Including Nellore Sub-Regional Office)

STATE : ANDHRA PRADESH (23)

Districts : Adilabad, Anantapur, Chittoor, Cuddapah, Godavari East, Godavari West, Guntur, Hyderabad, Karimnagar, Khammam, Krishna, Kurnool, Mahaboobnagar, Medak, Nalgonda, Nellore, Nizamabad, Prakasam (Ongole H.Q.), Rangareddy, Srikakulam, Visakhapatnam ,Vizianagaram, Warangal. STATE : MAHARASHTRA (3) Districts : Latur, Nanded, Osmanabad.

Goa Regional Office

STATE : GOA (2) Districts : North Goa, South Goa . STATE : MAHARASHTRA (7) Districts : Kolhapur, Pune, Ratnagiri, Sangli, Satara, Sholapur, Sindhudurg. STATE : KARNATAKA (7) Districts : Bagalkot, Belgaum, Bijapur, Dharwar, Gadag, Haveri, Uttar Kanada.

Bangalore Regional Office

STATE : KARNATAKA (23)

Districts : Bangalore, Bangalore Rural, Bellary, Bidar, Chamarajanagar, Chikkaballapura, Chikmagalur, Chitradurga, Davangere, Gulbarga, Hassan, Kodagu, Kolar, Koppal, Mandya, Mysore, Raichur, Ramanagara, Shimoga, South Kanara, Tumkur, Udupi, Yadgir.

STATE :KERALA (14) Districts : Alappuzha (Alleppy), Ernakulam, Idukki (Iddiki), Kannur, Kasargod, Kollam, Kottayam, Kozhikode, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram, Trissur, Wynad. **UNION TERRITORY: LAKSHADWEEP**

Chennai Regional Office

STATE : TAMIL NADU (32)

Districts : Ariyalur, Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kanchipuram, Kanyakumari, Karur, Krishnagiri, Madurai, Nagapattinam, Namakkal, Niligiris, Perambaloor, Pudukkottai , Ramnathapuram , Salem, Sivaganga, Thanjavur ,Theni (Madurai), Thiruvallur (Chengalpattu), Thiruvannamalai, Thiruvarur, (Nagapattinam) , Trichirapalli , Tirunelveli, Tiruppur, Turicorin, Vellore, Villupuram, Virudhunagar.

STATE : PONDICHERRY (4)

Districts : Karaikal , Mahe, Pondicherry, Yanam.

Central Zone

Bhubaneswar Regional Office

STATE : ODISHA (30)

Districts : Angul ,Balasore, Bargarh, Bhadrak, Bolangir, Boudh, Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, Jagatsingpur, Jajpur, Jharsuguda, Kalahandi, Kandhamal, Kendrapara, Keonjhar, Khurda, Koraput, Malkanagiri, Mayurbhanj, Nabrangpur, Nayagarh, Nuapada, Puri, Raygada, Sambalpur, Sonpur, Sundargarh.

Jabalpur Regional Office

STATE : MADHYA PRADESH (25) Districts : Ashoknagar, Anuppur, Bhind, Chhatarpur, Damoh, Datia, Dindori, Guna, Gwalior, Jabalpur, Katni, Mandla, Morena, Narasinhapur, Panna, Rewa,

Sagar, Satna, Shahdol, Shivpuri, Shyopur, Sidhi, Singrauli, Tikamgarh, Umaria.

STATE : UTTAR PRADESH (10)

Districts : Allahabad, Banda, Chatrapati Shahuji Maharaj Nagar, Hamirpur, Jhansi, Kaushambi, Lalitpur, Mahoba, Mirzapur, Sonbhadra.

Ranchi Regional Office

STATE : BIHAR (38)

Districts : Araria, Arwal, Aurangabad, Banka, Begusarai, Bhagalpur, Bhojpur, Buxar, Darbhanga, East Champaran, Gaya, Gopalganj, Jahanabad, Jamui, Kaimur, Katihar, Khagaria ,Kishanganj, Lakhisarai, Madhepura, Madhubani, Munger, Muzaffarpur, Nalanda, Nawadha, Patna, Purnia, Rohtas, Saharsa, Samastipur, Saran, Sheikhpura, Sheohar, Sitamarhi, Siwan, Supaul ,Vaishali, West Champaran.

STATE : JHARKHAND (21)

Districts : Bokaro, Chatra, Deogarh, Dhanbad, Dumka, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Khunti, Kodarma, Latehar, Lohardaga, Pakur, Palamau, Ramgarh, Ranchi, Sahebganj, Simdega.

Kolkata Regional Office

STATE : JHARKHAND (3)

Districts : Saraikela-Kharsawan, Singhbhum (East), Singhbhum (West). STATE : SIKKIM (4) Districts : Sikkim East, Sikkim West, Sikkim North, Sikkim South STATE : WEST BENGAL (19) Districts : 24- Parganas North , 24-Parganas South , Bankura ,Birbhum, Bardhaman, Cooch Behar, Darjeeling , Dakshin Dinajpur , Uttar Dinajpur, Hooghly, Howrah, Jalpaiguri, Kolkata, Malda, Murshidabad, Nadia, Paschim Midnapore, Purba Medinipur, Purulia

UNION TERRITORY: Andaman Nicobar

Districts : Nicobar, North & Middle Andaman , South Andman.

GUWAHATI SUB-REGION STATE : ARUNACHAL PRADESH (18)

Districts : Anjaw, Changlang, Dibang Valley, East Kameng, East Siang, Kurung Kumey, Lohit, Lower Dibang Valley, Lower Subansiri, Paum Pare, Tawang, Tirap, Upper Siang, Upper Subansiri, West Kameng, West Siang.

STATE: ASSAM (27)

Districts : Barpeta, Baksa, Bongaigaon, Cachar, Chirang, Darrang, Dhemaji ,Dhubri, Dibrugarh, Goalpara, Golaghat, Hailakandi, Jorhat, Kamrup, Metropolitan, Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, North Cachar Hills (Dima Hasao), Sibsagar, Sonitpur, Tinsukia, Udalguri.

STATE : MANIPUR (9)

Districts : Bishnupur, Chandel, Churachandpur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal, Ukhrul.

STATE : MEGHALAYA (11)

Districts : West Jaintia Hills (Jowai),East Jaintia Hills (Khliehriat),East Khasi Hills (Shillong),West Khasi Hills (Nongstoin),South West Khasi Hills (Mawkyrwat),Ri-Bhoi (Nongpoh),North Garo Hills (Resubelpara),East Garo Hills (Williamnagar), South Garo Hills (Baghmara), West Garo Hills (Tura),South West Garo Hills (Ampati), STATE : MIZORAM (8) Districts :Aizwal, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha, Serchhip. STATE : NAGALAND (11) Districts : Dimapur, Kiphire, Kohima,

Longleng, Mokokchung, Mon, Peren, Phek, Tuensang, Wokha, Zunheboto.

STATE : TRIPURA (4)

Districts : Dhalai, Sipahijala, Khowai, Gomati, Unakot, North Tripura, South Tripura, West Tripura

Nagpur Regional Office

STATE : CHHATTISGARH (27)

Districts : Balod, Baloda Bazar, Balrampur, Bastar, Bemetara, Bijapur, Bilaspur, Dantewada, Dhamtari, Durg, Gariyaband, Janjgir-Champa, Jashpur, Kanker, Kawardha, Kondagaon, Korba, Koriya, Mahasamund, Mungeli, Narayanpur, Raigarh, Raipur, Rajnandgaon, Sukma, Surajpur, Surguja.

STATE : MADHYA PRADESH (26)

Districts : Agar Malwa, Alirajpur, Badwani, Balaghat, Betul, Bhopal, Burhanpur, Chhindwara, Dewas, Dhar, Harda, Hoshangabad, Indore, Jhabua, East Nimar (Khandwa), West Nimar (Khargaon), Mandsaur, Neemuch, Raisen, Rajgarh ,Ratlam, Sehore, Seoni, Shajapur, Ujjain, Vidisha.

STATE : MAHARASHTRA (25)

Districts : Ahmednagar, Akola, Amravati, Aurangabad, Bhandara, Beed, Buldhana, Chandrapur, Dhule, Gadchiroli, Gondia, Greater Mumbai, Hingoli, Jalgaon, Jalna, Mumbai (Suburban), Nagpur, Nandurbar, Nashik, Parbhani, Raigad, Thane, Wardha, Washim, Yavatmal and Bombay High. Contact Details of Divisional / Zonal / Regional Offices of Indian Bureau of Mines

1. Divisional Offices

Name of the Division / Office	Designation of the Divisional Head & Postal Address	Telephone No.	Fax No.	E-Mail
Mines Control & Conservation Of Minerals Division	Chief Controller of Mines 2 nd Floor, Block 'A', Indira Bhavan, Civil Lines, Nagpur-440001	91-712- 2560961	91-712- 2565488	ccom@ibm.gov.in
Ore Dressing Division	Director (Ore Dressing) 2 nd Floor, Block 'B', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565024	91-712- 2562631	codo@ibm.gov.in
Planning & Co- Ordination Division	Controller of Mines (Planning & Co-ordination) 2 nd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712- 2561824	91-712- 2561824	com.plcdn@ibm.gov.in
Technical Consultancy, Mining Research & Publication Division	Controller of Mines (TMP) 7 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2562143	91-712 2561110	com.tc@ibm.gov.in com.mr@ibm.gov.in
Mineral Economics Division	Chief Mineral Economist 3 rd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565471	91-712- 2565471	cme@ibm.gov.in
Mining & Mineral Statistics Division	Deputy Director General (Statistics) & In-charge MMS Division 5 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712- 2564934	91-712- 2564934	mms@ibm.gov.in

2. Other Important Offices

Name of the Division / Office	Postal Address	Telephone No.	Fax No.	E-Mail
Chief Mining Geologist	1 st Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2561267	91-712 - 2561267	cmg@ibm.gov.in
Technical Secretary	2 nd Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712- 2565136	91-712- 2561824	rcom.ts@ibm.gov.in
Director (Training)	8 th Floor, Block 'A', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565867	91-712 - 2565867	dir.trg@ibm.gov.in
Chief Administrative Officer	4 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565333	91-712 - 2565333	ho-office@ibm.gov.in
Chief Editor Publication Section	1 st Floor, Block 'B', Indira Bhavan, Civil Lines, Nagpur-440001	91-712 - 2565500 Extn : 1105	91-712 - 2565471	ce.press@ibm.gov.in

3. Zonal Offices of MCCM Division

Name of the Zone	Postal Address	Telephone No.	Fax No.	E-Mail
Central	Controller of Mines (CZ) 6 th Floor, Block 'D', Indira Bhavan, Civil Lines, Nagpur-440001	0712 - 2565603	0712 - 2565603	com.cz@ibm.gov.in
South	Controller of Mines (SZ) 29, Industrial Suburb, IInd Stage, Tumkur Road, Yeshwantpuram, Bangalore-560022	080 - 23373287 080 - 23375366 / 080 - 23375367 (PBX)	080 - 23373287	zo.bangalore@ibm.gov.in
North	Controller of Mines (NZ) Type-IV, Block B/9, IBM Colony, Adarsh Nagar, Balupura Road, Ajmer-308 002	0145 - 2681831	0145 - 2441244 Ext. 28	zo.ajmer@ibm.gov.in

Name of the Region	Postal Address	Telephone No.	Fax No.	E-Mail
Ajmer	Regional Controller of Mines Makhupura Industrial Estate, Nasirabad Road, Ajmer - 305002.	91-0145 - 2695150	0145 - 2695202	ro.ajmer@ibm.gov.in
Bangalore	Regional Controller of Mines Industrial Suburb, II Stage, Tumkur Road, Yeshwantpur, Bangalore - 560 022.	91-080 - 23371027	080 - 23373287	ro.bangalore@ibm.gov.in
Bhubaneswar	Regional Controller of Mines Mahanee Complex, 308, District Center, Chandrasekharpur, Bhubaneswar - 751016	91-0674- 2744430	0674- 2744430	ro.bhubaneshwar@ibm.go v.in
Chennai	Regional Controller of Mines Rajaji Bhavan, C-4 A, C.G.O. Complex, Besant Nagar, Chennai- 600 090	91-044 - 24911570 91-044 - 24914461	044 - 24911295	ro.chennai@ibm.gov.in
Dehradun	Regional Controller of Mines 108, Nehru Nagar, Scheme No. II, Dehradun -248 001	91-0135 - 2671896 91-0135 - 2676350 91-0135 - 2672610	0135 - 2674962	ro.dehradun@ibm.gov.in
Goa	Regional Controller of Mines IBM Colony, New National Highway , Near Arlem Breweries, P.O. Fatorda, Margao- 403602	91-0832 - 2741757 91-0834 - 2741758	0832 - 2741758	ro.goa@ibm.gov.in
Hyderabad	Regional Controller of Mines Indian Bureau of Mines, Room No. 603, 6th Floor, CGO Towers, Kavadiguda, Secunderabad - 500 080	91-040 - 27539992 91-040 - 27539993	91-040 - 27539991	ro.hyderabad@ibm.gov.in
Jabalpur	Regional Controller of Mines Scheme No. 11, IBM Colony, Kamla Nehru Nagar, Jabalpur – 482 002	91-0761 - 2416780 91-0761 - 2416231 91-0761 - 2416589	0761 - 2416780	ro.jabalpur@ibm.gov.in

3. Regional Offices of MCCM Division

Kolkata	Regional Controller of Mines CP-13, Sector V, Salt Lake City , Kolkatta- 700 091	91-033 - 23673986	91-033 - 23673617	ro.kolkata@ibm.gov.in
Nagpur	Regional Controller of Mines 6 th Floor, Block 'B&C', Indira Bhavan, Civil Lines, Nagpur-440 001	91-712- 2565089	91-712- 2565089	rcom.nr@ibm.gov.in
Ranchi	Regional Controller of Mines 318/B, Ashok Nagar, Road No. 3, Ranchi - 834 002	91-0651 - 2242903 91-0651 - 2242889	0651 - 2242903	ro.ranchi@ibm.gov.in
Udaipur	Regional Controller of Mines 142-C, Sector - XI, Hiran Magri Scheme, Udaipur - 313 001	91-0294 - 2583230 91-0294 - 2583139.	0294 - 2583139	ro.udaipur@ibm.gov.in

4. Sub-Regional Offices of MCCM Division

Name of the Sub-Region	Postal Address	Telephone No.	Fax No.	E-Mail
GUWAHATI (Under Kolkata Region)	Officer in Charge House No. 203, Dee Cee Villa, First Floor, Rajgarh Road, Ulubari , Guwahati - 781 007	0361 - 2466184	0361 - 2466184	ibmghy@yahoo.in Ibmghy.sro@gmail.com sro.guwahati@ibm.gov.in
NELLORE (Under Hyderabad Region)	Officer in Charge D.No.26 - II – 830, Flat No. 86, 8th Cross Road, Jyothi Nagar, Vedayapalem, P.O. A.K.Nagar, Nellore-524 004	0861 - 2327294	0861 - 2327294	ibmnlr@yahoo.com sro.nellore@ibm.gov.in

Location of the Pilot Plant / Regional Ore Dressing Laboratory	Postal Address	Telephon e No.	Fax No.	E-Mail
Nagpur Modern Mineral Processing Laboratory and Pilot Plant	Chief Ore Dressing Officer L-8, MIDC, Hingna Road, Nagpur -440 016	07104- 236645 / 235541 / 235543 / 235545	07104- 235542	indian75@bsnl.in ibmhngn@bsnl.in
Ajmer Regional Ore Dressing Laboratory and Pilot Plant	Suptdg. Officer (Ore Dressing) Makhupura Industrial Estate, Nasirabad Road, Ajmer - 305002	0145 - 2695163 2695150	0145 - 2695163	ibm_rodl_ajm@yahoo.co. in
Bangalore Regional Ore Dressing Laboratory and Pilot Plant	Suptdg. Officer (Ore Dressing) & Officer in Charge Industrial Suburb, II Stage, Tumkur Road, Gurguntaplayam, Bangalore - 560 022.	080 - 23379824 23375362 23375364	080 - 23375360	rodlbng@vsnl.net majumdar.ibm@gmail.co m

5. Mineral Processing Laboratories and Pilot Plants

6. Liaison Office

Location of the Liaison Office	Designation of the Officer-in- charge Postal Address	Telephone No.	Fax No.	E-Mail
NEW DELHI	Administrative Officer, Indian Bureau Of Mines 5th Floor,11th Block , CGO Complex , New Delhi-110 003.	011 - 24363199	_	nagarajan.25@nic.in
	Mines - III, Ministry of Mines, Shastry Bhavan, New Delhi - 110 115	011 - 23383085	011 - 23383085	nagarajan.25@nic.in