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PICTURE OF THE ISSUE

The delegates attending the National Workshop on DMF/PMKKKY engrossed in a thematic discussion over Implementation of Projects under High Priority and Low Priority Sectors during the Technical Session II of the conference held in New Delhi. The delegates drafted a set of recommendation for each of the themes and submitted to the Ministry of Mines. The suggestions would be incorporated for furthering implementation of PMKKKY across the States.

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Published by the Office of Controller General and produced by Publication Section Indian Bureau of Mines

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From Controller General’s Desk

At the outset, I extend a warm greeting to Shri Pralhad Joshi on being appointed the Union Minister of Coal & Mines and Parliamentary Affairs. His experience as a four-time Parliamentarian and member of several key Parliamentary Committees during his tenure as Member of Parliament shall keep the Mines Ministry abreast with the progress and achieve greater heights in the coming years. I wish the new Minister and Mines Ministry a good success.

The Union Government unveiled a National Mineral Policy 2019 which lays thrust on transparency, better regulations & enforcement, balanced growth & sustainability and grants industry status to Mining. The revised provisions are expected to rejuvenate the mineral industry to achieve higher growth. The NMP 2019 along with MMDR Amendment Act 2015 is expected to give a boost to the mineral and metals sectors. A series of mining lease auctions are lined up across States in next 1-3 years which will act as a catalyst to mining sector growth.

Ministry of Mines and IBM is working on expediting the Mining Tenement System (MTS) which aims automating the entire concession life-cycle of mines. IBM is in touch with the State and Central agencies for compiling the spatial data for the GIS module of MTS. These agencies will share geological and topographical maps and metadata for integration with the MTS project.

Mines Ministry organised Workshop on District Mineral Fund (DMF) in New Delhi to address the issues & challenges faced by few States and districts in implementation of Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) and develop strategies to speed up the process.

IBM has to play a proactive role in the wake of notifying of NMP 2019 and commissioning of MTS project. I believe the Bureau will live to expectations of the stakeholders.

Dr K. Rajeswara Rao, IAS
Additional Secretary (Mines) & Controller General In-charge
Pralhad Joshi is Union Coal & Mines Minister

Shri Pralhad Joshi took over as the Union Minister of Coal & Mines and Parliamentary Affairs on 30 May, 2019. He is a four-time member of the Lok Sabha from Dharwad Parliamentary Constituency in Karnataka. An active Parliamentarian, he is known for his discipline and dynamism.

Shri Joshi served member of various Parliamentary Committees since 2005. He was nominated member of Parliamentary Standing Committees on Chemicals and Fertilizers, Transport and Culture and Consultative Committee on Finance during the 14th Lok Sabha. In 15th Lok Sabha, he was a member of Standing Committee on Railways and served Estimates Committee and Consultative Committee on Urban Development and member of Tobacco Board. As a member of the delegation on Empowerment of Women to UNO, he addressed UN General Assembly.

A fine Orator, Shri Joshi is a popular political face in Karnataka and known for his workmanship. He was instrumental in many of the development works in his constituency like completion of Hubli-Ankola Railway line, Gadag-Bijapur Gauge conversion, Goods Shed at Navalur, modernisation of Hubli Railway Workshop, upgradation of Hubli Railway Station and Airport road and development works in Hubli-Dharwad city under Central Government funds. Under MPLAD, a memorial “Baro Sadhankerige”, in the name of Kannada poet and Jnanpith awardee, Dattatreya Ramachandra Bendre was completed outside the poet’s ancestral home. He also involves himself in social service and has established two NGOs to carry out social work.

Shri Joshi is the Chairman of Vijayanagar Education Society established by noted freedom fighter N.S. Hardikar and regularly contributes to mid-day meal schemes of schools in Hubli-Dharwad region. He has also been a board member of Karnataka Chamber of Commerce and Industry, Hubli. An avid reader, Shri Joshi has interests in Indian classical music and traditional art forms. The Ministry of Mines shall achieve newer heights under his leadership.

Congratulations Sir...

Workshop discuss implementation of PMKKKY

In a bid to expedite the implementation of District Mineral Fund (DMF)/Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) and develop strategies to address the challenges in its way, the Ministry of Mines organised the first National level workshop on DMF/PMKKKY on 18 Jan 2019 in New Delhi. The objective of the workshop also included audit and reconciliation; improving guidelines and charting new criterion for identification of affected people and areas.

Shri Narendra Singh Tomar, then Hon’ble Union Minister of Mines inaugurated the workshop. He said mining affected areas saw notable turnaround after implementation of DMF/PMKKKY. All districts should have target based projects and focus on timely deliveries. The percentage share of fund utilisation should be increased to bring in significant relief to affected regions and people. There is an accrual of Rs 23,606 crores under DMF till date, the Minister informed.

He added that Rs 2.5 lakh crore is expected to be accrued under DMF in next 25 years. The optimum utilisation of these funds shall go a long way in changing the landscape of mining affected areas and betterment of life of people affected, he said. On the occasion, then Minister released a souvenir titled, “Transform Mining” showcasing the development projects and best practices implemented in districts where fund utilisation under DMF has begun.

The workshop showcased the developmental works carried out in the districts and brainstorm on the challenges faced by the districts in implementation of projects under PMKKKY. The aim was also to learn from the success stories for districts to replicate. District Collectors/ Magistrates/CEOs of Zilla Parishad, officials from State Mining Department, senior officials of Mines Ministry and other central ministries including Health, Women and Child Welfare, Rural Development participated in the workshop and shared their experience.

Shri Anil G. Mukim, Secretary (Mines), Dr K. Rajeswara Rao, Additional Secretary (Mines) & CG (I/c), IBM are seen.

Shri Narendra Singh Tomar, then Minister of Mines lighting the lamp to inaugurate the National level workshop on DMF in New Delhi. Shri Anil G. Mukim (right), Secretary (Mines), Dr K. Rajeswara Rao, Additional Secretary (Mines) & CG (I/c), IBM are seen.
Dr K. Rajeswara Rao, Additional Secretary (Mines) and Controller General In-charge, IBM attended the final day function of Mine Environment and Mineral Conservation (MEMC) week celebrations organised under the joint auspices of IBM (Bengaluru Regional office), Sandur Manganese and Iron Ores Ltd (SMIORE) and the Mining Industry Association at Sandur Mines in Ballari district on 1 March 2019.

Dr Rao unfurled the Green flag, a customary event of MEMC Week celebrations which symbolises sustainable development of mines in harmony with the environment. He administered oath to the industry leaders and representatives of various mines taking part in the programme. The Additional Secretary and CG (I/c) interacted with the representatives of various mining industry at the expo organised as part of the MEMC week celebrations.

On the occasion, he released a souvenir and gave away awards to various mines for good performance on sustainable development indicators. The representatives of the companies received the award.

Mine Visit

On the sidelines of the MEMC week, Dr K. Rajeswara Rao visited the SMIORE mines in Sandur. He interacted with the company officials on systematic mine development and social welfare programmes carried out by SMIORE inside the mines and surrounding areas. He planted a sapling on the mines campus. He also paid a visit to the nearby school where SMIORE carried out support and educational programme and interacted with the school children there.

Raipur

Dr K. Rajeswara Rao was the chief guest at the valedictory programme of the Third Mine Environment and Mineral Conservation Week celebrations organised under the joint auspices of IBM and Mining Industry Association at the Shree Cements campus in Raipur on 23 Feb, 2019.

In his address, Dr Rao said MMDR Amendment Act, 2015 brought more transparency, equity and eliminated discretions in grant of mineral concessions. It provided an effective redressal and regulatory mechanism. The mining and exploration companies should adopt advance methods for mineral extraction, transportation and beneficiation making use of the IT and Artificial Intelligence to achieve zero waste mining, he said adding that it shall go a long way in reducing life hazards and reducing pollution in and around the mining areas. Dr Rao gave away awards to various mine owners in different categories and released a souvenir.
**National Mineral Policy 2019 unveiled**

The Union Government has approved the National Mineral Policy 2019 following the approval of Cabinet chaired by Hon’ble Prime Minister Shri Narendra Modi on 28 Feb, 2019 in New Delhi.

The key focus of the NMP 2019 is on transparency, better regulations & enforcement, balanced growth & sustainability. Grant of Industry status to Mining activity. It would ensure more effective regulation and would lead to sustainable mining sector development in future while addressing the project affected persons especially those residing in tribal areas. The NMP 2019 objects to have a more effective, meaningful and implementable policy that brings in further transparency, better regulation and enforcement, balanced social and economic growth as well as sustainable mining practices.

Some of the provisions in NMP 2019 includes:
1. Introduction of Right of First Refusal for RP/PL holders.
2. Encouraging the private sector to take up exploration.
3. Encouragement of merger and acquisition of mining entities.
4. Creation of dedicated mineral corridors to boost private sector mining areas.
5. The 2019 Policy proposes to grant status of industry to mining activity to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector.
6. It also mentions that long term import export policy for mineral will help private sector in better planning and stability in business.
7. The Policy also mentions rationalise reserved areas given to PSUs which have not been used and to put these areas to auction, which will give more opportunity to private sector for participation.
8. The Policy also mentions to make efforts to harmonise taxes, levies & royalty with world benchmarks to help private sector.
9. The Policy also introduces the concept of Inter-Generational Equity that deals with the well-being not only of the present generation but also of the generations to come and also proposes to constitute an inter-ministerial body to institutionalise the mechanism for ensuring sustainable development in mining.

The National Mineral Policy 2019 replaces the extant National Mineral Policy 2008. In compliance of the directions of the Supreme Court, the Ministry of Mines constituted a committee under the chairmanship of Dr K. Rajeswara Rao, Additional Secretary, Ministry of Mines to review NMP 2008. The Committee, which included members from various ministries/departments, Industry Associations and Subordinate offices of Ministry of Mines held a wide consultations and receiving of comments on the draft NMP 2019 from the stakeholders. NMP 2019 was finalised and submitted to the Ministry of Mines early this year.

**CME Dr P. K. Jain invited to deliver lecture at MINCON 2019**

Dr P.K. Jain, Chief Mineral Economist, Indian Bureau of Mines delivered a lecture at a Workshop on UNFC System and MMDR Act 2015, organised for the officers of Geological Survey of India (GSI) and other Central and State agencies engaged in mineral exploration at Regional Training Institute, GSI, Central Region, Nagpur. He was also the chief guest for the valedictory programme held following the technical sessions and shared dias along with Shri G. Vidya Sagar, Additional Director General & HoD, GSI, Central Region, Nagpur.

Dr Jain also attended MINCON 2019, a two-day conference on Mining organised by the Department of Industries and Mining, Government of Maharashtra organised at Hotel Centre Point, Nagpur during 9-10 Feb, 2019.

He spoke on “The Changing Supply and Demand Scenario of Indian Industrial Minerals” and “Mineral Exploration and Opportunity for Mineral-based Industry”.

Dr P.K. Jain, Chief Mineral Economist, IBM delivering a lecture at MICON 2019, a two-day conference on Mining organised in Nagpur.
Shri A. Nandi, Regional Controller of Mines unveiled the tricolour at the Regional Office, Ranchi. The employees and their family members took part in the national event. In his address, Shri Nandi complimented the gathering for the completion of 70 years of the Republic. Similarly, Republic Day was celebrated with lot of enthusiasm across other regional and zonal offices of Indian Bureau of Mines. The regional heads of various zonal and regional offices hoisted the tricolour to mark the day.

Republic Day celebrated in IBM offices

The 70th Republic Day was celebrated with pomp and zeal across all offices of IBM spread across the country on 26 Jan, 2019. The IBM HQ in Nagpur hosted the main event where Shri Mantu Biswas, then CCOM In-charge hoisted the tricolour.

In his address, Shri Biswas extended his wishes to the employees. He asked the gathering to deliver their duties with renewed energy. A disciplined and efficient delivery of services in the day-to-day office work would help the country progress better, he said.

For Spatial Data under MTS: IBM coordinates with Central, State forest agencies

Under the Mining Tenement System (MTS), the Indian Bureau of Mines (IBM) made some more progress in Q4 of FY19. The Bureau made correspondences with various agencies like Wildlife Institute of India, Forest Survey India, State Forest Departments, Geological Survey of India, National Informatics Centre and National Remote Sensing Centre for integration of geospatial data.

The forest departments of Rajasthan and Goa State Governments have shared the forest administrative maps and many of the State Governments have agreed to share the forest maps with IBM for the MTS project. While, Geological Survey of India (GSI) has also agreed to share the Regional Geological maps of the country on 1:50K scale from the OCBIS System. Similarly, the GIS and Remote Sensing Cell is also utilising the services of OCBIS system of GSI and are utilising the geological maps for preparation of multi-mineral lease hold maps.

Training on Online Submission of Returns


About 60 representatives from Rajasthan, Jammu and Kashmir and Gujarat participated in the training programme and were apprised statutory provisions of filing of periodical returns and various other requisites under Rule 45 of MCDR 2017. Shri L. Kulshrestha, Chief General Manager and CFO, GMDC was the chief guest who lighted the

Training/P11
Indian Bureau of Mines (IBM) celebrated the 72nd Foundation Day, ‘Khanij Diwas’ at the Headquarters, Zonal and Regional offices on 1 March, 2019. The IBM HQ in Nagpur hosted the main event. Dr S.R. Wate, former Director of National Environmental Engineering Research Institute was the chief guest, while noted Diabetologist Dr Manish Bothale was guest of honour.

To begin with, a message from Dr K. Rajeswara Rao, Additional Secretary (Mines) & Controller General (I/c) was read. Dr Rao extended greetings and wrote: “IBM officers need to play a responsible and accountable role to bring laurels to the organisation and to achieve higher goals in disciplined and organised way. The role of IBM has acquired significant dimensions in the light of announcement of NMP 2019. IBM has to take leadership role coordinating mining industry and all stakeholders for effective implementation. Each employee should have inherent transparency and honesty and work hard for smooth day-to-day functioning of IBM.”

In his address, Dr S.R. Wate, who inaugurated the foundation day programme lauded the contributions of IBM to the development of mining sector and its proactive role as advisor, regulator and facilitator. The mining sector in the country should be more sustainable in the future. IBM can bring about some robust mechanism in place to ensure that mining plans and mine-closure plans have a fair outlook for the environment; he said and added that IBM has the responsibility to make mine-closure plans effective in environmental redress ideas and plans.

Diabetologist Dr Manish Bothale, speaking on the occasion, gave some tips to the employees for keeping away diabetes. “A regular exercise, healthy diet accompanied with stress-free lifestyle can go a long way in keeping away all kinds of disorders and diseases,” he stated. Smt Indira Ravindran, Director (Ore Dressing) stressed on synergy between various divisions of IBM. Shri Mantu Biswas, then CCOM In-charge, Shri P.N. Sharma, COM and other senior officials from different divisions and sections were present.

Earlier, the employees actively took part in a health check-up and Blood donation camp. More than 50 officials from the IBM HQ and Ore Dressing Laboratory, Hingna, Nagpur donated blood. A walkathon was also organised in the morning in which officers and staff took part.
competitions were organised for the officials. The winners in various competitions were felicitated at the end of the programme. Retired officials of IBM participated. Shri Ashwini Kumar gave vote of thanks.

Goa

Dr (Smt) Vrishali Madrekar, the Head of the Department of Hindi, University of Goa was the chief guest at the Foundation Day celebrations organised at the IBM office in Goa on 1 March, 2019. The Foundation Day programme was accompanied with a Hindi Karyashala.

In his address, Dr Y.G. Kale, RCOM highlighted the key achievements of IBM in the last seven decades and delved on the importance of observing Khanij Diwas to mark the foundation day. He called upon the employees to help building a strong foundation of the organisation.

Addressing the gathering, Dr (Smt) Vrishali appreciated the contributions of IBM to the mining sector. She also released the 12th volume of the Hindi house journal of IBM Goa office, Prayaas on the occasion. Shri Om Prakash, DCOM gave vote of thanks. Shri Suresh Prasad, DCOM and other officials were present.

Hyderabad

Khanij Diwas was celebrated with pomp and show at the Hyderabad Regional office. Shri B. Ram Mohan, retired Regional Controller of Mines, IBM was the chief guest. Shri Shailendra Kumar, RCOM, Hyderabad presided over the programme. Shri Manish Maindiratta, DCOM welcomed the guests. Dr Komal Jagadish, physician, conducted a training programme on first aid on various health emergencies. On the occasion, retired officials of IBM were honoured. A blood donation camp was also organised in the campus. Shri Ibrahim Shariff, Assistant Controller of Mines offered vote of thanks.

Bengaluru

The Bengaluru Zonal, Regional office and the Regional Ore Dressing Laboratory together hosted the Khanij Diwas celebrations on 1 March, 2019. Shri J.R. Chaudhary, Controller of Mines inaugurated the event lighting the lamp. Dr V.J. Aruna, SO (OD) and Head of Office, IBM, Bengaluru and Ashwini Kumar, Assistant Mining Engineer were present.

Addressing the employees, Shri Chaudhary talked about the National Mineral Policy and said the new mineral policy would help bring about more reforms in the mining sector in future. As part of the Foundation Day celebrations, various events and

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MPD officer invited as faculty

Dr D.R. Kanungo, Suptdg. Officer (OD) delivered a lecture on the topic, “Significance of Beneficiation Technique in G-2 Exploration with Case Studies” at a week-long training programme on G-2 stages of Mineral Exploration organised by Regional Training Institute, GSI Central Region in Nagpur. The training programme was conducted for the Geoscientists from GSI, Indian Bureau of Mines, Directorate of Geology and Mining, Maharashtra, Mineral Exploration Corporation (MECL) and Manganese Ore India Limited (MOIL).

Registration under Rule 45

The registration under Rule 45 of MCDR 1988 (excluding 31 minor minerals) has made good progress. All the 1316 working leases are registered as on March, 2019. While, 2130 leases out of 2488 non-working leases are registered. In total, 3446 leases are registered with IBM. About 108 leases were suspended and another 218 recommended to the State Governments for termination. So far, 12111 end users, traders, stockiest and exporters are registered under the Rule.

GIS & Remote Sensing projects

Under the GIS & Remote Sensing Centre Projects at IBM, Nagpur and Hyderabad, discussions are underway with NRSC, Hyderabad for integration of Bhuvan Portal Services with MTS project and Bhuvan based services for monitoring of mining activities. IBM has also proposed for development of mobile app for field data collection and imparting of training to the IBM officials for the purpose. Data migration activities of transferring of multi-mineral lease hold maps from Autocad platform to the GIS platform is in progress. The Reconnaisance Permits and Prospecting Licences shall be digitised on the GIS platform.

IBM has prepared a project proposal for ‘Assessing the Impact of Mining activities in and around the leases and prospecting licences of MOIL Ltd through application of GIS and Remote Sensing Techniques’ under an MoU between the two organisations. The proposal is sent to the MOIL Ltd for its concurrence.

In Mumbai

IBM officials attend India Steel 2019

The Indian Bureau of Mines (IBM) participated in the India Steel 2019, a Conference and Exhibition jointly organised by the Ministry of Steel and Federation of Indian Chambers of Commerce and Industry (FICCI) at Bombay Exhibition Centre, Goregaon, Mumbai during 22-24 January, 2019. IBM participated in the exhibition under the aegis of Ministry of Mines (MoM).

The IBM, Geological Survey of India (GSI), National Aluminium Company (NALCO), Hindustan Copper Limited (HCL) and Mineral Exploration Corporation Limited (MECL), the key departments and PSUs under the Mines Ministry exhibited their strength under the Mines Pavilion. The agencies displayed posters/banners showcasing the services, achievements, capabilities and disseminating information on role of Ministry of Mines in enhancement of exploration and mining through recent policy changes.

Shri Bipul Pathak, Joint Secretary (Mines) inaugurated the Mines Pavilion cutting the ribbon and illuminating traditional lamp. He lauded the efforts of representing officers from all four agencies for a befitting display of each organisation’s strength and the design of the Pavilion. The prominent visitors to the Mines Pavilion included Shri Chaudhary Birender Singh, then Union Minister of Steel. The theme of the Mines Pavilion was the role played by MoM in speeding up exploration activities in the country for auctioning of potential mineral blocks.

A megal LED screen and two large LED screens showed glimpses of functioning of different offices and PSUs under MoM. Also, running photographs of infrastructure, capabilities and achievements were on display. Specially designed VIP lounge, round tables attracted the visitors and evoked good response from dignitaries, domestic and foreign delegates. The event gave an enriching experience to officials from IBM and other agencies. S/Shri D.S. Walde, SgME, Dilip Jain, SMG, A.Z. Khan, SMG, Arun Kumar, DCOM represented IBM.

A large number of stakeholders of the steel sector including Central & State departments and PSUs and private companies participated to display their services, products and achievements.
For Indian Bureau of Mines, the year 1981 brings some of best cherished moments in its seven decades of existence. Upon recommendations from the IBM Review Committee 1978, the Government of India by notifying a resolution No. F-23012(133)/80-MVI, dated 11 August, 1981 expanded the functions of the Bureau. IBM was poised to play a more significant role in the development of mineral resources.

The salient additions to the functions of IBM were inspection of beneficiation plants and mineral-based industries; conducting geological, mining, beneficiation and other techno-economic field studies; conducting studies on environmental protection and pollution control; testing and analysis of ores and minerals obtained from the sea; issue of information circulars relating to mining, mineral beneficiation and mineral-based industries; advising Government on matters regarding the mineral resources of the sea, infrastructural requirement and environmental protection and pollution control; training of scientific, technical and other cadres from the mineral industry; and promoting awareness in regard to the conservation and protection and pollution control; training of scientific, technical and other cadres from the mineral industry; and promoting awareness in regard to the conservation and systematic development of mineral deposits through museums and other audio-visual aids.

New Charter of Functions
A new Charter of Functions was formulated for IBM, broadening the horizons and functional areas. The collection, processing and storage of data on mines, minerals and mineral-based industries; collection and maintenance of world mineral intelligence, foreign mineral legislations and other related matters; publication of bulletins, monographs, information circulars, reports of investigations relating to mining, mineral beneficiation and mineral-based industries; and publishing of statistics relating to mineral production in India, mineral stocks, exports, local consumption etc became a key feature of Charter of Functions along with the regular functions.

Mineral Resources Inventory
The massive programme launched for updating the inventory of mineral resources in India was successfully concluded after two years of hard work. The work called for a careful planning and measures to arrive at an understanding with all the exploration agencies in the country. The intensive programme led to completion of the inventories on 30 important minerals. Shri Pranab Mukherjee, then Hon'ble Minister of Commerce, Steel and Mines was presented with a copy of the Inventory during the 21st meeting of Mineral Advisory Council.

The period also witnessed IBM organising a conference on Rock Phosphate in Nagpur during 22-23 Sept, 1981 to discuss the demand and supply problems. About 75 representatives from all the stakeholder agencies like exploration companies, producers, and consumers of phosphates, chemical industries, Central and State Governments, Indian Standards Institution and Fertilizer Association of India, Minerals and Metals Trading Companies etc. participated.

Training
lamp to begin the day-long training. In his address, Shri Kulshrestha emphasised on the need for systematic implementation of Online Submission of Monthly Returns and asked participants to ensure prompt action for their own benefit and improving of efficiency in regulation of mineral sector in the country.

The training programme covered sessions on Statutory Provisions of Filing of Periodical Returns, Processing of Monthly and Annual Returns (F & H Series) under Rule 45 of MCDR 2017 and publication of Average Sale Price (ASP), Mining Tenement System and filing Online Returns. Shri K. Thomas, DDG (Statistics), Dr P.K. Jain, CME, Shri Kotriwala, RCOM, IBM and Shri Jangid, RCOM (TMIS) from Indian Bureau of Mines presented lectures on topics relevant to Rule 45. The participants included executives from PSUs and Private Sector companies. The participants were presented certificates. S/Shri K. S. Yadav, RCOM, M. Girhe, SMG, IBM were present.
Beneficiation of low grade copper

A very low grade copper exploratory drill core sample of South of Gangutana extension, Unit TS NO.54A/1, Mahendragarh Distt., Haryana was received from Geological Survey of India, Chandigarh. The as received sample assayed 0.19% Cu, 44.17% SiO₂, 10.08% Al₂O₃, 19.98% CaO, 3.66% MgO, 0.124% organic Carbon, and 8.38% LOI.

The mineralogical studies on the as received sample indicate that the sample consists major amounts of mica (biotite & muscovite), quartz, amphibole and carbonates (dolomite & calcite) with minor amounts of chlorite and feldspar. Chalcopyrite, covellite/chalcocite, bornite, pyrite, arsenopyrite, and tourmaline are noticed in very minor to trace amounts in the sample.

By employing flotation process could yield a final copper concentrate assaying 21.93% Cu, 18.06% SiO₂, 20.02% Fe₂O₃, 6.48% Al₂O₃, with 66.3% Cu recovery (weight percent yield being 0.55). Thus, the copper concentrate produced is suitable for industrial use.

The as received sample also contains about 19.98% CaO, and so efforts were made to assess the possibility to produce a by-product of carbonate concentrate suitable for industrial applications. A preliminary flotation test was carried out on the rejects of the copper flotation process. After recovering the copper concentrate, reject was the feed to carbonate flotation and final concentrate could be produced assaying 43.82% CaO, 5.54% MgO, 7.09% SiO₂, 1.31% Al₂O₃, and 39.81% LOI with 39.3% CaO recovery (weight percent yield-17.9).

Besides copper concentrate production, carbonate concentrate for making cement as a by-product shows value addition product for these mines.

Sample II

A low grade copper bearing ore sample (G-2 Stage) was received from GSI, Western Region, Jaipur for bench scale beneficiation studies.

The as received sample assayed 0.23% Cu, 331ppm Pb, 822ppm Zn, 34.52% SiO₂, 25.22% CaO, 8.063% Al₂O₃, 4.179% MgO, 10.1% Fe₂O₃, 2.10% K₂O, 1.38% Na₂O, 0.708% TiO₂, 0.444% MnO, 0.259% SO₃, 0.091% P₂O₅ and 16.40% LOI.

Mineralogical studies of the as received sample indicated that the sample consisted of Chalcopyrite, Covellite and Chalcocite as the copper bearing minerals in minor to very minor amounts. Major amounts of carbonates (calcite, dolomite) and mica (biotite > muscovite) with subordinate amounts of quartz. Minor to very minor amounts of chlorite, hematite, amphibole (tremolite, actinolite), magnetite, ilmenite, goethite/limonite, pyrite and traces of galena, bornite, sphalerite and tourmaline were also noticed in the sample.

By adopting froth flotation beneficiation process could yield a copper concentrate assaying 21.16% Cu, 3.20% Pb, 6.20% Zn with respect to metal recoveries of 70.01% Cu, 57.17% Pb and 64.47% Zn with wt% yield 0.8.

Attempts employing a preliminary flotation test conducted on Rougher Tails obtained after rougher sulfide flotation for by-product recovery could yield a carbonate concentrate assaying 46.20% CaO, 2.58% MgO, 5.41% SiO₂, 2.21% Al₂O₃, 4.06% Fe₂O₃, 37.73% LOI with CaO recovery of 28.94% and wt% yield 13.1. The carbonate concentrate obtained may find its use in cement making industries.

Beneficiation study on limestone reject

A siliceous limestone reject sample from Bilakalaguduru village, Gadivemula Mandal, Kurnool Distt. of M/s JSW Cement Limited was received at Regional Mineral Processing Laboratory, IBM, Bengaluru for preliminary characterisation and detailed bench scale beneficiation studies with an objective to reduce silica content in the limestone concentrate so as to meet the cement industry requirement.

The as received sample assayed 36.90% CaO, 0.73% MgO, 24.24% SiO₂, 3.95% Fe₂O₃, 2.3% Al₂O₃, 0.14% TiO₂, 28.50% A.I., 12.46% Free Silica, 67.72% Total carbonates and 29.75% LOI. Specific gravity of the as received sample is 2.72.

Mineralogical analysis of the sample revealed that the sample mainly consists of carbonate (calcite) as major mineral and quartz+feldspar as sub-ordinate mineral. Clay, goethite/limonite, pyrite/pyrrhotite, pyroxene/amphibole, dolomite and mica are present in very minor to trace amount. Microscopic examination studies revealed that the Carbonate (calcite) occurs in cryptocrystalline to fine sized grain. Most of the carbonate grains are interlocked with quartz + feldspar, goethite/limonite, pyrite+pyrrhotite and clay minerals.

Dry beneficiation processes like differential grinding in rod mill with reduced rod charge followed by dry sieving was attempted. The results are not encouraging. This is due to occurrence of calcite as microcrystalline aggregates, finely intermixed with quartz and other silicate gangue minerals. Flotation test at a grind of 95.4% passing 75 µm, with 0.5 Kg/t Sodium silicate, with 0.7 Kg/t Sodium oleate, at a low pulp density of solids (~20%) yielded a three stage cleaner float concentrate assaying 47.21% CaO, equivalent to 84.03% CaO₆, 12.42% SiO₂, 36.16% LOI with a CaO recovery of 68.1%. The wt.% yield of the product was 55.6.

This suggests that the limestone reject dump sample is amenable for beneficiation by flotation to reduce silica content to the desired specification of cement industry i.e., <13% SiO₂.
SPORTS MEET

The 27th All India IBM sports meet was organised under the auspices of Guwahati Regional office at Netaji Subhash Regional Centre of Sports Authority of India in Guwahati during 5-7 Feb, 2019. Shri Pankaj Kulshrestha, Controller of Mines, IBM, Kolkata inaugurated the Sports meet accompanied by Capt. S.S. Chaudhary, CAO, IBM and Shri P.K. Bhattacharjee, RCOM, IBM Guwahati. About 170 employees from HQ and Regional offices participated. An Assamese traditional dance marked the opening ceremony of the event. The three-day event saw events such as Athletics, Long Jump, Volley Ball, Shot Puts, Javelin Throw and others. Shri Mantu Biswas, then CCOM In-charge presided the valedictory ceremony and gave away prizes to the winners in which Nagpur team stood first, while Ajmer Regional office team came second.

Beneficiation of
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Sample III

A low grade Copper ore bearing sample from Khera SE Block, District-Alwar, Rajasthan collected by Geological Survey of India as a part of G-2 exploration was received at Regional Mineral Processing Laboratory, IBM, Ajmer for bench scale beneficiation studies. The objective of the investigation was to evolve a process flow sheet for producing a Copper concentrate assaying more than 18% Cu with maximum possible recovery.

The as received sample assayed 0.22% Cu; 52.82% SiO₂; 6.43% Al₂O₃; 0.67% S(T); 3.64% Fe (T); 2.34% FeO; 11.39% CaO; 4.85% MgO; 0.21% Na₂O; 2.38% K₂O; 0.40% TiO₂, 11.87% LOI with 56.01% Acid insoluble.

Mineralogically, Chalcopyrite is present in traces. Quartz is present in predominant amount, whereas carbonates (Calcite and Dolomite) occur in major amount. Mica (Muscovite and Biotite) present in subordinate amount. Feldspar and Iron Oxides (Hematite, Magnetite & Goethite) are present in minor amount, whereas Arsenopyrite, Pyrrhotite, Pyrite, Fluorite, Rutile and Amphibole occurs in very minor to trace amount.

By employing flotation test, obtained a composite copper concentrate assayed 21.2% Cu with recovery 68.7% (wt% yield 0.71) which is suitable for metallurgical applications.

The bench scale beneficiation results indicate that, although the as received sample was a low grade (0.22% Cu), it is amenable for up gradation, and it is possible to produce a Copper concentrate suitable for Copper smelter.
हिन्दी अनुभाग

हर्षोल्लास के साथ मनाया गया स्वाधिक दिवस

प्रतिवर्ष नवंबर इस वर्ष भारतीय खान खूरे का स्थापना दिवस ‘स्वाधिक दिवस’ के रूप में मनाया गया। इस अवसर पर विभिन्न क्षेत्रों, उप-क्षेत्रीय कार्यालयों में विभिन्न कार्यक्रमों का आयोजन किया गया।

भारतीय खान खूरे, मुख्यालय – भारतीय खान खूरे मुख्यालय में खानिज दिवस हर्षोल्लास के साथ मनाया गया। कार्यक्रम की अध्यक्षता मुख्य खान नियंत्रक (प्रभारी) श्री गंगा सिंह देव ने की। खानिज अधिकारी का तौर पर गंगा सिंह देव ने खानिज अधिकारी का तौर पर खानिज अधिकारी का तौर पर नियंत्रक की अध्यक्षता होती है। इसका ऑफिस रिकॉर्ड होती है। इसका ऑफिस रिकॉर्ड होती है।

राज्य मुख्यालय – भारतीय खान खूरे मुख्यालय सहित अन्य सभी क्षेत्रों तथा उप-क्षेत्रों के कार्यालयों में भारतीय खान खूरे का स्थापना दिवस खानिज दिवस के रूप में मनाया गया। राजस्थान के कार्यक्रमों में एक अद्वितीय हस्ताक्षर श्री अनुपम नंदी की अद्वितीय खानिज दिवस समारोह का आयोजन किया गया था।

वरिः. सहाय.नियंत्रक श्री इमाम शरीफ के धन्यवाद खानिज दिवस का समापन हुआ।

गुवाहाटी क्षेत्रीय कार्यालय – गुवाहाटी क्षेत्रीय कार्यालय में भारतीय खान खूरे का स्थापना दिवस, खानिज दिवस के रूप में मनाया गया। इस अवसर पर फ्लाय विकास नियंत्रक श्री अंतर्ज्ञ सुधीर के अध्यक्षता के तौर पर आयोजित गुवाहाटी क्षेत्रीय कार्यालय का समापन हुआ।
हिंदी कार्यालय का आयोजन

संघ सरकार की राजमार्ग नीति एवं वार्षिक कार्यक्रम के अनुसार भारतीय खान ब्योर भु-स्लु (ङ्ग्ल) कार्यालय में हिंदी कार्यालय का आयोजन किया जाता है।

भारतीय खान ब्योरो, भु-स्लु – भु-स्लु में 14 मार्च 2019 को अधिवकातीय एवं कमेंटेशन द्वारा हुए एक पूर्ण विद्वान हिंदी कार्यालय का आयोजन किया गया। हिंदी कार्यालय में भारतीय खान ब्योरो के व्याख्याताओं ने अन्तर्द्वारा भ्रमण निर्देशित करते हुए आयोजकों की प्रवचन में विवरण दिया।

अपने व्यवहार में मुख्य अध्यक्ष एवं समाजवादी अधिकारी ब्राज़ील के जैन ने हिंदी कार्यालय के उद्देश्य और महत्त्व पर प्रकाश डालने उपर यह कहा कि हिंदी कार्यालय का आयोजन भारत सरकार की राजमार्ग नीति का एक ही अंग है। मुख्य अध्यक्ष ब्राज़ील के जैन ने अंतर्द्वारा पारंपरिक रूप से जानकारी देते हुए इसकी आवश्यकता के बारे में विविधता करते हुए जानकारी दी। हिंदी अध्यक्ष इ.व. हिंदी ने हिंदी वर्तमान में होने वाली हींवी—हिंदी तुर्की एवं तिमाही सिटेट की जानकारी दी। खबर अंतर्राष्ट्रीय मुख्य मुकुटहर्दी ने हिंदी में सामाजिक एवं तकनीकी पहलाई कैसे किया जाय इस बारे में जानकारी दी।

कार्यालय के प्रदत्त सभी प्रतिवेदनों के कार्यालय के विषय में हमने प्रतिवेदनों का प्राप्त किया है। कार्यालय में 24 अधिकारियों एवं कमेंटेशनों ने माप ग्राह किया। आदर्श एवं हिंदी अनुवादक भ्रमण के क्षेत्र में ध्यान देने की आवश्यकता के लिए आयोजकों में प्रतिवेदन किया।

खेम प्रस्तरक्रान्ति प्रभाव – भारतीय खान ब्योरो के खेम प्रस्तरक्रान्ति प्रभाव, एय-आय-डी-सी, हिंदी, नागपुर में 14 मार्च 2019 को एक विशेष हिंदी कार्यालय का आयोजन किया गया। मुख्य अधिकारी के तौर पर विवाद समाधान अतिरिक्त रिश्ते इंडिया भाषा के अध्यक्ष क। कार्यालय का अनुबंध भु-स्लु अनुबंध कार्यक्रम अधिकारियों दल (विभागीय) सन्योजन लाने के लिए। समीक्षक मुख्य अधिकारी एवं अधिकारी का पीछे में देवर स्थानक किया।

पुस्तक 16 पर
शिवाजी जयंती

श्री चंगली शिवाजी महाराज जयंती उत्सव समारोह की आयोजन के लिए भारतीय खान ब्यूरो मुंबई में 19 फरवरी 2019 को चंगली शिवाजी महाराज की जयंती हर्षभूमि के साथ मनाए गए। इस अवसर पर गृह अतिथि और पंजाब का पूजन चित्रात्मक समारोह के रूप में का अतिथि तथा वर्तमान खान मंत्री श्री बिजेंद्र प्रसाद यादव, नगर अधिकारी अध्यक्ष मिश्रीलाल दास, अध्यक्ष उपाध्याय जयंती ट्रस्ट की अध्यक्ष तथा कुलेश जी निलेश नागपुरे ने तथा आम आदमी पार्टी प्रदर्शन श्रीमती दिना चौरसिया ने किया।

गुवाहाटी में ख्रेउर्ड्स-मोट का आयोजन

भारतीय खान ब्यूरो के रिकॉर्ड कल्ब द्वारा प्रतिष्ठित अखिल भारतीय ख्रेउर्ड्स-मोट का आयोजन किया गया है। इस से 27 वीं अखिल भारतीय ख्रेउर्ड्स-मोट का आयोजन 5 फरवरी से 7 फरवरी के दौरान भारतीय खान प्रदर्शन, नगर अधिकारी द्वारा गुवाहाटी में किया गया था।

बिभागीय राजभाषा समिति की 109वीं बैठक का आयोजन

बिभागीय राजभाषा कार्यालय समिति, भारतीय खान ब्यूरो (मुंबई) का 109वीं बैठक 27 वीं अखिल भारतीय ख्रेउर्ड्स-मोट की आयोजन के लिए भारतीय खान ब्यूरो (मुंबई) का 109वीं बैठक का आयोजन किया गया। इस से वर्तमान खान मंत्री श्री बिजेंद्र प्रसाद यादव, नगर अधिकारी अध्यक्ष मिश्रीलाल दास, अध्यक्ष उपाध्याय जयंती ट्रस्ट के अध्यक्ष तथा कुलेश जी निलेश नागपुरे ने तथा आम आदमी पार्टी प्रदर्शन श्रीमती दिना चौरसिया ने किया।