Minutes of 12th State Geological Programming Board
8th August, 2012, Raipur.

12.1 12th meeting of SGPB was held at Raipur on 8th August, 2012 under the Chairmanship of Shri Vijayendra, Secretary, Govt. of Chhattisgarh, Mineral Resource Department. Representatives of Geological Survey of India, Chhattisgarh unit & Coal wing, G.S.I. Training Institute, Indian Bureau of Mines, Mineral Exploration Corporation Ltd, Atomic Mineral Directorate, Central Mine Planning and Design Institute, National Mineral Development Corporation, Chhattisgarh Mineral Development Corporation, Forest Department, Chhattisgarh Council of Science & Technology and Directorate of Geology and Mining, Chhattisgarh participated in the meeting. List of Participants is enclosed.

12.2 Ab initio, Shri Jayant Pashine Joint Director, Geology and Mining, Chhattisgarh, presented a warm welcome to the Chairman and to the members. In his inaugural address, he said that this meeting provides an opportunity to the state agencies as well as central agencies to discuss about their achievements and future geological field programme which are to be carried out during coming field season.

12.3 Chairman of the Board, Shri Vijayendra welcomed the members. In his address he said that this meeting is organized to discuss about the work carried out and reserves estimated during field season 2011 -12 and to plan the field programme to be taken ensuing field season i.e. 2012-13.

12.3.1 He said that mineral sector is an important component of the state. It contributed Rs. 2737.25 crores in 2011-12 financial year to state exchequer as mineral revenue and Chhattisgarh stands in 3rd position among mineral producing state. He also inform that Rs. 15800 crores of mineral have been produced during 2011-12, it includes coal, iron ore, limestone, dolomite, bauxite and quartzite etc.

12.3.2 He urged that, since Chhattisgarh is very rich in minerals and lot of opportunities exist here, hence massive investment opportunities have been created in the areas of mineral exploration to promote investment in this sector with latest technologies.

12.3.3 During his addressed, he said that all the organization working in the state has very good co-ordination and wished that they should come up with the ideas of common consensus so that some good result may come.

Concluding his words he congratulated all the agencies for this commendable work and hope that this meeting will be fruitful for all of us.

12.4 Shri Jayant Pashine thanked Chairman for his valuable guidance and assured him of compliance of all the guidelines. He presented the minutes of the 11th meeting of the SGPB held on 19th August, 2011 before the house for approval and the same was unanimously approved by the members without any modifications.

12.5 **Geological Survey of India, Chhattisgarh Unit, Raipur-**

Mr. M. C. Patel, Director GSI, CG Unit, informed the house that GSI has taken up different projects in Chhattisgarh during the period. GSI is concentrating on two mission that is mapping and exploration.

12.5.1 **Mapping**:- Mr. C.R. Das, Director, GSI presented the work on specialized thematic mapping in Pandadah-Khairagarh-Amgaon-Nandgaon Belt, Rajnandgaon distt. 502 sq. Km area is mapped on 1:25,000 scale in Toposheet no. 64 C/15 and 16 in Rajnandgaon distt. In the mapped area Rocks of Chilpi Group are present. Sitagaon metabasics (volcanics), Rhyolite and basalt of Nandgaon Group and shale of Chilpi Group are also found in the area. The structural setup and correlation of different formations of the area are studied during this period.

12.5.2 Specialized thematic mapping in Chhotanagpur granites-gneiss and metasediments of Surguja Distt. Total 398 sq. km. area mapped on 1:25,000 scale. The litho units found are Alkali feldspar granite, granodiorite, biotite gneisses and augen gneisses of Chhotanagpur gneissic complex. Two phases of folding are observed within biotite gneisses.

12.5.3 Mr. A.P.S. Parihar, Director, GSI presented the work of Geochemical mapping in Toposheet no. 64 K/12 & 16, Distt. Mahasamund. Various type of Geochemical samples were collected from this area. 676 stream sediments samples along with other samples were collected. The area is predominantly occupied by Dongargarh Granitoids.

12.5.4 Geochemical mapping in Raipur and Mahasamund Distt. Total 662 stream sediments samples along with other samples are collected. The area is occupied by rocks of Raipur Group of Chhattisgarh Super group.

12.5.5 Search for kimberlite clan rocks in Bilaspur Dist. (Economic Geology Project) :- Reconnaissance mapping for 570 sq. km. is done and 76 no. of stream sediment samples, 23 Nos. of Pit samples, 18 Nos. of Palaeochannel samples, 42 Nos. of grains for EPMA, 08 Nos. of HMA samples were collected for indicator mineral studies. Presence of garnet, zircon and other opaques are revealed in the samples.

12.5.6 Preliminary investigation for gold mineralization in Palsapali area, west of Bhanwarpur, Raipur dist. (Economic Geology Project) :- 70 sq. km. area is mapped on 1:12500 scale and 54 cu. m. pitting /trenching was done. The mapped area exposes metabasics and acid volcanic rocks of Baghmara Formation of Sonakhan Group.

12.5.7 Assessment for Iron ore in Bhalapuri, Eklama-Chelikama block, Kabirdham Distt.
A total of 9 meter drilling was done in two boreholes.

12.5.8 Geoinformatics Project. Maintenance of LAN/WAN and uploading of unpublished reports on to GSI portal.- LAN/WAN of GSI, CG. Unit Raipur is working properly for transmission and retrieving of data and remote printing from one end to different user ends and vice versa.

12.5.9 Finalization of geological map layer in 1:50K national grid and Uploading with attribute data in geodatabase:- All the 153 nos. of geological maps on 1:50,000 scale pertaining to the GSI, CG. Unit were digitized and uploaded in GSI portal.

12.6 Coal Wing, Geological Survey of India, Kolkata-

During the period regional and promotional exploration programme for coal were continued in Chhattisgarh in the Mahanadi Valley basin (Mand Raigarh Coalfield & Hasdo-Arand Coalfield) and Son Valley basin (Tatapani-Ramkola Coalfield).

Mr. M.C. Patel of GSI informed the house that GSI coal wing is engaged in exploration for 6 Coal blocks in Chhattisgarh.

12.6.1 **Mand Raigarh Coalfield** incorporates three block.

Nawagaon block, Raigarh Dist. During the period under review, a total of 3519.15 m. drilling was carried out in eleven boreholes. Twelve no. of regional Barakar coal seams (seam I to XIII in ascending order) were intersected between 11.96m and 406.15m depths and the thickness of seams varies from less than a metre to 20.44m (cumulative). Of these the important seams are I, IV, VI, VII and VIII . The continuity of coal seams has been established over 10 km in strike direction and 12 km along dip direction.

Teram Block:- During the period under review, a total of 2124.50 m. drilling was carried out in five boreholes. Ten regional Barakar coal seams (seam I to X in ascending order) were intersected between 132.90 m and 729.10 m depths and the thickness of seams varies between less than a meter to 12.55 m. The continuity of coal seams has been established over 5 km along strike direction 3.5 km along dip direction.

Samarsingha block was commenced on 1-12-11 and was continued with 1680.05m drilling in three boreholes. 13 no of regional coal seams and a few local coal seams ranging in thickness from less than a meter to 8.52m have been intersected indepth range of 56.20 to 604. 50m Coal seams I, VI, VII & XIII are important for their thickness and regional persistency.

12.6.2 **Hasdo-Arand Coalfield**

Korja Block, Surguja Dist. During the period under review, a total of 1247.05 m. drilling was carried out in four boreholes. Four regional Barakar coal seams were intersected between 65.85 m and 342.35 m depths with maximum cumulative coal thickness of 6.45 m. Four local coal seams were also intersected. Seam no III, IV, V and L-2 are important for their thickness and regional persistency.

12.6.3 **Son Valley Coalfield (**Tatapani-Ramkola Coalfield, Surguja Dist.**)**

Reonti west block, Surguja Dist. A total 823.30 m. drilling is done in this block in two boreholes. 6 regionally persistent coal seams (I to VI in ascending order) were intersected. These seams ranging in thickness from less than a meter to 66.66m (cumulative). Depth of occurrence was 702.10m to 880.00m. Seam no VI, V, IV and III are important for their thickness and regional persistency.

Vijaynagar-Giddhi block, Surguja Dist. A total 2299.75 m. drilling is done in this block in four boreholes. 13 regionally persistent coal seams (I to XIII in ascending order) and ten local seams were intersected in this block. These seams ranging in thickness from 0.50m to 14.80m (cumulative). Depth of occurrence was 22.55m to 605.60m. Seam no II, III, IV, V, VII, VIII, XII and XIII are important for their thickness and regional persistency. The continuity of coal seams has been established over 4 km along strike direction 1 km along dip direction.

12.7 **Indian Bureau of Mines, Nagpur**:-

12.7.1 Mr. A.K. Ghoshal, Sr. Mining Geologist, IBM, Nagpur, informed that 45 mines were inspected in Chhattisgarh for implementation of MCDR 1988. The mines inspected were of minerals Bauxite, Dolomite, Iron ore, Limestone, Quartz & Quartzite, Molding Sand & White Clay in different dist. of the state. 59 sites were inspected for approval of mining plans & schemes of mining and 48 mining plans were approved. Four case of FMCP was processed and two were approved. 63 cases of schemes of mining were processed. During

the year 2011-12, 23rd Mines Environmental and Mineral Conservation Week was organized under the jurisdiction of Nagpur Regional Office. During the 2011-12 eight applications fresh grant and four applications for renewal of persons from the Chhattisgarh were received & processed for recognition as RQP for preparation of Mining Plan/Scheme of Mining and granted recognition in all the cases.

12.7.2 During the discussion Mr. Anurag Diwan, Joint Director said to IBM that, list of violation of ML provide to DGM and a copy of inspection report/violation report may endorsed to concerned district office for speedy action.

(Action IBM)

12.7.3 During discussion, Mr. A.P. Biswas, Conservator of Forest has also informed the house that for reconnaissance survey and sampling in initial stage, no prior permission from Forest department is required and any body can enter in the forest for this purpose.

12.8 **Atomic Mineral Directorate of Exploration and Research**-

Mr. Amit Majumdar, Regional Director, AMD, Nagpur elaborated the Geological activities of the field season 2011-12 and proposals for the next field season in Chhattisgarh. He informed that three prominent Mesoproterozoic basins (Chhattisgarh Basin, Khairagarh Basin and Indravati Basin)have been identified as most promising areas for Uranium exploration in Chhattisgarh state. In addition to this shear zones in rock of Nandgaon Group and Surguja crystalline are also being investigated. Apart from Uranium Work for RMRE minerals are also carried out.

12.8.1 Uranium investigation-

a. Chhattisgarh Basin-

Radiometric survey carried out along north-west margin of Chhattisgarh basin which brought to light uranium mineralization.

b. Indravati Basin-

Detailed litho-structural mapping (1:2000 scale) is carried out in southwestern part of Indravati basin. Reconnoitory drilling (1338.60m) of 10 boreholes in Silckjhodi, fault zone has indicated uranium mineralization.

c. Khairagarh Basin-

Reconnoitory drilling of 24 boreholes (3698.60m) at Nalpani and Bhimdo area intercepted significant uranium mineralization hosted conglomerate and TEM sounding surveys indicated significant geophysical anomalies in the area.

d. Surguja Shear Zone-

Detailed Geological mapping, detailed radiometric checking and systematic sampling in Surguja crystalline were carried out to establish sub-surface continuity of shear controlled ‘vein type’ uranium mineralization. Drilling in 10 boreholes (total 3526.95m) was done.

12.8.2 Rare Metal Rare Earth (RMRE) Investigations-

These investigation include reconnaissance survey detailed evaluation and assessment of Columbite-Tantalite along with Beryl in parts of Bastar and South Bastar Distt.

12.8.3 Mr. Majumdar of AMD said that their organization is putting 90 % of their geologist and other technical staff in different projects in Chhattisgarh. He added that requirement of

RMRE has become a very important issue these days. Earlier these minerals were imported from China and Brazil. The demand of RMRE has increased immensely. Chhattisgarh has got a good potential of occurrence of these minerals. He asked DGM, Chhattisgarh to give special attention on it. Beside this Chhota Nagpur granite has good potential of disseminated/segregated RMRE deposits. Mr. Majumdar also discussed about the possibility of working for RMRE with DGM, Chhatisgarh.

12.9 **Central Mine Planning and Design Institute-**

Mr. Biswanath Das, CMPDI, Ranchi said that CMPDI engaged in Coal Exploration in Korba, Mand-Raigarh, Bisrampur, Hasdeo-Arand, Sonhat and Ramkola-Tatapani Coalfields were in progress through departmental resources and outsourcing. Total of 235918.25 m drilling was carried out. Prospecting report of Chhal block of Mand-Raigarh coalfield is finalized during 2011-12. Coal reserves proved in this block are 85.50 million. Prospecting report of Madan north sub-block Mahan I & II block is finalized during 2011-12. Coal reserves proved in this block are 136.89 million. Prospecting report of Naraibodh II block is also finalized during 2011-12. Coal reserves proved in this block are 131.56 million tonne.

During coming field season (2012-13) proposed drilling for coal by CMPDI is 233000m in Chhattisgarh State. One Geological Reports is proposed to be completed during the coming field season. .

12.10 **National Mineral Development Corporation Ltd**.-

Mr. Sravan Kumar informed the house that NMDC has carried out exploratory drilling work in the existing mining leases of Bailadila area for quality control and additional reserve proving. Total 5525m drilling is done.

NMDC proposes to drill 9990m for Iron ore during coming F.S. 2012-13 in working mine of Bailadila Deposit No. 14, 11C, 11A and 5.

12.11 **Mineral Exploration Corporation Ltd.**

12.11.1 Mr. Das informed that MECL was engaged in exploration of coal in 12 coal blocks in Chhattisgarh state. Out of these, 11 blcok lie in Mand-Raigarh Coalfield of Raigarh district and one in Sonhat Coalfield of Koria district.

He intimated also that 4 coal blocks on promotional basis, 6 blocks for CMPDIL and one each for M/s CMDC and M/s Mahatamil on contract basis.

12.12 **Chhattisgarh Council of Science and Technology(Remote Sensing Application Centre)-**

Shri P. Kawishwar, Sr. Resouces Scientitist elaborated the work of organization done during this year. Terrain editing of 130 catroscene has been completed and Orthorectified cartoscene generated of Bastar region

Final DPR of Bhatunga Nala, Distt. Rajnandgaon have been prepared to develop a model project of water shed development.

12.13 **Central Institute of Mining & Fuel Research, Bilaspur Unit -**

Representative of CMFR was absent in the meeting. However, as the review materials for Agenda paper, during the period under review, CIMFR, Bilaspur unit has received 7,091.00 m length of coal core for analysis and testing from various organization. Total 8,116.90 metre of coal cores (including 2010-11) have been dispatched to exploration agencies after analysis & testing.

12.14 **Chhattisgarh Mineral Development Corporation-**

Mr. Pandey, Geologist of CMDC elaborated the mineral exploration activities of CMDC. In the year 2011-12, CMDC carried out investigation for Bauxite, through DGM, CG. In Sarbhanja and Dandkesra area in Surguja Dist. and Darai and Bhurskipakri area in Kabirdham Dist. prospecting work for bauxite is being done by DGM, CG and the work is under progress.

12.15 **Training Centre, Geological Survey of India-**

Officers of Training Centre, Geological Survey of India, Raipur informed that they are organizing training on various technical aspects of Geological survey, Mineral exploration and drilling, computerization etc. Participants from various organizations are asked to avail training facilities at this centre.

(Action - all members)

12.16 **Directorate of Geology and Mining, Chhattisgarh-**

12.16.1 **Regional Office Bilaspur**:-

Dr. D. R. Patel, Regional Head Bilaspur elaborated the mineral exploration activities of Regional office Bilaspur. He informed that Prospecting for Bauxite was carried out in Dandkesra area during the period. Total 1142.35m drilling is done and approximately 4 lack tonne of bauxite deposits are estimated in the area. Prospecting work in Saila coal block, Dist. Korba was continued during the field season. In Saila 14 coal seams were encountered among which seam no. III is the most important. 1797.20m drilling is done in Saila block. 51 million tonne of coal reserves have already been established in this block. In Gare sector 1 block 498.35m drilling is done. In this block 15 coal horizon occurs out of which 6 seams appear potential. On basis of present work 14 million tonne of coal resources are estimated in this block. The grades are between C to G. The work is completed in this block during May, 2012. During the field season preliminary work for exploration of coal is carried out in Saidu Block, Distt. Surguja. Reco survey over 440 sq. km area and detailed geological mapping over 0.80 Sq. km. area is done. During the field season preliminary work for exploration of coal is also carried out in western and southern part of Mainpat plateau, Distt. Surguja. Reco survey over 300 sq. km area and detailed geological mapping over 0.48 Sq. km. area is done.

12.16.2 **Regional Office Raipur**:-

Shri Dutta Mainkar, Regional Head Raipur informed the house that prospecting for Limestone in Deogaon Kurra area was completed during the period. Total 728.10m drilling is done and 17.98 million tonne of cement grade limestone reserves are proved and 68 million tonne of cement grade limestone resources are estimated. Prospecting for Limestone in Kesla area was started during March, 12. During the period total 284m drilling is done and 17 million tonne resources of limestone estimated. Prospecting for Bauxite in Darai area, Dist. Kabirdham was continued. 812.70m drilling is done and 3.25 lack tonne of reserves of bauxite are estimated in this block. During the period investigation work for Manganese ore is carried out in Chhura Parsuli area in Gariaband Distt. Reconnaissance survey over 151 Sq. km area is done and 28 manganese samples are collected for analysis. As the geological setup suggest now the prospects for manganese occurrence are not very promising hence no further work is recommended in the area.

12.16.3 **Regional Office Jagdalpur**:-

Shri N. K. Chandrakar, Regional Head Jagdalpur informed the house that survey for cement grade limestone in Bastar area was carried out. Reconnaissance survey over 300 sq. km. is done. 1.00 million tonne resources of cement grade limestone are estimated. Survey

and demarcation of Granite suitable for cutting and polishing around Charama, Kanker and Keshkal area, Dist. Bastar/Kanker is carried out during the period. Reconnaissance survey over 965 sq. km. is done. 68 samples for study of cutting and polishing properties were collected. 28 lack cu.m.black granite (dolerite) is estimated in this area. During the period survey for Iron ore in Pawaras and Kachora area Distt. Bastar (Kondagaon) is carried out. Reconnaissance survey over 574 sq. km. is done and 238 samples were collected. 5.10 million tonne of low grade Iron ore is assessed from this area. As the area doesn't seem potential no further work is recommended in this area.

12.15 The proposed field programme of the member organizations have been approved unanimously. As there was no overlapping or duplication found in the field programm

The meeting ended with vote of thanks presented by Mr. D. Mahesh Babu, Joint Director, D. G. M. Chhattisgarh to Chairman and members of Board.

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List of Participants

S.No.	Name & Designation	Address	Phone No.
	Members		
1	Shri Vijayendra, Secretary	Govt. of Chhattisgarh, MRD, Raipur	0771-4080931
2	Shri M.C. Patel, Director	GSI, CG Unit, Raipur	9425502029
3	Shri CR. Das, Director (G)	GSI, CG Unit, Raipur	9424201183
4	Shri A.P.S. Parihar, Director (G.)	GSI, CG Unit, Raipur	8962743014
5	Shri H. Yusuf Bhai, Director	GSI, FTC, Raipur	9424200384
6	Dr. A.K. Ghoshal, Sr. Mining Geologist	IBM, (NR office), Nagpur	9423058537
7	Shri P. Kavithwar, Sr. Resource Scientist	CG Council of Science & Technology	2583549, 2434569
8	Shri N.N. Parva, Chief Manager	CMPDI, Bilaspur	-
9	Shri Sravan Kumar, Asstt.General Manager(Geo.)	NMDC Ltd., Hyderabad	9490760005
10	Anup Kumar Biswas, Conser.of Forest	PCCF Office, Raipur	9425833066
11	Shri Amit Majumdar, Regional Director	AMD, Central Region, Nagpur	9422147717
12	Shri Biswanath Das, Manager (Geology)	CMPDI, Ranchi	9424185245
13	Shri S.K. Pandey, Asstt. Geologist	CMDC, Raipur	9926533449
14	Shri A.K. Sharma, C.E.	CECB, Raipur	9827126123
	Other Participants		
15	Shri Arun Kumar Shukla, Project Manager	NMDC Ltd., Raipur	9479000507
16	Shri N.K. Panda, Scientific Officer	AMD, Central Region, Nagpur	9423637329
17	Shri Rajaiya, Sr.Geologist	GSI, CG Unit, Raipur	9826170022
18	Shri Amit P. Multaniya, R.A.	CG Council of Science & Technology	8989568770
19	Shri A.K. Verma, Asstt.Geologist	CMDC, Raipur	9981297819
20	Shri Jayant Kumar Pashine, Joint Director (Geo)	Directorate of Geology & Mining, Raipur	9425208243
21	Dr. D.R. Patel, Joint Director (Geology)	Directorate of Geology & Mining, R.O.Bilaspur	9827153271
22	Shri D. Mahesh Babu,Joint Director (Min.Adm.)	Directorate of Geology & Mining, Raipur	9425228164
23	Shri Anurag Diwan, Joint Director (Min.Adm.)	Directorate of Geology & Mining, Raipur	9425532588
24	Shri S.S.L. Nagwanshi, Joint Director (Lab.)	Directorate of Geology & Mining, Raipur	9981008085
25	Shri N.K. Chandrakar, Dy.Director (Geology)	Directorate of Geology & Mining, R.O. Jagdalpur	9425512932
26	Dr. Datta Mainkar, Dy. Director (Geology)	Directorate of Geology & Mining, R.O. Raipur	9826103305
27	Shri H.D. Dhekaware, Dy.Director (Geology)	Directorate of Geology & Mining, Raipur	9098703637
28	Shri A.K. Sharma, Dy.Director (Geology)	Directorate of Geology & Mining, Raipur	9924224722
29	Shri S.K. Tiwari, Dy.Director (Geology)	Directorate of Geology & Mining, R.O. Raipur	9425206830
30	Shri B.S. Acharya, Dy.Director (Geology)	Directorate of Geology & Mining, R.O.Bilaspur	9691346929
31	Shri S.K. Singh, Dy.Director (Geology)	Directorate of Geology & Mining, R.O. Raipur	9425512901
32	Shri P.K. Padlamwar, Dy.Director (Geology)	Directorate of Geology & Mining, Raipur	9406202456
33	Shri Mahipal Singh Kanwar, Dy.Director(M.Adm.)	Directorate of Geology & Mining, Raipur	9425550927
34	Shri S.K. Verma, Asstt. Geologist	Directorate of Geology & Mining, R.O.Bilaspur	9826099701
35	Dr.Sanjay Khare, Asstt. Geologist	Directorate of Geology & Mining, Raipur	9425510191
36	Shri H.K. Dhrew, Asstt. Geologist	Directorate of Geology & Mining, R.O.Jagdalpur	9424291081
37	Smt. Prachi Awasti, Mining Officer	Directorate of Geology & Mining, Raipur	9424281192
38	Shri Parmanand Khute, Asstt.Geologist	Directorate of Geology & Mining, Raipur	9630942005

Minutes of the 13th meeting of State Geological Programming Board (12th September 2013) Chhattisgarh.

13.1 13th meeting of SGPB Chhattisgarh was held at New Circuit house, Raipur on 12th September, 2013 under the **chairmanship of Shri M.K.Tyagi, Secretary, Govt. of Chhattisgarh, Mineral Resources Department.** Representatives of Geological Survey of India Chhattisgarh Unit, Indian Bureau of Mines, Atomic Mineral Directorate for Exploration and Research, Central Institute of Mining & Fuel Research, Central Mine Planning & Design Institute, National Mineral Development Corporation, Central Ground Water Board, Chhattisgarh Mineral Development Corporation and Directorate of Geology and Mining, Chhattisgarh participated in the meeting (List of participants is enclosed.

13.2 First of all, the Member Secretary of the SGPB Shri N.K. Xaxa, Director, Geology and Mining, Chhattisgarh state offered a warm welcome to the Chair and all the members. He reiterated that the basic objective of this meeting was to interact and discuss on the achievements of the geological investigations carried out during previous year and to plan for the ensuing year geological programme so that there should not be any overlapping or duplication.

13.3 The Member Secretary put up the minutes of the 12th SGPB meeting held at 8.8.2012 for approval. The same was approved unanimously.

13.4 Shri M.K.Tyagi, Secretary, Govt. of Chhattisgarh, Mineral Resources Department and Chairman expressed his happiness to be in the midst of the eminent geoscientists who had gathered to exchange their scientific knowledge and expertise for the cause of mineral development of the State of Chhattisgarh. He urged for the collaborative efforts to be made by all the geological organizations working in the field of mineral exploration so as to ensure sustainable development of the State and in turn, of the Nation by putting their maximum efforts to explore the hidden mineral deposits as well as by proving additional mineral reserves for establishment of new mineral based industries.

Shri M.K. Tyagi, Secretary and Chairman of SGPB gave needful suggestion of all agencies of mineral exploration.

13.4.1 Mineral reserves must be proved by various organizations as per the UNFC guidelines and modern parameter.

13.4.2 The exploration agencies avoids cultivated land or double crop area for prospecting.
13.4.3 The all agencies interact and share all datas to each other and upload the public Domain.
13.4.4 The exploration agencies before start their exploration work, get the area are notified, proposal for notification to the State Government.
13.4.5. Geological work should also includes prospecting and evaluation of low grade limestone because the demand of building material growing rapidly.

13.4.6 During his address, he said that all geological organizations particularly CMPDI & NMDC should update their websites regularly and all the information which can be disclosed should be in public domain.

(Action CMPDI & NMDC)

13.5 Geological Survey of India, Chhattisgarh Unit, Raipur

Mr. S. Shivanna, Dy. Director General informed that GSI will host 36th International Geological Congress 2020 at New Delhi along with co-hosting countries like Bangladseh, Pakistan,

Nepal, Sri Lanka etc. The proposed theme for IGC 2020 will be **"Geosciences: The Basic Science for a sustainable Future".**

13.5.1 Mr. Shivanna emphasized about the vision of GSI, is to develop GSI into a world class institution for fundamental as well as applied geoscience with latest technologies and methodologies.

13.5.2 Five missions including 17 projects have been taken up under the supervision of Mission Heads during field season 2012-13.

13.5.3 Mission I, three projects were taken up, namely:-

1. Specialized Thematic mapping in Mangikhuta-Karutola-Morkutum-Chichola belt, Durg & Rajnandgaon Dist., C.G. (T.S. No. 64C/8 & 12)
2. Specialized Thematic mapping in Bilaspur-Raigarh-Surguja metamorphic belt in Bohla-Hariharpur-Sevadih area, Surguja Dist., C.G. (T.S.No. 64M/9)
3. Specialized Thematic mapping in Chilpi-Ranidhara-Palak area in Kawardha (Kabirdham) Dist., C.G. (T.S. No. 64F/4)

13.5.4 Mission I Project GCM, three Geochemical Projects were taken up, namely:-

1. Geochemical mapping in Sonakhan Granite Greenstone Belt, Raipur and Mahasamund Districts, Chhattisgarh (T.S. No. 64K/2 & 64 K/4).

   During discussion on Gold, the Chhattisgarh is 2nd in Gold panning. So it is more important to search for host rock of Gold in those part where panning is in progress.

   (Action G.S.I.)

2. Geochemical Mapping in Bastar craton and Chhattisgarh basin, Raipur district, Chhattisgarh (Toposheet No. 64L/1, 2 and part of 64 K/16).
3. Geochemical Mapping in Bastar Craton and Chhattisgarh Basin, Raipur district, Chhattisgarh. (Toposheet No: 64 L/3).

   The main objective was geochemical characterization of the abiotic environment in parts of Raipur and Mahasamund Districts, CG.

13.5.5 Mission II A (Economic Geology) five projects were taken up- two for PGE investigation, one for iron ore and two for diamond

PGE Investigation

1. Re-appraisal of PGE in Mayurnacha-Jamjahor-Madhuban-Konpara area of Jashpur district.
2. Preliminary investigation for PGE & Ni in Chandranagar-Lohardadar areas, Raipur district.

Diamond

3. Search for Kimberlite Clan rocks in Dhamtari, Kanker and Durg districts. T.S.No64H/10 & 11.
4. Search for Kimberlite Clan rocks in Dhamtari and Kanker districts, T.S.No. 64H/10 & 11.

Iron Ore

5. Assessment for iron ore in Bhalapuri, Eklama, Chelikama block, Kabirdham (Kawardha) Distt., (T.S. No. 64G/1)

   Dy. Director General, GSI informed the house that prospecting work was suspended due to time barred of P.L. granted to CMDC. He requested to take action immediately for smooth running of work.

   (Action CMDC and DGM)

13.5.6 Mission III - Geoinformatics, updating of 1:50KGeological maps already uploaded in the portal linked 071 and other project were taken.

13.6 Geological Survey of India, Coal Exploration in Chhattisgarh.

Shri S. Shivanna, Dy. Director General of GSI elaborated the coal exploration work in under Mission II B in four areas of Mand Raigarh and Tatapani Ramkola Coalfield.

13.6.1 A. MAHANADI VALLEY COALFIELDS (MAND – RAIGARH CF)

1. Regional exploration for coal in Samarsingha block, Mand-Raigarh coal field, Raigarh district.

2. Regional exploration for coal in Amlidhonda block, Mand-Raigarh Coalfield, Raigarh district.

3. Regional exploration for coal in Teram block, Mand-Raigarh Coalfield, Raigarh district.

13.6.2 B. SON VALLEY COALFIELDS (EAST) (TATAPANI–RAMKOLA CF)

4. Regional exploration for coal in Vijaynagar-Giddhi block, Tatapani-Ramkola coal field, Surguja district.

13.6.3 He also communicated to the house about the proposed work for field season 2013-14

13.7 Indian Bureau of Mines, Nagpur.

Shri R.R.Dongre Sr. Asstt. Controller of Mines, IBM, Nagpur, informed the house that 08 mines were inspected in Chhattisgarh for implementation of MCDR 1988. The mines inspected were of Dolomite and Limestone of Bilaspur and Raipur districts. Total 77 sites were inspected for approval of mining plan and scheme of mining and 25 mining plans were approved. Two case of FMCP was processed and one was approved. Total 89 cases of scheme of mining were processed and 40 scheme of mining approved. During the year 2012-13, 24th Mines Environmental and Conservation week was organized under the jurisdiction of Nagpur Regional Office. During the period, thirteen applications of fresh grant and one application for renewal of qualified persons from the Chhattisgarh were received and processed for recognition as RQP.

Mr. Dongre has also added in his deliberation that as per IBM circular the agency for DGPS survey to be nominated by State Govt. as soon as possible.

(Action DGM)

13.7.1 Mr. Diwan also enquired about the lessees who had been registered under rule 45 of MCDR 1988, and requested to provide the list of ML to DGM.

(Action IBM)

13.7.2 He brought the attention of IBM towards the violation of mining activities under MCDR and to be first taken under cognizance by IBM under rule 58.

(Action IBM)

13.8 Atomic Mineral Directorate for Exploration and Research

Mr. Ajit Majumdar, Regional Director, AMD, Nagpur elaborated the Geological activities of the field season 2012-13 and proposals for the next field season. He informed that three prominent Mesoproterozoic basins (Chhattisgarh Basin, Khairagarh Basin and Indrāvati Basin) have been identified as most promising areas for Uranium exploration in Chhattisgarh state. In addition to this shear zones in rocks of Nandgaon Group and Surguja crystalline are also being investigated. Apart from Uranium work for RMRE minerals are also carried out.

13.8.1 Uranium Investigation

(a) Chhattisgarh Basin - Radiometric survey carried out along north-west margin of Chhattisgarh basin which brought to light uranium mineralization associated with Chilpi Group and Chandrapur Group of Chhattisgarh Supergroup.

(b) Indravati Basin - Drilling in SilekJhodi area of Indravati basin is carried out. Drilling (684.30 m) of 4 boreholes in SilekJhodi zone has been carried out in view of lean mineralization. The drilling work has been suspended.

(c) Khairagarh Basin - Drilling of 17 boreholes (3888.25 m) at Nalpani and Bhimdo area intercepted significant uranium mineralization hosted conglomerate of Bortalao Formation and TME profile surveys indicated significant geophysical anomalies in the area. Reconnoitory drilling was also carried out along Dewalgudra-Pandutola area of Rajnandgaon District to establish the sub-surface mineralization.

(d) Surguja Shear Zone - Detailed Geological mapping, detailed radiometric checking and systematic sampling in Surguja crystalline were carried out to establish sub-surface continuity of shear controlled 'vein type' uranium mineralization. Drilling in 10 boreholes (total 4425.15 m) was done.

13.8.2 Rare Metal Rare Earth (RMRE) Investigations.

These investigation include reconnaissance survey detailed evaluation and assessment of Columbite-Tantalite along with Beryl in parts of Bastar and South Bastar (Dantewada) districts. He also said that in view of the increase in demand of Yttrium and RMRE in recent years. Xenotime recovery operations in Siri River area, Jashpur district was resumed and recovery work will be initiated shortly.

13.8.3 Mr. Majumdar requested that AMDER wrote a letter for notification of Baljora Nala at Kunkuri of Jashpur district for Atomic Mineral Exploration to their agency. Shri M. Babu, Joint Director informed that the matter has been sent to Govt. for notification.

13.9 Central Institute of Mining and Fuel Research

Mr. Chhattopadhyay, Sr. Principal Scientist elaborated the activity of CIMFR. During the period, 9312.32 m of coal core received from various organizations for analysis and 11,245.12m length of coal core (including 2011-12) have been analyzed and dispatched to the concern agencies.

Washebilitiy study of ROM coal from Chotiya mines, Kusmunda mines have been done under sponsored scheme and characterization studies of borehole coal core of Gare-Pelma sector of CMDC block have also been done.

13.9.1 Mr. Diwan also added that seam wise washebilitiy study has to be carried out so that yield and grade of washed and reject coal has to be properly assessed.

(Action CIMFR)

13.10 Central Mine Planning and Design Institute

Mr.N.N.Paira, Cheif Manager (Geology), CMPDI RI –V, Bilaspur said that CMPDI is engaged in coal exploration and total of 76,327.10 m drilling was carried out during the F.S. 2012-13. During the period CMPDI carried out the drilling work in Balrampur, Mahamaya, Kalyani and Tulsi Blocks of Bisrampur coalfield, Bijari, Batati, Barod and Singmouza-Jampali blocks of Mand-Raigarh coalfield and Amgaon, Bhilai bazaar and Bhilai blocks of Korba coalfield. Total 93,666.50 m drilling was done by MECL for CMPDI. Prospecting report of Tulsi (Gangapur) block of

Bishrampur Coal- field finalized during 2012-13. Coal reserves proved in this block are 24.84 million tonnes of B to G grade.

In field season 2013-14, the proposed drilling for coal by CMPDI in Chhattisgarh is 2,08,000m , out of which CMPDI will carry out 81,000 m drilling and 1,27,000m drilling will be done by other agencies for CMPDI.

13.11 National Mineral Development Corporation

Mr. H. Khan informed the house that NMDC has carried out exploratory drilling work in the existing mining leases of Bailadila area for quality control and additional reserve proving. Total 6168.00 m drilling work completed.

NMDC proposes to drill 9800 m for iron ore during field season 2013-14 in working mine of Bailadila Deposit No. 14, 11C, 11A and 5.

Mr. Diwan inquired about proved additional reserve, total mined out and balance reserve in these deposits.

(Action NMDC)

13.12 Mineral Exploration Corporation Ltd.

Mr. D.K. Bhorali, Senior Manager (Geology) informed that MECL was engaged in coal exploration for CMPDI in Karkoma block of Korba coalfield, Karichhapar, Jarekela, Syang east, Banai, Elong, Dolesara, Bhalumada and Jilga-Barpali blocks of Mand-Raigarh coalfield, Ghughra block of Sonhat coal field and Duba, Amartipur, Meghuli, Tatapani (Bormi) blocks of Tatapani-Ramkola coalfield and Barapara block of Bisrampur coalfield of Chhattisgarh State. Total of 93,666.50 m drilling was carried out during F.S. 2012-13 by MECL.

13.13 Central Ground Water Board

Mr. Tiwari, CGWB, Raipur informed the house that CGWB engaged in the study of “Impact of coal mining on ground water” in Korba district and “Sustainability of Gondwana aquifer” in Korba and Raigarh district. During the work 3 aquifer identified in the area, Upper aquifer is unconfined aquifers, depth ranges from 0-120 meter, second and third aquifers are semi-confined to confined, depth ranges from 20 to 100 meters.

13.13.1 In Underground exploration programme, total 34 borewells were drilled in Rajnandgaon, Korba and Raigarh district. Out of which 19 are exploratory wells, 6 are observation wells and 9 are piezometers wells.

13.13.2 Ground water monitoring is also carried out through network of 932 station and 880 numbers of water samples were analyzed and studies.

13.13.3 Two demonstrative artificial recharge study carried out in Gurur block of Balod district and Bilha block of Bilaspur district, under Central Sector Scheme of Government of India.

13.13.4 Under Ground Water Regulation, 6 project proposals sent to CGWB for NOC.

13.13.5 During the discussion, Mr. Diwan said that the effects of mining activities over chronic mining areas of state were required to be assessed. In this context, representative apprised the board that ground water table in Korba and Mand Raigarh area has now reached to static status and with the present rate of discharge there is no further depletion. However, it was desired that detail report in this regard may please be furnished to DGM and also that the same kind of study may also be conducted for other chronic limestone mining areas.

(Action CGWB)

13.14 Directorate of Geology & Mining, Chhattisgarh

13.14.1 Dr. D.R. Patel, Joint Director elaborates the exploration activities in Chhattisgarh in synoptical way. He also informed the house that all exploration work by DGM is as per UNFC Guidelines and under all rules and parameter given by Govt. The details of work done elaborate by Regional Head of concerning Regional offices.

13.14.2 Regional Office Bilaspur

Mr. Kailash Dongre, Regional Head Bilaspur elaborated the mineral exploration activities of Regional office Bilaspur. He informed that prospecting for Bauxite was carried out in Dandkesra area during the period. Total 1096 m drilling was done in 98 boreholes and approximately 5 lakh tonnes of bauxite deposits are estimated in the area. Prospecting work in Saila coal blocks District Korba was completed. In Saila 14 coal seams were encountered among which seam no. III is the most persistent. 51.15 million tonnes of coal reserve have already been established in this block. In Saidu area of Surguja District coal exploration work taken up and 862.25 m drilling work has been done in 3 boreholes. In this block four regional seam present and seam IV is prominent. Total 126 lac tonnes coal resource have been estimated on the basis of present work.

During the field season, preliminary work for survey of coal was carried out in Ghotan-Birjupali, District Surguja. Reconnaissance Survey over 340 sq. km. area and detailed geological mapping over 1.76 sq km area was done and 58 samples have been collected.

Prospecting of Dolomite in Pachri and Bhalwohi area of Janjgir-Champa District was taken up in this field season total 100 sq. km. area was covered under Reconnaissance Survey and 2.20 sq. km. area was covered by details mapping. Total 819.70 m. drilling work completed in 27 borehole and 300 lac tonnes dolomite have been assessed in area.

13.14.3 Regional Office Jagdalpur

Shri B.S. Acharya, Regional Head Jagdalpur informed the house that survey for limestone in Chitapur area of Bastar district was continued. Reconnaissance Survey over 50 sq km was done and 5 lac tonnes of cement grade limestone are estimated. Survey for limestone in Birsatpal area Sukma District has also been taken up in this field season. Total 2.44 sq km area has been covered by details mapping and 85 samples have been collected. Total 2 lac tonnes of limestone resource estimated in the area. The content of CaO is varies from 46.20% to 52.26%.

Survey and demarcation of Granite suitable for cutting and polishing around Charama, Kanker, Keshkal area of district Bastar, Kanker and Chingavaram- Bhusaras area of Dantewara District carried out. During F.S. 2012-13, Reconnaissance Survey over 723 sq km area covered and 124 samples were collected for cutting polishing study. Total 32 lac cubic meters Granite resource is estimated suitable for cutting and polishing. Survey for Iron ore in Pawaras and Kachora area, Distt Bastar (Kondagaon) is carried out. 39 sq km area is covered under Reconnaissance Survey and 3 million tonnes of low grade iron is assessed in this area. The area doesn’t seem potential hence no further work is recommended.

During the survey work, granite suitable for cutting and polishing has been marked in Kondagaon and Kanker Districts, several low grade iron ore pockets have been deciphered in Nathia-Nawagaon area. About 30 lac tonnes of low grade iron ore inferred in this area.

13.14.4 Regional Office Raipur

Shri H.D. Dhekaware, Regional Head Raipur informed the house that prospecting of limestone is Kesla area of Raipur district was continued during the period. Total 805.90 m. drilling is done in 24 boreholes and 54.88 million tonnes cement grade limestone resource are estimated.

Gradewise assessment of limestone in Tekapar Kalkasa area of Rajnandgaon district was started in 2012-13. During the period 249m drilling in 9 boreholes were completed and 165 lac tonnes of limestone of various grade estimated in the area. The work will be continued in ensuing field seasons.

Prospecting for Bauxite in Darai area District Kabirdham was continued and during the period 2.16 sq.km. area of Dhanwahi block has been mapped in detail. Total 1077 m drilling work was done in 102 boreholes and 2.50 lac tonnes of bauxite are estimated in this area.

13.15 The proposed field programmes of the member organizations have been approved unanimously as there was no overlapping or duplication in the field programme.

13.16 The meeting was ended with vote of thanks presented by Mr. D. Mahesh Babu, Joint Director, DGM CG, to the Chairman and members of the board.

Director
Geology & Mining
Chhattisgarh.

List of Participants

S.No.	Name & Designation	Address	Phone No.
	Members		
1	Shri M.K. Tyagi, Chairman	Secretary, Govt. of Chhattisgarh, MRD	-
2	Shri S. Shivanna, Dy. Director General	GSI, Raipur	990123333
3	Shri N.K. Xaxa, Member Secretary	Director, DGM	-
4	Shri Prem Kumar, Managing Director	CMDC, Raipur	-
5	Shri A.P.S. Parihar, Director	GSI, CG Unit, Raipur	2263172
6	Shri R.R. Dongre, Sr. Asstt. Controller of Mines	IBM, NR, Nagpur	9422304581
7	Shri Amit Majumdar, Regional Director	AMDER, Central Region, Nagpur	9422147717
8	Shri N.N. Paira, Chief Manager (Geo.)	CMPDI, RI-VBilaspur	9407776799
9	Shri D.K. Bhorali, Sr. Manager (Geo.)	MECL, Ghargoda, Raigarh	8959734707
10	Dr. O.N. Tiwari, Scientist D	CGWB, Raipur	9406092202
11	Shri A.K. Chattopadhyay, Sr.Principal Scientist	CIMFR, Bilaspur Unit	9827167058
12	Dr. P. Rabibulla Khan, Dy. General Manager(Geo.)	NMDC Ltd., Masab Tank, Hyderabad	9490759640
13	Shri J.S. Virdi, Joint Director	State Planning Commission, Mantralaya, Raipur	9425211116
14	Dr. S.K. Pande, Prof. & Head	Pt. Ravishankar Shukla University, Raipur	9827479377
15	Shri R.K. Sharma, E.E.	CG Environment Conservation Board, Raipur	9685095441
16	Shri Vinod Mishra, DCF	Forest Department, Raipur	9425216437
	Other Participants		
18	Shri B.K. Mishra, Suptdg. Geologist	GSI, Raipur	9424200959
19	Shri Niroj K. Panda, Scientific Officer	AMD, Central Region, Nagpur	9423637329
20	Dr. Arun Kumar Panda, Chief Manager(Geo.)	CMPDI, Bilaspur	9424147845
21	Manoj Kumar Sethi, Scientist	CIMFR, Bilaspur Unit	9893442806
22	Shri M.S. Dawale, Sr. Manager	NMDC, Raipur	9424200902
23	Shri V.K. Mishra, Geologist	CMDC, Raipur	9406118875
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25	Shri Anil Verma, Asstt.Geologist	CMDC, Raipur	9981297819
26	Dr. D.R. Patel, Joint Director (Geology)	Directorate of Geology & Mining, Raipur	9827153271
27	Shri Jayant Kumar Pashine, Joint Director (Geology)	Directorate of Geology & Mining, Raipur	9425208243
28	Shri D. Mahesh Babu,Joint Director (Min.Adm.)	Directorate of Geology & Mining, Raipur	9425228164
29	Shri Anurag Diwan, Joint Director (Min.Adm.)	Directorate of Geology & Mining, Raipur	9425532588
30	Shri S.S.L. Nagwanshi, Joint Director (Lab.)	Directorate of Geology & Mining, Raipur	9981008085
31	Shri N.K. Chandrakar, Joint Director (Geology)	Directorate of Geology & Mining, Raipur	9425512932
32	Shri H.D. Dhekaware, Dy.Director (Geology)	Directorate of Geology & Mining, R.O.Raipur	9098703637
33	Shri Anil Sharma, Dy.Director (Geology)	Directorate of Geology & Mining, Raipur	9424224722
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35	Shri B.S. Acharya, Dy.Director (Geology)	Directorate of Geology & Mining, R.O.Jagdalpur	9691346929
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37	Shri P.K. Padlamwar, Dy.Director (Geology)	Directorate of Geology & Mining, R.O. Raipur	9406202456
38	Shri Mahipal Singh Kanwar, Dy.Director (Min.Adm.)	Collectorate (Mining Section) Raipur	9425550927
39	Shri G.R. Chouhan Dy.Director (Geology)	Directorate of Geology & Mining, R.O.Bilaspur	9424147716
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42	Dr. Sanjay Khare, Asstt.Geologist	Directorate of Geology & Mining, Raipur	9425510191
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45	Smt. Prachi Awasthi, Mining Officer	Directorate of Geology & Mining, Raipur	9424281192
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