

MINUTES OF THE 43rd MEETING OF THE CENTRAL GEOLOGICAL PROGRAMMING BOARD HELD AT NEW DELHI ON 29.09.2008

43.0.00	The 43 rd meeting of the Central Geological Programming Board (CGPB) was held on 29 th of September, 2008 at Hall No. 5, Vigyan Bhawan, New Delhi. Shri Shantanu Consul, Secretary to the Govt. of India, Ministry of Mines (MOM), chaired the meeting. A list of Members/Participants in the 43 rd meeting of the Central Geological Programming Board is attached as Annexure – I.
43.1.00	WELCOME ADDRESS BY THE MEMBER SECRETARY, CGPB.
43.1.01	At the outset Dr. B. Chattopadhyay, Deputy Director General (Planning, Programming and Monitoring), Geological Survey of India (GSI), CHQ and Member Secretary, CGPB welcomed Shri Shantanu Consul, Secretary, Government of India, MOM and Chairman CGPB, Shri S. Vijay Kumar, Additional Secretary, MOM; Shri P.M.Tejale, Director General, GSI; Shri P.N.Razdan, Sr. Deputy Director General, GSI and all the members of the CGPB which include representatives from State and Central Government departments, PSUs and Private Entrepreneurs etc.
43.1.02	<p>Member Secretary, during his welcome address, emphasized the following points :</p> <p>(a) The formation of Central Geological Programming Board and its continuous functioning since 1966 was instrumental in coordinated geological programming of the country. CGPB functioning through seven Sub-Committees active participation during the sub-committee meetings was the key to making CGPB effective.</p> <p>(b) Importance of the CGPB partly lies in the fact that it provides the platform for implementation and execution of the mineral policy of the Government of India in various earth science related sectors. However, CGPB had implications for the entire earth science sector and has numerous stakeholders outside the mineral sector.</p> <p>(c) Rapid changes are taking place in technology and methodology and the way survey institution are organized. CGPB needs to revamp itself in the light of this.</p> <p align="right">[Action: GSI]</p>
43.2.00	ADDRESS OF THE CHAIRMAN, CGPB
43.2.01	In his address the Chairman welcomed all distinguished members of the board, invitees and representatives of the media to the 43 rd meeting. He indicated that in addition to coordinating the annual programme of GSI, the CGPB has a greater role in setting the pace and standard of geological work for all stakeholders in the country, including the State Governments and the private sector. To achieve this goal, he proposed that CGPB should meet twice a year to take stock of the progress, ensure coordination and help identify and resolve policy and programmatic issues in a systematic and transparent manner. He informed that the ministry will also closely monitor the work of the seven Sub-Committees so that the outcome fits into the

	<p>national priorities and crucial inputs are available for sectoral policy making.</p> <p>[Action: GSI]</p>
43.2.02	<p>The Chairman expressed the hope that by properly operationalising the twin system of sectoral Sub-Committees and State-level Boards, the Central Board can effectively articulate the policy and programmatic requirements in a technically feasible and scientifically desirable manner. He assured that the Ministry will interact closely with the Central Board and State Governments to make the system of sectoral Sub-Committees and State-level Boards to work to their full potential. He requested the State Secretaries of Mining & Geology to ensure that the State Boards meet frequently and take the full benefit of the GSI's presence in their States. At the same time he hoped that the Board should work in the field of Geoscience as a sector involving all stakeholders.</p> <p>[Action: State DGMs/GSI]</p>
43.2.03	<p>The Chairman informed that with the announcement of National Mineral Policy, 2008, the minerals and metals sector globally is critically poised for growth and expansion. The Policy ensures to make sectoral environment more conducive to investment and technology flows. The State should facilitate and regulate sectoral activities in such a way that the private sector can become the main source of investment in reconnaissance and exploration. Government agencies will expend public funds primarily in areas where private investments are not forthcoming. In this connection, he emphasized the need for GSI and IBM to ensure that the data filing and integration systems are made to work effectively for the interest of the mineral sector.</p> <p>[Action: GSI/IBM]</p>
43.2.04	<p>The Chairman reiterated that GSI shall continue to be the principal agency for geological mapping and regional mineral resource assessment of the country. He mentioned a few issues arising out of the new Policy, such as the internationally accepted resource inventory system, UNFC, which must be immediately adopted <i>in toto</i> in GSI and IBM and other institutions and used in exploration and resource inventorisation etc.</p> <p>[Action: GSI/IBM]</p>
43.2.05	<p>The Chairman opined that GSI, IBM, Central institutions and State Departments of Mining and Geology should work in tandem too facilitate mining and geoscience activity. He requested the Board to deliberate on issues arising out of the New Mineral Policy and come up with specific suggestions and recommendations.</p> <p>[Action: GSI]</p>
43.2.06	<p>The Chairman informed that a High Level Committee under the Chairmanship of the Additional Secretary is already engaged in reviewing the mandate of GSI and a similar study will be taken up for IBM. He further informed that the work is on to review the MMDR Act and Rules to bring them in tune with the National Policy. Policy and coordination issues such</p>

	<p>as forest clearance etc. have been taken up with the Ministry concerned and will be pursued with due attention and focus.</p> <p>[Action: MOM]</p>
43.2.07	<p>He hoped that efforts will also be made by GSI to build partnerships with State Governments to create synergy and try to improve data sharing mechanisms. He welcomed partnerships for specific activities of GSI and IBM where the State Government can contribute human resources or facilities and GSI or IBM will endeavour to provide additional matching capabilities including technical resources and laboratory facilities.</p> <p>[Action: GSI]</p>
43.2.08	<p>The Chairman suggested to the State Governments to review their policies on Mining and Minerals and incorporate the broad steps to strengthen the Directorates of Mining and Geology, facilitating private sector participation in reconnaissance, prospecting and mining and building partnerships with central agencies, industry and academia in order to provide a qualitative set up in the pace of mineral exploration. He assured that with GSI and IBM would upgrade their training/support facilities to help build up State DGMs.</p> <p>[Action: State DGMs/GSI/IBM]</p>
43.2.09	<p>The Chairman also referred to the international practice of making regional exploration data available free of cost through the web-portal and said that GSI would need to quickly take action on this. If the Ministry's intervention was necessary, proposal may be made at the earliest so that by the time the mid-term review CGPB is held, a decision is taken.</p> <p>[Action: GSI]</p>
43.3.00	CONFIRMATION OF THE MINUTES OF THE 42nd MEETING HELD IN NEW DELHI ON 27.9.2007
43.3.01	<p>The minutes of the 42nd CGPB meeting held in New Delhi on 27.9.2007, already circulated to all members of the Board, was approved with a correction proposed by DGM, West Bengal on page 17 para 42.8.09 ('rock phosphate' instead of 'phosphorite').</p>
43.4.00	REVIEW OF WORK DONE BY GSI DURING 2007-08 AND PRESENTATION OF ANNUAL PROGRAMME FOR 2008-09
43.4.01	<p>Shri P.M.Teja, Director General, GSI presented the highlights of the current activities and achievements of GSI for the year 2007-2008 and salient features of the ensuing Annual Programme for the year 2008- 2009. He mentioned that beginning as a department, engaged primarily in the search for coal, GSI over the last 157 years has diversified and expanded its activities manifold in almost all the fields of earth science and applied aspects.</p>
43.4.02	<p>He informed the house that considering the increasing demand for metals and minerals and to improve the investment environment for mining in the country, the new National Mineral Policy (2008) has been approved by the Government. Under the Policy, GSI continues to remain the principal</p>

	<p>agency for geological mapping and regional mineral resources assessment of the country and also has been accorded the additional responsibility of drawing up action oriented plans in close cooperation with all other agencies engaged in this task. The Ministry of Earth Sciences (MoES) and its agencies are entrusted with the task of seabed exploration and mining. Cooperation between MoES and GSI will be institutionalised so as to achieve this objective within a time bound framework. The Policy also emphasizes the need to focus attention on the survey and exploration of minerals in which the country has high geological potential but poor resource-cum-reserve base. Similar priority is to be given for minerals with high internal demand or export potential. The changes proposed in the new National Mineral Policy 2008 would lead to significant improvement in the environment for investment in the mining sector, he opined.</p>
43.4.03	<p>Specialized thematic studies, multi-elemental geochemical mapping, aerogeophysical survey and ground geophysical mapping have remained one of the major activities. Seabed survey in Territorial Waters and parametric survey in EEZ along with preliminary assessment of economic resources in seabed continues. Mapping of the EEZ is to be expedited.</p>
43.4.04	<p>GSI's thrust on mineral exploration remains on noble metals, precious stones, base metal, ferrous metals, limestone, fertilizer, strategic, and refractory minerals along with coal and lignite. The specialized discipline of Engineering Geology continues to provide inputs in the nation building processes through planning and execution of major civil engineering projects in the domain of water resources, irrigation, power generation, and communication. Baseline data is generated on Coal Bed Methane (CBM) in Rajmahal – Birbhum Master Basin. GSI is also generating baseline data on natural and anthropogenic hazards related to earthquake, tsunami, landslide, fluvial and coastal erosion, urbanization and mining activities to effectively address the adverse impacts on human life and property. Similarly issues related to environmental geology, glaciology, Quaternary geology and earthquake geology will be taken up on a planned basis.</p>
43.4.05	<p>Government of India has constituted National Disaster Management Authority (NDMA) under the chairmanship of the Prime Minister of India to formulate National Disaster Management Policy and Guidelines for all natural disasters including Landslide for mitigation. As the Nodal Agency for landslide studies, GSI has prepared and submitted a paper on landslide hazard to the National Disaster Management Authority.</p>
43.4.06	<p>GSI NET and the GSI Enterprise Portal are fast nearing completion. The Information Infrastructure will be fully functional once the Wide Area Network (WAN) is commissioned in near future.</p>
43.4.07	<p>In the field of International activity GSI has continued its effort with various international governmental organizations/ scientific agencies through collaborative and bilateral exchange programmes and continues to participate in International Geological Correlation Programmes (IGCP) and Indian Scientific Expedition to Antarctica and Arctic.</p>
43.4.08	<p>Fundamental research in the fields of petrology, geochronology and isotope</p>

	geology, paleontology, geophysics, analytical chemistry, mineral physics, photogeology and remote sensing continues to remain important domains of activity. Modernization as well as upgradation programmes already taken up for laboratories at National, Regional and Operational levels, will be pursued in order to provide high quality laboratory support to the ongoing programmes, he added.
43.4.09	During the field season 2007-08 GSI augmented the resource for coal and lignite, gold, basemetal, Platinoid group of elements, iron ore, manganese, limestone and located new bodies of kimberlites (the source rock for diamond). Under Survey and Mapping, 840 sq km has been covered by systematic geological mapping; about 1,45,764 sq km has been covered under the geochemical mapping programme; about 7960 sq. km has been covered by specialized thematic mapping; about 21,225 sq km occupying 9170 stations has been covered under Gravity-Magnetic mapping; about 19,628 line km covering an area of 33,443 sq km has been covered by aero-geophysical surveys using magnetic and radiometric sensors.
43.4.10	About 2425 sq km area covering about 615 line km road corridors have so far been completed by Landslide Hazard Zonation on Macro scale. The data on landslide incidences is being transferred to the Disaster Management Support Network of Ministry of Home Affairs.
43.4.11	Active fault studies involving multifarious inputs of geological, geophysical, seismological, geodetic techniques have been carried out in several active faults of the country. Seismic hazard microzonation has been carried out in Bhabnagar, Chennai and Jammu. The Broad Band Seismic (BBS) observatory at Nagpur and Jabalpur are operating continuously to record earthquake events of the distant, regional and local origin. Data generated from the permanent geodetic GPS installed at Jabalpur and Lucknow is supplied regularly to National GPS Data Centre, Survey of India, Dehradun for further processing/interpretation.
43.4.12	Forty two items of geotechnical and engineering geological studies through 319 investigations were undertaken related to civil engineering projects for water resource development, communication and miscellaneous projects in almost all the states of the country as well as in neighboring countries.
43.4.13	Twenty one geo-environmental investigations were taken up. These include Regional Geo-environmental Appraisal, Site/Theme Specific Geo-environmental Studies, Public Health Hazards, Desert Geology, and Studies on Coastal Dynamics and Fluvio-Geomorphic Dynamics.
43.4.14	Detailed glaciological studies on Hamtah glacier, Lahaul-Spiti district, H.P., were carried out for the eighth consecutive year. During the period from 2000 to 2007, the glacier has evacuated an area of 0.0286 sq. km with an average value of 0.004 sq. km /year.
43.4.15	GSI has been participating in expeditions to Antarctica since 1981 and among the major programmes undertaken are geological mapping on 1:50,000 scale, thematic mapping for petrochemical, structural and geochronological studies; glaciological observations on advance and/or

	retreat of polar continental ice, studies on shelf ice for accumulation patterns; study of the glacial dynamics recording the movement direction and velocity of the polar ice sheet; ice core drilling and lake sediment coring for palaeoclimatic studies; GPR survey for plotting lake bathymetry, etc.
43.4.16	GSI has compiled and digitized around 5000 sheets of 1:50,000/ 1:63,360 scale geological maps. All such maps covering about 98% of India will be uploaded in GSI portal shortly.
43.4.17	As part of Human Resource Development 32 items were taken-up. This includes one orientation course, 13 scientific courses, 7 technical courses, 7 administrative courses and 4 sponsored courses.
43.4.18	Induction of the state-of- the-art instrumental facilities in the fields of Petrology, Geochronology and Isotope Geology, Paleontology, Photogeology and Remote Sensing, Geophysics, Mineral Physics, Analytical Chemistry etc. resulted in generation of precise analytical database. Input from Electron Probe Micro Analyses, Fluid inclusion study, Optically Stimulated Luminescence (OSL) dating etc. has been widely and effectively used in different research projects as well as in STM and metallogenic projects.
43.4.19	DG, GSI then presented the Annual Programme of GSI for 2008-09 mentioning that the guiding factors for the generation of the programme included the guidelines of the Government, the priorities set by the Planning Commission, recommendations of the CGPB Sub-committees and State Geological Programming Boards and endorsement by critical in-house reviews. Many of the programmes proposed for F.S. 2008-09, logically have roots in those executed in F.S. 2007-08, he added.
43.4.20	He mentioned that due to several constraints some of the programmes suggested at various levels could not be taken up. However, efforts have been made to incorporate as many projects as possible keeping in view the national priority. Thrust has been given to Mineral Exploration and Survey and Mapping. A total of 77 items are included of which 57 (17 gold, 19 base metals, 3 platinum group of metals, 6 ferrous minerals, 5 diamond and 7 other minerals (including strategic, limestone and industrial minerals) are under ores and minerals and 20 belong to coal and lignite.
43.4.21	Survey and Mapping will be pursued. A total of 74 items (STM 32, GCM 30, GPM 11 and 1 item on Systematic Geological Mapping) excluding investigations taken up by AMSE and Marine Wing have been included.
43.4.22	Engineering, Earthquake and Environmental Geology have been grouped under Special Investigations with renewed emphasis on hydel-power. About 31 items in Engineering Geology under water resource development, communication and miscellaneous engineering works have been included. All the items are sponsored by different agencies. In addition, 21 programmes on landslides under Landslide Hazard Zonation on macro- and meso-scale, site specific study and/or monitoring of landslides and inventory of landslides shall be taken up.
43.4.23	Every year, since the Sixth Plan, there is a decrease in working S&T personnel mainly in the geology, geochemistry, geophysics and drilling streams. GSI has taken up the task of augmentation of human resources. It

	<p>is expected that with bulk recruitment of fresh professionals each year the situation will gradually ease out in the coming years. Career progression of the existing scientists and technical personnel of GSI are being looked into. Proposal for cadre review of Group A are being prepared to remove the cadre imbalance. The proposal for implementation of FCS to give a boost in the career progression in the Department is in a very advanced stage. At present, about 49 % of GSI's manpower is deployed for working in the three major field operations of Mineral Exploration, Survey & Mapping and Special Investigations. Another 16 % of human resources are engaged in Research & Development. About 23% of manpower is deployed for Information Dissemination that includes map, publication and information technology while 12% manpower has been deployed for HR and training.</p>
43.4.24	<p>The portal meta-databases are continuously being populated with information on published maps, unpublished progress reports, and different publications of GSI. The geological milieu and resource potential are the major factors considered while formulating the programmes. All the states have their share of GSI's activities though special reference is due to the northeastern states.</p>
43.4.25	<p>He expressed that GSI is grateful to all the participating organizations for successful formulation of the annual programme. He then placed the annual programme for approval of the house. He mentioned that the success of these programmes will depend on wholehearted and yearlong cooperation from all.</p>
43.5.00	RELEASE OF TWO PUBLICATIONS OF GEOLOGICAL SURVEY OF INDIA
43.5.01	<p>With a view to fulfill the commitment to strengthen Rajbhasa Hindi, GSI is translating Miscellaneous Publications 30 (Geology & Mineral Resources of the States) in Hindi. The Chairman released Hindi version of the volume 15 (Punjab & Chandigarh) of the Miscellaneous Publication 30. The Additional Secretary (Mines) released the volume GSI Special Publication 91 (Pan African event: India & Antarctica). Member Secretary briefly described the relevance of both the issues.</p>
43.6.00	DISCUSSIONS ON FOLLOW-UP ACTION ON THE DECISIONS OF THE 42nd MEETING OF THE CGPB HELD AT NEW DELHI ON 27.9.2007.
43.6.01	<p>The status of the follow up action on the decisions of the 42nd CGPB was sequentially placed before the house by the Member Secretary, CGPB. The issues were grouped under specific subject head for the benefit of comprehensive discussion.</p>
43.6.02	<p>A detailed discussion was held on the agenda items 42.4.02 / 42.8.21 / 42.8.23 / 42.8.24 / 42.8.27 / 42.8.31 regarding delay of grant of forest clearance for mineral investigations hindering all exploration activities. Member Secretary informed that a large number of investigations are held up / delayed due to non-availability of clearance from Forest Authority. Shri C.D. Singh from MOEF informed the House that the concerned Committee comprising representatives from MOEF, GSI, MECL and CMPDIL has submitted the report in April 2007 to the MOEF. The</p>

recommendation made by the said committee was not accepted at the MOEF and the matter was subsequently placed to the 'Forest Advisory Committee', a statutory committee under Forest Conservation Act, 1980. This Committee has submitted its recommendations which are under active consideration of MOEF that may allow 5 to 10 boreholes per 10 sq. km with the existing rule of 4" diameter. The Member Secretary also pointed out that restriction of MOEF for a maximum of 4" diameter exploration drilling cannot be accepted since a minimum of 6.6" diameter at the initial stage is required for any exploratory investigation for successfully obtaining the results at depths for any investigation. He clarified that with depth the borehole diameter decreases (so the diameter of the core). Only if drilling can be started with a larger diameter, required diameter of core can be recovered at desired depth.

Chairman Shri Shantanu Consul urged that a note on technical aspects may be sent by GSI to the committee of the MOEF that deals with regulation of borehole. Chairman, CGPB also advised GSI to send a copy of the note to the Secretary (Mines) so that the matter can be taken up by him with MOEF. Member Secretary also pointed out that there is no restriction of forest clearance for oil exploration [clause 1.3. (i)] but the same is imposed for mineral exploration [clause 1.3.(v)]. It would serve the best interest of assessment of non-renewable mineral resources at the exploratory stage if this is clubbed with the oil exploration and covered under [1.3. (i)]. With the advancement of technology as well as concept the stipulated restrictions of spacing of borehole and diameter of borehole may otherwise need revision at a future date. Chairman further suggested to the representative of MOEF to arrange to hold an across the table discussion with the concerned Ministries before the final decision on the issue is taken.

[Action: MOM/MOEF]

Representative of MOEF suggested that prior to providing permission for RP or PL in a forest area; State Wild Life Warden may be consulted. Rich forest and Wild life abounds in many prospective areas. The MOEF representative also suggested that experts from Forest Services may be invited to give lectures in the Orientation Course of GSI Training Institute for better understanding the legal and technical aspects regarding forest and environment.

[Action: GSI]

Shri P.R. Mondal, representative of Ministry of Coal (MOC) remarked that areas have been identified by MOEF where exploration is allowed. He informed that a number of discussions were held between MOC and MOEF but positive outcome is yet to be arrived. There are 30 to 40 numbers of rigs of CMPDIL which has remained idle due to lack of forest clearance.

Representative DGM, Arunachal Pradesh, commented that special dispensation of 10 hectares to be allowed for exploration. DGM, Andhra Pradesh, pointed out that despite being shown as 'Forest area' in toposheets, there are number of areas where actually not even a grass is visible but there are good prospects of limestone. He suggested that those ambiguously

	<p>marked areas may be cleared for mineral investigation.</p> <p>CMPDIL also expressed inability for detail exploration in forest areas which are already shown as potential resource through regional exploration. CMPDIL pointed out that 50% of the area of operation is under 'Forest cover' and as a result 80 billion tons of reserve of coal can not be utilized. SCCL informed that there would be large shortage on production of coal due to non-availability of forest clearance.</p> <p>MOEF informed that Hon'ble Supreme Court has cleared about 40 cases on forest disputes on 20.9.08. Representative of Mizoram also expressed his view that Forest Conservation Act restricts all mineral developmental activities. Mr. L.P. Sonkar, Advisor (Planning Commission), commented that a joint working group between MOEF and MOM may be set up to resolve the issues. Chairman agreed to that proposal and felt the need of a further meeting with MOEF on the issue.</p> <p style="text-align: right;">[Action: MOM/MOEF]</p>
43.6.03	<p>In response to issues related to non-availability of GSI reports, Member Secretary informed the house that more than 20,000 reports have been posted in the GSI portal. The CD provided to the members also contains a list of 3000 priced reports. The representative of Govt. of Gujarat informed that costing of unpublished report takes long time in GSI which requires to be speeded up. Member Secretary assured that the process of pricing of unpublished report is being looked into and a simple system for pricing of the unpublished reports will be worked out. Chairman & Secretary (Mines) wished that the modalities followed abroad, as experienced by members of HPC during the recent visits may be followed by GSI. Representative of Govt. of Rajasthan indicated that in the proforma for obtaining reports, the confidentiality clause has to be mentioned which may be counterproductive in some cases. Member Secretary clarified that clearance is given on case to case basis for removal of confidentiality clause subject to approval and stipulations of Ministry of Defence and Survey of India. The representative of Andhra Pradesh brought into notice that the small mine-owners with minor deposits are unable to get geological reports and enquired whether the reports can be provided to them free of cost. Member Secretary replied that small prospect details may be had from the DID which is reasonably priced and affordable. Basic data can be obtained from the metadata of the reports available free of cost.</p> <p style="text-align: right;">[Action: GSI]</p> <p>Chairman desired that the GSI Portal relating to reports needed to be looked at afresh so that published reports can be searched based on State/District/Taluka/Location and other parameters simultaneously and metadata of the report is linked to the search result. Similarly, unpublished reports should also be searchable on various parameters simultaneously. Also, to facilitate States, published reports should be made available from Operational Unit level offices of GSI.</p> <p style="text-align: right;">[Action: GSI]</p>

	<p>The representative of Ministry of Non-Conventional Energy requested that the geothermal atlas brought out by GSI may be updated. Dr. P.N. Razdan Sr. DDG informed that deeper drilling data is still not available for Tatapani and Puga hot spring areas. Member Secretary informed that after the last publication of geothermal atlas not much data has been acquired by GSI. Hence the updation may not be required at this stage. Chairman requested all members that the issues related to obtaining GSI reports may also be discussed in the SGPB meetings.</p> <p style="text-align: right;">[Action: All DGMs]</p>
43.6.04	<p>In response to para 42.4.05 the representative of DGM Manipur informed that they are ready with drilling machine for geochemical evaluation of subsurface water in the Kakching area, Manipur. DGM, Manipur was advised to contact NE regional office for successful completion of the project.</p>
43.6.05	<p>In response to para 42.4.06 regarding the area relinquished by the different MNCs/ private entrepreneurs the Chairman requested all the State DGM to cooperate and provide GSI with the latest data. Whenever an area is relinquished, it should be so notified. GSI would also coordinate with State DGMs to ensure that RP data filing and relinquishment data are reconciled.</p> <p style="text-align: right;">[Action : all DGM/GSI]</p>
43.6.06	<p>On para 42.4.07 regarding raising the standard of GSITI, the Member Secretary informed that the road map for GSITI has already been submitted.</p>
43.6.07	<p>On para 42.4.08 regarding power of leasing lignite bearing areas to Govt. of Rajasthan, Shri P.R. Mondal of Ministry of Coal clarified that lignite like coal is covered under MMDR Act, 1957 which does not allow anybody to obtain RP/PL/ML for lignite exploration as it is governed by schedule 1 act, part A. However for getting RP in a non-leased area of lignite one can approach the Central Govt. for consideration.</p>
43.6.08	<p>In response to para 42.4.09 on implementation of FCS in GSI, Member Secretary informed that MOM is working on the issue.</p>
43.6.09	<p>In response to para 42.4.10 regarding restriction for aero-geophysical survey, the Member Secretary informed that a committee has been constituted by MOM to review restrictions and uses of aerogeophysical data.</p>
43.6.10	<p>In response to para 42.4.11 regarding handing over of reports on cesium investigation in West Bengal, Member secretary informed that two reports have already been handed over and the third one will be provided as soon as it is finalized.</p> <p style="text-align: right;">[Action : GSI]</p>
43.6.11	<p>In response to para 42.4.12 regarding holding of SGPB meetings, the Member Secretary urged that the SGPB Meeting of NER has to be held regularly since there are number of investigations taken up in NER. Secretary (Mines) enlightened that the MOM is taking special attention for the activities in NER. Member Secretary made an earnest request to all the states to attend sub-committee meetings and to hold SGPB meetings regularly. Chairman insisted that SGPB meeting should be taken up by the states of NER before July of the year.</p> <p style="text-align: right;">[Action: All DGMs]</p>

43.6.12	In response to para 42.8.04 regarding exploratory drilling in non-lease areas for iron ore in the states, the proposals from Karnataka, Chhattisgarh and Jharkhand were received which are being studied for future consideration. Member Secretary informed that the float ore does not come under the purview of GSI as requested by Karnataka. The West Bengal Govt. enquired about the report of the geophysical study of the iron ore in Saltora etc. taken up by GSI. It was assured that the report would be made available within two months after obtaining required formalities. [Action : GSI]
43.6.13	In response to para 42.8.05 regarding exploration of manganese, Karnataka Govt. informed GSI that there is no manganese bearing areas in non-lease, non-forest area.
43.6.14	In response to para 42.8.06 regarding exploration for gold in Wynad- Nilambur area, it was again reiterated that as soon as the forest clearance will be received GSI will take up the investigations. [Action: DGM, Kerala]
43.6.15	In response to para 42.8.08 regarding exploration for Nimi limestone, DGM has requested Secretary, Mines during April 2008 to convene a joint meeting of MECL & DGM under the Chairmanship of Secretary (Mines). A joint meeting of the DGM Nagaland and MECL was held under the Chairmanship of AS (Mines) on July 4, 2008 for the Detailed Exploration for Nimi Limestone Deposit and Nimi-Pyakatsu Block of Kiphire District, Nagaland. Since the project is important for the Government of Nagaland for tapping its mineral resources and keeping in view thrust given by Government of India/MoM for development of the Northeastern Region, it was decided that MECL will explore the modalities of taking up the work jointly with DGM, Nagaland. MECL can outsource the field work i.e. drilling and sampling etc. for which capabilities exist with the DGM. Laboratory work and preparation of report etc. can be taken up by MECL at Nagpur, DGM, Nagaland will work out the likely expenditure to be incurred by it for taking up the field component and for funding from the State budget/DoNER to the extent it cannot be met from project cost. [Action: MECL / DGM, Nagaland]
43.6.16	In response to para 42.8.09, representative of DGM, WB informed that the detail proposal on phosphate prospecting was sent to GSI on 12 May 2008. Chairman pointed out that in view of present market need of fertilizer emphasis to be given by the mining sector towards exploration for new phosphate prospects. During FS 2008-2009 GSI has taken up one investigation on phosphate in Purulia District of West Bengal.
43.6.17	In response to para 42.8.10 on guidelines for conducting regional coal exploration, no specific addition / modification of the said guidelines have so far been placed by SCCL before the CGPB Sub-Committee on Energy Minerals, for review.
43.6.18	In response to para 42.8.12 on paleo-channels of major rivers of Kerala etc. the programme is being continued during F.S. 2008-09 from Kerala Unit of GSI and the results will be reported to DGM, Kerala in due course.
43.6.19	In response to para 42.8.14, 42.8.15, 42.8.16 on NCT Delhi, the matter was discussed in detail under fresh agenda from IMD (under agenda 15,16,17).
43.6.20	In response to para 42.8.17 on Nayachar, DGM, W.B. informed that High Power Committee not yet accorded permission for the project but it is

	expected in November 2008 clearance may be obtained and GSI will be requested to take up the job. [Action; DGM, W.B.]
43.6.21	In response to para 42.8.19 on indigenous development of exploration software AMD held discussions with National Informatics Centre (NIC), Hyderabad in this regard. However, it is understood that NIC is presently giving higher priority for e-governance technologies with Government - Public interfaces. Due to shortage of manpower NIC may not be able to actively assist in development of such specialized software. For immediate development and deployment of customized software required for mineral exploration in India different Open Source software are also being evaluated in AMD. Some of this software are in advanced state of development and are used by professional organizations across the world. Member Secretary assured that GSI will cooperate on the issue as and when asked for.
43.6.22	On para 42.8.22 regarding supply of geological reports of coal free of cost for the promotional items, the decision/ modalities for providing reports to State Govt. is yet to be taken by MOC. Chairman requested that a decision may be taken by MOC before the next CGPB meeting to be held in January/February, 2009. [Action: MOC]
43.6.23	On para 42.8.30 on nomination of GSI in State Environment Pollution Committee GSI has not received any request from State Environment Pollution Committee, Govt. of Rajasthan, till date.
43.6.24	On para 42.8.32 regarding lack of reservation for mineral exploration/prospecting by GSI, some of the states like Karnataka, Madhya Pradesh, Maharashtra, Chhattishgarh, Kerala, Rajasthan, have informed that they follow the rules and issue notification. Action is under way in Madhya Pradesh for gazette notification of the area-wise reservation as approved by the 42nd SGPB. Rajasthan also indicated that as per the direction of Coal & Mines Ministry, Government of India, vide letter No.7(4)/2000/M-VI, dated 20.12.2001, 'Working Permission' to GSI was issued earlier for 19 areas. They have also agreed to issue notification.
43.6.25	On para 42.8.35 regarding study with regard to silting problem in Suketi Khad valley district Mandi, Himachal Pradesh, No more communication has been received in GSI from the concerned authorities. Action completed.
43.6.26	In response to para 42.8.36 to 42.8.44 regarding investigations in Jammu & Kashmir, the Member Secretary informed that GSI will be taking up STM, landslide hazard studies, geotechnical investigation on water resource development, communication and transports and heavy civil engineering projects, seismic hazard microzonation etc. during FS 2008-2009 and also assured that technical guidance will be provided whenever requested for any of the projects to be taken up by DGM, J&K.
43.6.27	In relation to para 42.8.46 to 42.8.55, Shri Madhukar representative of Andhra Pradesh requested GSI for taking up items on industrial minerals for the benefit of the rural people. Chairman wanted GSI to interact with the State Govt. to obtain additional data whatever required for taking up the investigations. Regarding taking up of a few industrial mineral investigations, Chairman assured to look into the matter. [Action: GSI/ DGM,A.P.]

43.6.28	<p>In response to para 42.8.57 regarding exploration of Baghmor-Siju high-grade limestone in Garo Hills, Meghalaya, it was mooted that MECL may be given the job on sponsorship basis. It was highlighted by DGM that the limestone is underlain by coal and both should be explored at one go. MECL replied that the exploration can be taken up on promotional basis in closer grid and in deeper level. Chairman requested that both MOC and MECL can take up exploration for coal as well as limestone on promotional basis from NEC fund.</p> <p style="text-align: right;">[Action: MOC / MECL]</p>
43.6.29	<p>At the end of follow up discussions, Chairman requested all the State Government to supply relevant additional information as sought by GSI so that those can be followed up as early as possible.</p> <p style="text-align: right;">[Action: All State DGMs]</p>
43.6.30	<p>On reply to a request made by the representative of Ministry of Non-conventional Energy on preparing a guideline for geothermal investigations in Maharashtra and Andhra Pradesh, the Chairman advised the member to send a formal request which will then be taken up by GSI. He also recommended for a small group consisting of representatives from GSI, MOES, Ministry of Non-conventional Energy etc.</p> <p style="text-align: right;">[Action: Ministry of Non-Conventional Energy/ GSI]</p>
43.7.00	<p>AGENDA ITEMS TAKEN UP FOR DISCUSSION IN THE 43rd MEETING OF THE CENTRAL GEOLOGICAL PROGRAMMING BOARD.</p>
43.7.01	<p>The Chairman requested all members present in the meeting to participate in the discussion on the proposed agenda items, which were then discussed sequentially.</p>
43.7.02	<p>Agenda 1: The Mineral policy calls for a comprehensive institutional framework for R&D and Training. The GSI already has a Training Institute, which needs to be suitably strengthened. However, a comprehensive institutional framework can be developed only with the inputs of all stakeholders, both in respect of R&D and Training. The Board may make recommendations.</p> <p style="text-align: right;">(Suggestion: MOM)</p> <p>GSI pointed out the need for revamping of the training module of GSI Training Institute (GSITI) with enhancement of number of participant geoscientists particularly for the benefit of the State Governments. GSI will take up periodic revision of curriculum, utilization of retired professional for training etc. Dr. K.R. Gupta of Geological Society of India proposed that they can play a catalytic role in imparting training. DGM, Orissa informed that they are arranging training with the retired GSI professionals. ISRO said that they are already hand in hand with GSI in the capacity building under the aegis of an on-going MOU and will continue to support GSI in such endeavour on remote sensing training. However, ISRO regretted that there were very less participants from the State Governments and requested States to nominate enough number of persons. The representative of Maharashtra informed that they are regularly sending officers to GSITI for training. Representative of Andhra Pradesh suggested that the GSI courses be either approved by any University or an authorized certificate may be given to the participants.</p>

	<p>Secretary (Mines) advised that tailor made courses for the State Government if needed, may be designed by GSI. Mr. L.P. Sonkar from Planning Commission added that the vision for human resource development for coming years may be envisaged. DDG (Coal) suggested that in collaboration with Ministry of Petroleum GSI can offer special courses from M.Sc. onwards. Finally, the Chairman desired that all State DGMS should use GSI Training Institute facilities to the full and directed DG, GSI to take up the matter with all States to ensure that every year at least 50% of the States use GSI training facilities. He stated that the Ministry would also intervene in the matter if GSI felt that responses from the States are not forthcoming.</p> <p style="text-align: right;">[Action: GSI]</p>
43.7.03	<p>Agenda 2: The Mineral Policy calls for adoption of the latest version of the UNFC system showing reserves and remaining resources. The Board may work out a plan for switching over to this system within the current Plan period.</p> <p style="text-align: right;">(Suggestion: MOM)</p> <p>Regarding UNFC classification, representative of Andhra Pradesh argued that clear definition of UNFC classes are needed for proper categorization to avoid mismatch in the field level. Dr. N. Ahmad, CMPDIL stressed that UNFC cannot be a one time job and required updating from time to time. Member Secretary asserted that the prospects which are not economic today could become economic in future. Certain level of details (may be up to G3) is being done by GSI and not beyond. IBM representative informed that dynamic classification adopted globally has a tricky actual application. However, in India it may take little time to adopt though IBM has prepared a guideline. In lease-hold area, mining plan is followed whereas in free-hold area, UNFC classification is adopted. FIMI remarked that the level of authenticity for such classification lies with the analysis. IBM scrutinizes discrepancies. Chairman suggested that an independent agency may be engaged in checking the UNFC classification on the ground. FIMI agreed to do a study.</p> <p>Summing up, Chairman directed GSI, IBM and MECL to give time-bound plans on switching over to UNFC within the Plan Period, and also asked GSI to liaise with States, including through training programmes, to familiarize State DGMS with the UNFC for its adoption.</p> <p style="text-align: right;">[Action: IBM/GSI/MECL/FIMI]</p>
43.7.04	<p>Agenda 3: The new Mineral Policy reiterates that data filing requirements must be rigorously applied and monitored. It also specified that released data must be integrated with generated data and made available to other prospectors. As per Rule 7 of MCR, RP data is to be provided to GSI, IBM and State Governments. As per Rule 16, MCR geological, geophysical and other data is to be submitted by PL holder to State Governments, and as per Rule 8, MCDR, A PL holder is to submit a yearly report (Form B) to IBM. The Board may consider additional data management and coordination efforts required in order to comply with the requirements of the Policy.</p>

	<p style="text-align: right;">(Suggestion: MOM)</p> <p>It was agreed that status of relinquishment must be properly publicized by State Governments. It was also agreed that State Governments, IBM and GSI must monitor data filing as per requirement and take action in case of non-filing. Chairman stated that a lot of valuable data was being collected which after lock-in-period, must be put into public domain. He directed GSI to send a status note on the RP data available with it, including its cataloguing and methodology of integration with GSI data. GSI Portal and IBM website and State DGM webpages must be upgraded to reflect the availability of filed data in respect of RP and PL respectively.</p> <p style="text-align: right;">[Action: All members/ GSI/ MOM]</p>
43.7.05	<p>Agenda 4: National Agencies like GSI, MECL, IBM, etc. should be allowed to take up prospecting/exploration work in leasehold areas of Central/State PSUs under promotional funding of Govt. of India, since major part of the area are under RP / PL of MNC's or private parties, where MECL is not permitted to carry out exploration, particularly for basemetal, precious metal, strategic and deficit minerals.</p> <p style="text-align: right;">(Suggestion: MECL)</p> <p>It was felt that promotional finding has a specific connotation. Exploration in lease hold areas is commercial and must be done on commercial terms.</p>

43.7.06	<p>Agenda 5 : Exploration vis-à-vis Forest Problem</p> <p>During X plan period, SCCL could not carry out the exploration in the identified potential blocks due to delay in grant of Forest permissions and the drilling was carried out in alternate blocks to fulfill the projected target. Further, most of the blocks identified for coal exploration during the XI plan period in Godavari Valley Coal Field are falling in the forest areas. Hence the matter has to be emphasized at the highest level, considering the Nation's energy security.</p> <p>(Suggestion: The Singareni Collieries Co Ltd (Exploration Division))</p> <p>Agenda 6: Approved exploration proposal pending forest permission.</p> <p>Five Nos. of detailed exploration proposals for copper, gold and iron ore approved by Standing Committee for Promotional Projects (SCPP) of MECL could not be taken up for want of forest permission. The application for forest permission is at different stage of approval by MOEF/State Forest Department for the last 2-4 years. Delay in getting forest permission is causing increase in the approved project cost due to time over run. Even after intervention of MOM, these applications are awaiting clearance from MOEF/State Forest Authority. MECL request Chairman CGPB to take up the matter with highest authority for early and fruitful action.</p> <p>(Suggestion: MECL)</p> <p>In the light of detailed discussion on forest issues under the follow up action on decisions of 42nd meeting (para 43.6.02), it was expected that issues could be resolved to some extent.</p>
43.7.07	<p>Agenda 7: Approved scheme could not be taken due to adverse law and order problems.</p> <p>Four numbers of schemes were approved in various SCPP; MECL could not commence detailed exploration work in these schemes due to adverse law and order problem prevailing in the area. Name of schemes are as under:</p> <ol style="list-style-type: none"> 1) Intervening block (between Ramchandrapahar and Bayanbil blocks) for copper in Distt. Singhum (E), Jharkhand. Scheme was approved in 14th SCPP on 8/6/06. 2) Lupungpat bauxite in Gumla, Jharkhand: Proposal was approved in 14th SCPP on 8/6/06. MECL commenced work after negotiation with local people. Intermittently work was stopped. MECL was compelled to withdraw its resources after suspending work due to law and order problem. The project was ultimately abandoned. 3) Nimi-pyakatsu Limestone block, distt. Kiphire Nagaland. The proposal was approved in 12th SCPP on 28/2/2005. MECL

	<p>mobilized its resources to the site but work could not be commenced due to insurgency problem prevailing in the area. In 14th SCPP it was decided to abandon the project.</p> <p>4) Karlapat bauxite deposit, distt. Kalahandi, Orissa. This scheme was approved in 6th SCPP on 10/11/2000. MECL could not commence detailed exploration work due to stiff opposition by so called NGO's even after intervention by top officials of Govt. of Orissa. NGOs were creating problem in the East Coast Belt where world class bauxite deposits exist, in the name of environment of backwards/tribal area.</p> <p style="text-align: right;">(Suggestion: MECL)</p> <p>Before the programs are placed to SCPP, prior discussions need to be carried out with the respective State Government regarding the exploration items. Assurance has to be taken from the State Government to take care of law and order situation. The exploration programs approved in SCPP meeting has to be discussed in the CGPB Sub-Committee meetings also where the State Governments are likely to be present. State Government is the right authority to assess local law and order situation so as to enable GSI and MECL to take up appropriate programme.</p> <p style="text-align: right;">[Action: MECL/ all State DGMS]</p>
43.7.08	<p>Agenda 8: Reassessment of Iron Ore Reserves/ Resources in the Country</p> <p>Recently there has been a lot of debate in the country on the desirability of iron ore exports mainly because of an assumption of scarcity of resources (hematite and magnetite). The current estimate of more than 25 billion tones of iron ore resources as per National Mineral Inventory is too conservative, as the conversion of resources into reserves is a function of detailed exploration as well as threshold values/cut-off grade of iron content in the ore. More so, with the technological up gradation in utilizing low-grade ores in steel making, the lowering of threshold value/cut-off grade in assessment of reserves/resources has become necessary.</p> <p>As the cut off grade of 55% Fe content in the ore has by and large been considered by the exploration agencies in the country for assessment of iron ore reserves, the same needs to be lowered down in the present scenario. Indian Bureau of Mines is already engaged in revision in threshold values of iron ore but keeping in view different parameters being considered in different regions for the assessment of iron ore resources and also taking into account considerable variation in the ore characteristics, a realistic assessment of iron ore deposits particularly in free-hold areas is called for at this stage.</p> <p>Further, it may be mentioned that iron ores of low grades (35% Fe content) are being utilized through beneficiation world over and in such a scenario, the present estimate of iron ore resources at higher cut off grade does not indicate the true potential</p>

	<p>In view of above, it is felt if the Geological Survey of India being a premier agency may consider a quick reassessment of all iron ore reserves /resources in the country based on a revised lower cut off grade. This exercise may be taken up based on the available data during the programme 2008-09 as a special project.</p> <p>(Suggestion: Federation of Indian Mineral Industries (FIMI))</p> <p>Mrs. Ajita B. Pande, JS, MOM stated that IBM was engaged in looking at the issue of cut off grade and the cut off may be placed at 45% Fe. GSI stated that it had discontinued iron ore exploration after 1980. In case reassessment of explored area had to be done, GSI could undertake programme in freehold areas, but this would involve considerable work over a length of time. Secretary (Mines) asked GSI to work out a programme and bring it to the next year's CGPB.</p> <p style="text-align: right;">[Action: GSI]</p>
43.7.09	<p>Agenda 9: Proposal to reevaluate the low-grade iron ore resources in India.</p> <p>With the global impetus to iron ore mining, the existing Indian iron ore reserve/resources have come under stress particularly because as per National Mineral Inventory a significant part of resource base of hematite ore are categorized under medium and low grade, unclassified, status not known and others. With the ambitious development of iron and steel industry in India a major part of the known deposits are placed for captive consumption by Indian and multi national companies proposing to set up mega steel plants in the country. The technology for utilization of low-grade iron ore resources by suitable beneficiation and pelletisation is being indigenously developed. Under this scenario, Indian Bureau of Mines has just now concluded large-scale consultation to fix up threshold value for Iron ore and other minerals with the Indian mining companies, R & D experts, specialist, mineral administrator and academicians from Universities. Accordingly threshold value (lower limit of such grade ore) for iron ore is proposed to be brought down to 45% Fe. Lowering the threshold value for hematite ore has been proposed on support from the fact that now the low grade iron ore horizons like BHQ, BHJ, banded iron formation etc. assaying up to 40% Fe can be upgraded to 60% and also because the sub grade ores up to 50% Fe are effectively used during blending and for direct sale.</p> <p>The IBM has also taken up crash resource appraisal of low grade iron and manganese ores currently available in Indian mining leasehold which have still not been revaluated. This revaluation of leaseholds of iron ore is taken by mining geologists in different regional offices of IBM. It is therefore suggested that GSI should also take up the revaluation of low grade iron ore resources in freehold areas of the country. Considering the national priority, this revaluation/reassessment of iron ore resources in freehold areas up to cut off of 45% Fe is recommended to be taken up by GSI during current and next years annual field program. If such low grade iron ore</p>

	<p>resources/reserve up to 45% Fe in the country can be reassessed (by IBM for leasehold areas and by GSI for freehold areas), the National Mineral Inventory for iron ore can be substantially augmented.</p> <p style="text-align: right;">(Suggestion: IBM)</p> <p>In leasehold areas where reserves had already been proved, investigation to convert additional resources into reserves would need to be done either by the leaseholder or by GSI under Section 18 A of the MMDR Act. Secretary (Mines) desired that IBM may study the issue and make a proposal to MOM.</p> <p style="text-align: right;">[Action: MOM]</p>
43.7.10	<p>Agenda 10: Assessment of Reserve/ Resources of Low Grade Phosphate.</p> <p>The use of phosphatic fertilizer in India has maintained a steady upward trend with an ever increasing demand of apatite and rock-phosphate. The prices of phosphatic fertilizer also show a steady upward trend due to increasing demand, transportation cost, beneficiation and manufacturing cost etc. The phosphatic ores scenario in India is not comfortable as it possess only 0.19% of the world resource of phosphate to cater the agricultural needs of 1/6th population of the world. Total present annual requirement of rock phosphate in India is approximately 6 million tonnes, out of which total indigenous supplies are about 1.5 million tonnes of various grades including rock phosphate for direct application, rest being imported from countries like Egypt, Jordan, Syria, Senegal, Morocco, China etc.</p> <p>Under the above situation, it is imperative to evaluate the reserves/resources of low grade rock phosphate deposits and possibility of its up-gradation for use in single super phosphate (SSP) manufacturing.</p> <p>The assessment of low grade phosphate deposits within the lease hold areas in Rajasthan has already been included in the annual program of Indian Bureau of mines for the year 2008-09. Similar program can be taken up by Geological Survey of India for free hold areas so that the low grade rock phosphate deposits of the country can be evaluated and augmented resources be included in the National Mineral Inventory.</p> <p style="text-align: right;">(Suggestion: IBM)</p> <p>Member Secretary explained that GSI is carrying out exploration for low grade phosphate. For detail exploration of specific prospect, GSI may take up investigation on sponsorship basis. MOM informed about the concern of Dept. of Fertilizer on status of phosphate and potash. DGM, Rajasthan, informed that lease of phosphate cannot be given to private entrepreneurs since good quality phosphate is being explored by Govt. of Rajasthan. Assessment for low grade phosphate was not felt necessary since there is already 6 million tonnes good quality annual production of phosphate in</p>

	<p>Rajasthan. The Rajasthan state government feels that there is no requirement of low grade deposit as of now and hence phosphate exploration is made exclusive to the State Govt. corporation. MOM suggested that state Govt. may consider modifying their policy of exploration/ mining of phosphate. Low grade phosphates can well be beneficiated. Secretary (Mines) opined that a separate meeting is needed to resolve the issue.</p> <p style="text-align: right;">[Action: MOM]</p>
43.7.11	<p>Agenda 11: Chemical Vs Cement grade Limestone</p> <p>It has been observed that there is rush for grey cement manufacturing at unprecedented scale. To take up such venture, entrepreneurs are also exploiting limestone of chemical grade very frequently specially in NE region. This amounts to gross under-use of a valuable commodity and can lead to its serious short fall in near future.</p> <p>The question is whether limestone of all geological horizons has been categorized/ classified as per quality, highlighting those which belong to Chemical grade?</p> <p>Is there any move to restrict use of chemical grade limestone for grey cement manufacture?</p> <p style="text-align: right;">(Suggestion: MGMI)</p> <p>GSI undertakes regional exploration in which overall resources of a limestone deposit is estimated. If the limestone is of a single type, there is no problem regarding the quality. In a mixed limestone deposit where SMS, BF, cement and chemical grade limestone are available, detailed exploration needs to be carried out to classify the exact quantity and quality of limestone belonging to a specific grade. In general such detail exploration is not taken up by GSI. The exploiting agency does detail exploration to have control over production. Apart from GSI, limestone investigations are taken up by the State Governments and different private agencies and the total resources of different grade limestone in the country are given by the IBM, Mineral Year Book.</p> <p>In relation to restriction of use of chemical grade limestone for grey cement, FIMI took exception on the utilization of limestone on ground reality, i.e. location of mines vis-à-vis industry. FIMI pointed out that for Himachal Pradesh it is not easy to take SMS grade limestone to steel plants, instead it is used in cement production. In Jaisalmer SMS grade is sent to steel plant while cement grade is still lying in the mine site since no cement plant is nearby. Thus all the cost of mining is attributed to SMS grade limestone.</p> <p>Member Secretary indicated that from mineral conservation point of view, if chemical grade limestone is being used for cement manufacturing, it is highly irregular. MGMI is requested to forward the details of the areas and States where such high-grade limestone is being utilized for cement manufacturing to IBM and the concerned State Government, who will look</p>

	<p>after the issue of conservation of minerals.</p> <p style="text-align: right;">[Action: MGMI]</p>
43.7.12	<p>Agenda 12: Geological Mapping on 1:25,000 scale and regional mineral resources assessment for iron ore, manganese, bauxite, limestone and magnetite in the state of Jharkhand.</p> <p>According to National Mineral Policy, 2008, the role of the Geological Survey of India is to carry out the geological mapping and regional mineral resources assessment for the country.</p> <p>The State of Jharkhand being a mineral rich state possess varieties of minerals but the newly created state does not have adequate data base and geological details of extent of mineralized area and reserve of minerals in which state is rich like Iron Ore, Manganese, Bauxite, Magnetite, Limestone and Graphite.</p> <p>The State has signed several MoUs for investment in Steel and other sectors. The target for Steel production in the country is 295 MT by the end of year 2020 and the States share of Steel production by 2020 will have to go to the tune of 75 MTPA, for which 120 million tonnes iron ore will be required annually. Our considered opinion is that what ever reserve for Iron ore is reported for our state does not reflect the total reserve and it seems to be very conservative. The reserve of Iron ore is expected to be many times more than the reported reserve. Similarly, Bauxite and Limestone reserves are more than reported figure of 101 and 599 million tonnes.</p> <p>Another fact is that the exploration work for all these minerals was carried out, when modern technology of ore processing for end use was not introduced but now a days after coming of new technology, cut off grade has gone down.</p> <p>Therefore we request to Geological Survey of India to carry out geological mapping on 1:25000 scale and regional mineral resources assessment for mineral like; Iron ore, Manganese, Limestone, Bauxite and Magnetite to locate total mineral bearing area in the state on priority basis and give a fresh opportunity to state for detail exploration based on map and exploration result of area carried out by Geological Survey of India.</p> <p style="text-align: right;">(Suggestion: DGM, Jharkhand)</p> <p>Member Secretary told that GSI is carrying out theme based STM as well as geochemical mapping in Jharkhand. After discussion with the State Government GSI initiated iron ore/hematite exploration in Ghatkuri block, West Singhbhum district during the field season 2005-06 and continued up to field season 2006-07. Geological mapping and bed rock sampling was carried out but drilling could not be taken up due to forest problem. More than 2 crores of rupees have been estimated by the forest Department to be paid as a compensation for the loss of the forest property after which</p>

	<p>clearance can only be accorded for exploration. GSI had to abandon the investigation. DGM, Jharkhand stated that they are agreeable for payment of a reconciled forest compensation of Rs. 17 lakhs for the said drilling purposes. Chairman requested DGM to send a formal intimation to GSI. [Action: DGM, Jharkhand]</p> <p>Preliminary investigation for magnetite has been carried out by GSI during FS 2006-07 and 2007-08 in Rajhara, Sokra, Nawa, Datam, Bhiwabathan and Chunga areas in Palamau district. It is a matter of concern that during the field season 2007-08, GSI had to abandon three investigations on coal and one investigation on gold in the State due to adverse ground condition.</p> <p>DGM, Jharkhand, informed that several entrepreneurs require raw material like bauxite, iron, manganese, limestone, etc. for which basic geological mapping is most essential. GSI assured all assistance to Jharkhand and desired that programmes to be taken up have to be discussed in the SGPB meeting. They were also requested to directly communicate with the office of GSI, Eastern Region/ Operation located in the state under intimation to DG's office. [Action: DGM, Jharkhand/ GSI]</p>
43.7.13	<p>Agenda 13: Data Management & Norms for Exploration of Coal/ Lignite</p> <p>i) Till recently coal/lignite exploration was being conducted only by Government agencies and the Exploration data was being maintained by them. With the induction of private entrepreneur in the field of detailed exploration, the exploration data will be spread over a large number of agencies which may in the long run be lost or may not be available to Govt. agencies for national planning etc. There is a need of creation of National Data Bank under a Nodal Agency where all the coal/lignite exploration data may be kept. It should be made mandatory on all agencies operating in coal/lignite blocks to report their basic data to the Nodal Agency.</p> <p>ii) There is no system for accounting the extracted /depleted/sterilized resources in the inventory of coal. A system with required resources may be developed to incorporate such resources in the national inventory of coal. The resource data may be certified by Registered Qualified Geologist before incorporation in the inventory.</p> <p>iii) Since detailed coal/lignite exploration has now been opened for private sector a committee of experts may be constituted to formulate norms and guidelines for coal/lignite exploration as well as categorization of resources under BIS/UNFC. (Suggestion: CMPDIL)</p> <p>The proposal for creation of a National Data Bank of coal/ lignite is well appreciated. In this connection it may be pointed out that for development of Integrated Coal Resource Information System (ICRIS) in UNFC mode, all</p>

	<p>relevant data related to regional and detailed exploration of coal by National and State Agencies are already being provided to CMPDIL, being the Nodal Agency. Similarly NLC is presently working as repository of data related to lignite for development of Integrated Lignite Resource Information System (ILRIS) in UNFC mode. In GSI's view it would be appropriate if these two organizations are made Nodal Agencies for National Data Bank for coal and lignite respectively.</p> <p>The issue has been discussed at length in the Core Group and Subcommittee on Energy minerals where CMPDIL was made Nodal Agency for collection of data on depleted coal reserves and providing the same to GSI for incorporation in the national inventory.</p> <p>Regarding guidelines of coal depletion, it was requested that all information are to be submitted during sub-committee meeting where considered opinion of Ministry of Coal can be obtained. DDG (Coal) informed that for captive blocks, a review mechanism has to start on the guidelines given to private parties.</p> <p style="text-align: right;">[Action: Convenor, Sub-committee, Coal & Lignite]</p>
43.7.14	<p>Agenda 14: Supply of location (Co-ordinates) of the already allotted captive blocks.</p> <p>It has been observed that many Govt. /Public entrepreneurs and Private parties approach Coal Wing with just the name of the already allotted captive block for further details in respect of exploration data. However, it becomes difficult to locate the explored area and provide the required dataset when quarries are made only with reference of the name of the captive blocks. Moreover, in some occasions the allotted captive block include only a part of the regional exploration block of GSI and thus are renamed. Hence, bounding latitude and longitude of the allotted blocks are essential for supplying the required dataset to the concerned parties.</p> <p style="text-align: right;">(Suggestion: GSI)</p> <p>GSI clarified that whenever any details are required on captive blocks, block boundaries/ spatial domains may be clearly defined to facilitate in providing the data.</p> <p style="text-align: right;">[Action: Members concerned]</p>

43.7.15	<p>Agenda 15: Detailed Geological Mapping of Urban Agglomerations of NCT, Delhi on Scale 1:10,000:</p> <p>GSI has taken up the task of geological mapping of Urban Agglomerations of NCT, Delhi. In this regard, IMD procured Quickbird Satellite data for whole NCT, Delhi and made available to GSI, Lucknow, which is being used successfully while mapping. Four Geologists are also attached with officials of GSI to execute and accomplish the work at earliest. In a meeting held on 24.04.2007 GSI agreed to complete the work and provide the geological maps of whole NCT Delhi on 1:10,000 scale before May 2008 in phased manners. Hon'ble Minister MoES & ST was kind to reschedule the date of completion of Seismic Microzonation Study of NCT Delhi to June 2008. As per the minutes of the 42nd CGPB, it is understood that the geological mapping of NCT Delhi is in progress still. As the geological maps on 1:10,000 scale will be an important input for the said study, GSI is requested to kindly accelerate the work so as to complete the geological mapping and to provide us the final maps at earliest.</p> <p style="text-align: right;">Suggestion: IMD (EREC)</p> <p>Member Secretary informed that GSI has supplied geological map of entire NCT Delhi in 1:25,000 scale on 01.5.2008. In response to the request made by the IMD(EREC), Member Secretary informed that the report on 1:10,000 map of Delhi would be ready by 31.10.2008.</p> <p style="text-align: right;">[Action:GSI]</p>
43.7.16	<p>Agenda 16: Detailed Geological Mapping of Urban Agglomerations of 5 Cities on Scale 1:10,000:</p> <p>A good urban geological/geomorphological map forms the primary input for further ground characterization and micro-zonation of urban agglomeration vis-à-vis seismic hazard and risk. Reference may kindly be made to our request for consideration of geological mapping of 5 cities during 42nd meeting of CGPB. EREC has taken up the micro-zonation study of Ahmedabad, Mumbai, Chandigarh, Dehradun and Guwahati cities in the XI five year plan. As per the minutes of the 42nd CGPB, GSI has completed such studies for these cities on 1:20K/1:25K scale. While these studies will of great value in the work of EREC and will be made use of, the same will not be sufficient for engineering use and for risk evaluation. A scale of 1:10K is minimum requirement. It is mentioned in the minutes of 42nd meeting that GSI has no plans for geological mapping of these 5 cities on 1:10K scale. Keeping in view the fact that these cities are falling in the high seismic zones and also are highly populated, such detailed study is of great importance for disaster mitigation and public safety. Hence GSI is requested to reconsider the matter and to include the geological mapping of above mentioned 5 cities on 1:10K scale on priority basis.</p> <p style="text-align: right;">(Suggestion: IMD (EREC))</p> <p>GSI will consider taking up one or two cities during 2009-10 provided all materials (air photos, imageries and toposheets) are supplied to GSI well in</p>

	<p>advance and details worked out by March 2009. EREC is requested to contact GSI and arrange for a meeting to finalize the <i>modus operandi</i>. Out of two cities, Dr. A.K. Shukla, EREC suggested taking up geological mapping of Guwahati on 1:10,000 scale at the first place and the other city may be decided later.</p> <p>[Action: IMD(EREC)]</p>
43.7.17	<p>Agenda 17: Generation Primary Geological and Tectonic data for 30 different cities of the country on 1:50,000 scale</p> <p>(Suggestion: IMD (EREC))</p> <p>Dr. A.K. Shukla. EREC informed that IMD is taking up the item in the next financial year and will be discussed bilaterally.</p>
43.7.18	<p>Agenda 18: Preparation of Large Scale Geological Maps for Special Purpose</p> <p>Geological map prepared in scale of 1:4000 or 1:5000 would be immensely useful in studies where very local information is required especially in pollution problems in the vicinity of industries. Such maps should be prepared for industrial hotspots. It will also aid in siting of Domestic/hazardous waste disposal sites.</p> <p>(Suggestion: NEERI, Nagpur)</p> <p>Agenda 19: Initiate programs for in-situ remediation of arsenic affected soil and groundwater.</p> <p>(Suggestion: NEERI, Nagpur)</p> <p>Agenda-20: Initiation of R&D in Landslide hazard Zonation using Ground Penetrating Radar and Resistivity Imaging.</p> <p>(Suggestion: NEERI, Nagpur)</p> <p>The representative of NEERI was not present, however, the clarification on the site specific work for each of the items was received by GSI. NEERI has been requested to contact the office GSI, Central Region and Southern Region at Nagpur and Hyderabad respectively. GSI is agreeable to enter into detail work in the respective areas depending on the availability of personnel in GSI either in collaboration mode or in sponsorship basis.</p> <p>[Action: NEERI / GSI]</p>
43.7.19	<p>Agenda 21: Engineering Geological Studies for underground Crude Oil Storage Facility</p> <p>The Underground Crude Oil storage facility at Visakhapatnam is under construction and the underground facility at Mangalore will commence in February-March 2009. In this regard, the following are services required from GSI.</p> <ol style="list-style-type: none"> 1. Requirement of services of Engineering Geologist for the ongoing Underground Projects which are under construction and also for site selection of the proposed Underground projects in India.

	<p>2. Requirement of services for Third Party certification of various facilities at the Underground Crude Oil Storage facilities at Visakhapatnam and Mangalore.</p> <p>3. The above services are required intermittently and shall be on call basis for duration of 3-5 days per visit depending on the site requirements. The number of such visits may be around 10-15 during 2008-2009.</p> <p>It may be noted during 2007-08 though we had requested for services of GSI, the same could not be finalized due to urgent project schedule.</p> <p style="text-align: right;">(Suggestion: Engineers India Ltd)</p> <p>GSI can take up site specific jobs as per the requirements of EIL. The services provided are charged as per the Schedule of Charges (SOC). As and when EIL put official request, GSI is ready to take up the job.</p> <p style="text-align: right;">[Action: EIL]</p>			
43.7.20	<p>Agenda 22: Systematic geological mapping in the foothill region of Bhutan Himalayas along Assam-Bhutan Border</p> <p>The entire foothill region of Bhutan Himalayas, along the Assam-Bhutan Border has not been properly explored by systematic geological mapping by the Directorate of Geology & Mining, Assam. The job requires huge fund involvement. The State Directorate could not carry out the investigation due to paucity of fund. As a Central Government organization, it is felt that GSI has the capability to carry out the work. So, it is requested that GSI may carry out the above mentioned work covering the foot hills regions of the districts as detailed below: 1.</p> <table style="margin-left: 40px;"> <tr> <td style="vertical-align: middle;"> <ul style="list-style-type: none"> 1) Kokrajhar district 2) Chirrang 3) Baksa 4) Udalguri </td> <td style="font-size: 3em; vertical-align: middle; padding: 0 10px;">}</td> <td style="vertical-align: middle;"> <p>Longitude 89° 45'E to 92° 10'E (approx)</p> <p>Latitude 26° 30'N to 26° 50'N (approx)</p> </td> </tr> </table> <p style="margin-left: 40px;">Scale: 1:50000 or 1:25000</p> <p style="text-align: right;">(Suggestion: DGM, Assam)</p> <p>Member Secretary informed that GSI is carrying out Active fault studies in Kokrajhar and collaboration with foreign agency in that study is being initiated. DGM, Assam stressed on their requirement of geological maps and reports of GSI. He informed that formal request to GSI would be made to get geological maps available on 1:63,360 so that DGM can take up further work in those areas.</p> <p style="text-align: right;">[Action: DGM, Assam]</p>	<ul style="list-style-type: none"> 1) Kokrajhar district 2) Chirrang 3) Baksa 4) Udalguri 	}	<p>Longitude 89° 45'E to 92° 10'E (approx)</p> <p>Latitude 26° 30'N to 26° 50'N (approx)</p>
<ul style="list-style-type: none"> 1) Kokrajhar district 2) Chirrang 3) Baksa 4) Udalguri 	}	<p>Longitude 89° 45'E to 92° 10'E (approx)</p> <p>Latitude 26° 30'N to 26° 50'N (approx)</p>		
43.7.21	<p>Agenda 23: Investigations in Mizoram</p>			

	<ol style="list-style-type: none"> 1. Geological re-mapping in the eastern part of Mizoram in and around Champai to sort out the uncertainty of stratigraphic succession i.e., Barail vs Surma. 2. Detail geological mapping of all the District Capitals of the State of Mizoram in 1:50K or 1:10K. 3. Geotechnical Investigation of Khuangchera Puk and Lianchhiari Lunglen Tlang for development of Geotourism. 4. Regional Geochemical mapping of parts of Lunglei District. 5. Micro-seismic investigation of Aizawl District. 6. Preparation of Landslide inventory of Mizoram <p style="text-align: right;">(Suggestion: DGM, Mizoram)</p> <p>DGM, Mizoram agreed to the status given in the Agenda Paper.</p>
43.7.22	<p>Agenda 24: Problems for geological work in forest area and evaluation of BHQ's and BMQ's in Karnataka.</p> <p>Drilling programme is being taken up by the Department at Tumkur District, Karnataka for evaluation of resource availability and quality of lime stone deposits. This is an ongoing programme and is badly affected by the forest Department. The various organizations who are involved in exploration work in the state are facing similar kind of problems from the forest Department.</p> <p>Due to fast depletion of high-grade iron ores in the state, the time has come to explore low-grade iron ores. Therefore, Geological Survey of India along with other organizations should concentrate their studies towards evaluation and assessment of BHQ's and BMQ's.</p> <p>Illegal Mining of iron ore has become a serious problem in the state. Any violation in the approved mining plan/modified mining plan should be brought to the notice of the Director of Mines and Geology through inspecting the areas periodically by Indian Bureau of Mines. The IBM is also requested to send the information every month to Director Department of Mines and Geology, then it will be helpful for Mines and Geology to monitor, whether the lessees are transporting more than the consented capacity or not?</p> <p>In the recent SGPB meeting held on 20-08-2008 the principal secretary to the Government of Karnataka has stressed up on concentration of mineral resources and Forest wealth. Wherever possible value addition and employment generation must be taken care to drive maximum economic advantage. Therefore, he suggested the exploration and mining of Mineral resources are to be implemented systematically and scientifically.</p> <p style="text-align: right;">(Suggestion: DGM, Karnataka)</p> <p>Regarding forest issues and low grade iron ore investigation the decisions</p>

	are already given under para 43.6.02, 43.6.12 and 43.7.08.
43.7.23	<p>Agenda 25: Catchment area studies: Dibang Multipurpose Project.</p> <p>NHPC is entrusted with execution of 3000 MW Dibang multipurpose project in Arunachal Pradesh. The scheme involves construction of a 288 m high concrete gravity dam across Dibang river in Lower Dibang Valley district, Arunachal Pradesh. The water thus impounded shall form a 43 km long reservoir at FRL of 545 m in the river section in upstream side. During the DPR Stage as a part of investigation quite extensive studies were carried out for reservoir area wherein geological mapping and identification of existing landslides was done. It is noticed that the reservoir area is dotted with a no of landslides for which remedial measures are being contemplated by BHPC.</p> <p>The Dibang river rises near the Tibet border at an elevation of 5000 m and has an overall length of 195 km up to the confluence with Brahmaputra. The region en-marked for catchment area treatment is the directly draining area of 598 sq km which is downstream of the other schemes planned in the basin. In the EIA/EMP study the National Productivity Council, Gauwahati has identified nine water sheds for treatment. By the satellite imagery, land use mapping has been carried out and different measures for the treatment of the catchment area are dovetailed. It is now proposed to carry out further detailed study comprising of geological mapping on 1:50,000/1:25,000 scale and landslide hazard zonation of the directly draining catchment area in the Lower Dibang Valley and Dibang Valley districts. Following scope of work is proposed:</p> <ol style="list-style-type: none"> i) Preparation /compilation of geological map of reservoir and directly draining catchment area on 1:50,000/1:25,000 scale. ii) Identification of existing and ancient landslides, potentially venerable areas in reservoir/catchment area. iii) Landslide hazard zonation in reservoir/catchment area. iv) Use of remote sensing tools for the above purpose followed by field checks. <p>It is requested that the GSI in view of its vast experience in geological mapping and land slide zonation and analysis may kindly agree to undertake the above mentioned study. NHPC's Engineering Geology Division shall be actively associated with the GSI in the studies. As the mega project is of national importance the work may be taken on priority basis in the annual plan of 2009-10. This may also be included as an agenda item in the 43rd CGPB meeting scheduled for 29-9-08 at New Delhi.</p> <p style="text-align: right;">(Suggestion : NHPC)</p> <p>Representative of NHPC stressed the need for maps of free draining catchment area in scale 1:25,000/ 1:50,000 for landslide hazard zonation</p>

	<p>(LHZ) based essentially on remote sensing tools with limited field check. NHPC indicated that they are spending about Rupees 100 lakhs for geophysical study for the reservoirs. Member Secretary informed since the proposal came very late in GSI, the item will be considered at a later date. GSI would be taking up the work on sponsorship basis. Geologists from GSI as well as from NHPC will participate in the required field check. NHPC is advised to keep in touch with GSI, NER for finalizing suitable modalities. In this connection representative of Arunachal Pradesh reminded that the Hon'ble Prime Minister had already laid the foundation stone of the project and the PMO monitors the progress of work periodically and regularly.</p> <p style="text-align: right;">[Action: GSI/NHPC]</p>
43.7.24	<p>Agenda 26: Airborne Geophysical Survey should be carried out in the remote areas of Narayanpur, Bijapur and Dantewada Districts of Chhattisgarh State. The work is proposed in parts of Degree Sheet No. 65/A, 65/B, 65/E and 65/F, included within the boundary of Chhattisgarh.</p> <p style="text-align: right;">(Suggestion: DGM, Chhattisgarh)</p> <p>GSI informed that at present the air-borne survey is being carried out in the northern part of Chhattisgarh; however in the southern part (proposed area) there are logistic problems. Further there would be terrain roughness problem which will result in difficulty in interpretation and the elevation difference may be better dealt with heliborne survey. DGM, Chhattisgarh suggested that the GSI can use the airstrip of Jagdalpur for the said survey. It was assured that GSI will consider the programme in future.</p> <p style="text-align: right;">[Action: GSI]</p>
43.7.25	<p>Agenda 27: As per the 2nd proviso of Section-4 of “Mines and Minerals Development & Regulation Act, 1975” read with rule 74 of “Mineral Conservation Rules, 1960, Geological Survey of India, the Indian Bureau of Mines, the Atomic Minerals Directorate for Exploration & Research of the Department of Atomic Energy of the Central Government, the Directorates of Mining & Geology of any State Government (by whatever name called), the Mineral Exploration Corporation Ltd. & other Government Companies are authorized to undertake prospecting operations without obtaining prospecting licence under the Act. These agencies are now facing lot of problems for obtaining clearance under Forest Conservation Act, 1980 as the procedure adopted by the Forest Department is same as is in the case of individual PL holders who want to get the ML on the basis of PL work. Because Government agencies are only carrying out promotional exploration done by them, the non-commercial promotional prospecting operations undertaken by these Government agencies should be exempted from obtaining the clearance under Forest Conservation Act, 1980. This matter can be taken up at the Central Government level and suitable orders may be get issued by the Ministry of Environment and Forest in this regard.</p>

	<p>(Suggestion: DGM, Chhattisgarh)</p> <p>Regarding forest issues the decisions are already given under para 43.6.02.</p>
43.7.26	<p>Agenda 28: GSI was providing all the geological investigation reports to DGM and DGM was also providing their reports to GSI. But at present GSI is not providing the detailed reports to DGM. GSI may be directed to provide the detailed field reports to the respective State Governments.</p> <p>(Suggestion: DGM, Chhattisgarh/All States/GSI)</p> <p>GSI requested DGM, Chhattisgarh to give requisition of required reports to Raipur office which will be made available from there.</p> <p>Chairman desired that all State DGMs may also give a list of all pending requests to GSI within one month and GSI would bring an item with status of all pending requests from States/Institutions to each CGPB meeting, so that stakeholders can take necessary remedial action to correct deficiencies in requests.</p> <p>[Action: DGM, Chhattisgarh/ GSI]</p>
43.7.27	<p>Agenda 29: In some areas of Chhattisgarh, GSI has taken the geological projects related with health hazards. This type of projects should be taken in other areas of Chhattisgarh State where presence of fluorine, arsenic is affecting the local people.</p> <p>(Suggestion: DGM, Chhattisgarh)</p> <p>DGM, Chhattisgarh was requested to give specific areas with co-ordinates and toposheet numbers where health hazard due to arsenic/ fluorine contamination has been reported so that GSI may take up programmes in future considering manpower position. In this connection Member Secretary also informed that geochemical mapping items are being regularly taken up in the State.</p> <p>[Action: DGM, Chhattisgarh]</p>
43.7.28	<p>Agenda 30: In the state, survey and investigation with the help of modern technology is required for locating the high value scarce mineral (gold, diamond, PGE, REE etc.). It is suggested that, GSI should take up more areas for these investigations in the state.</p> <p>(Suggestion: DGM, Chhattisgarh)</p> <p>For taking up investigation on high value scarce mineral, DGM, Chhattisgarh was requested to give specific information on lease-free/ non-forest areas where GSI has to take up work on a priority basis. Systematic search by GSI would continue based on resource availability.</p>

	[Action: DGM, Chhattisgarh/ GSI]
43.7.29	<p>Agenda 31: For promoting small scale mining of small deposits, it is suggested that, during survey if small deposits are noticed by GSI, dimensions & grade of these deposits should be assessed during survey itself, because it doesn't take much time and efforts.</p> <p>(Suggestion: DGM, Chhattisgarh)</p> <p>GSI felt that it takes equal time and effort to survey even small deposits. Prospects of reasonable assurance are investigated and informed through posting of metadata on website.</p>
43.7.30	<p>Agenda 32 :Reassessment of Iron ore resources</p> <p>In view of the rapid industrialization process and several MOUs being signed by the state for steel industries, the state government is hard pressed to provide the principal raw material i.e. iron ore to the industrial houses. For this now it is felt that some of the existing and known iron ore deposits in the state need to be reassessed as per the UNFC guidelines. Further the detailed assessment may be done grade-wise taking the threshold value for iron ore fixed by IBM i.e. 48% Fe as lowest cut off.</p> <ul style="list-style-type: none"> (i) With the above background, it is proposed that GSI, Operations Orissa should take up detailed assessment of iron ore resources at Thakurani – A block located in Keonjhar district. The southern part i.e. Thakurani –B block had been assessed by GSI previously. Hence to maintain the continuity and to augment the resource, the work should be taken up by GSI. It will be appreciated if a detailed scheme of work and the time period required for such assessment may be moved by GSI to S&M Dept with proposal so that notification of the area can be made by the Govt of Orissa as per the provision of MMDR Act. (ii) Similarly, the reassessment of iron ore resources may be taken up in Melangtoli area located in Sundargarh district. A detailed scheme of work may be drawn up indicating year-wise break up of work to be taken up and proposal for notification of the area may be sent to Govt for facilitating the work. (iii) During the 42nd State Geological Programming Board Meeting, it has been indicated by GSI, Operations Orissa that “The study of coastal processes in Kendapara and Jagatsinghpur districts of Orissa” shall be taken up. In this regard, the active involvement of one or two officers of the Directorate of Geology, Orissa in the project may be considered. This will facilitate in knowing the techniques adopted by GSI, so that the Directorate may plan for more

	<p>such work along its long coastal tract (about 480 km) in view of the recent coastal erosion process at several places. Required assistance shall be provided by State Govt.</p> <p style="text-align: right;">(Suggestion : DGM, Orissa)</p> <p>Member Secretary in his reply stated that GSI had already carried out regional exploration in the area and further detail exploration does not come under the purview of GSI. However, it was assured that the proposals given by DGM, Orissa would be studied by GSI and suitable action will be taken in future. Regarding the study of coastal processes GSI has taken up a programme during FS 2008-09 where the active participation DGM, Orissa has been sought for. DGM, Orissa was also requested to directly communicate with the office of GSI, Eastern Region/ Operation located in the state under intimation to DG's office for further follow up of above proposals.</p> <p style="text-align: right;">[Action : DGM, Orissa /GSI]</p>
43.7.31	<p>Agenda 33: Points for discussion in the 43rd meeting of the CGPB</p> <ul style="list-style-type: none"> i) Sharing of all types of Geoscientific data between Government departments is required and it should be freely available. ii) A task force is to be constituted for data retrieval. iii) A senior level committee to be constituted to meet on quarterly basis for validating of all geoscientific data and its quality check. iv) A committee to be formed for integration of all types of available geoscientific data, including remote sensing data, satellite imaging data, Gravity-Magnetic for better subsurface understanding. v) GSI has been gathering geological information about sedimentary basins of both onland and offshore regions. The information collected so far is scattered in hundreds of reports and attached maps prepared by various divisions of GSI. Similarly subsurface information gathered by various geophysical methods in areas covered by volcanics and alluvium will also be of great use in targeting areas for detailed Hydrocarbon exploration. Sedimentary basin-wise compilation of all available information will be extremely useful for DGH to be utilized in hydrocarbon exploration. vi) Special attention should be given to the sedimentary basins covered by basalt, riverbed areas and tectonically disturbed areas, where seismic imaging is a problem. GSI may create

	<p>basin-wise folders for this kind of information. The strategy for carrying out exploration in such areas can be discussed with the Government.</p> <p>vii) The Geochemical surveys for all the sedimentary basins for HC exploration to be included.</p> <p>(Suggestion : DG, Hydrocarbon)</p> <p>Member Secretary welcomed all the suggestions of DGHC and expressed readiness to interact. Chairman advised that bilateral interactions on quarterly basis between two small groups may be made for further follow up.</p> <p>[Action: DG, Hydrocarbon/ GSI]</p>
43.7.32	<p>In reply to the query made by the representative of DGM, J&K on re-opening of Training Centre of Geological Survey of India at Aishmuqam in Anantnag District, Member Secretary informed that due to unavoidable circumstances no training programmes were conducted at Aishmuqam camp since 1989. The resumption of activities of the centre is under consideration, subject to improvement of ground conditions. However, he further clarified that the training subject on young fold mountain belt is being conducted by GSI from another centre.</p>
43.8.00	<p>Member Secretary put the Field Season Programme of Geological Survey of India for the Field season 2008 – 2009 for the approval of the house. The house approved the programme.</p>
43.9.00	<p>CONCLUDING REMARKS</p>
43.9.01	<p>Additional Secretary (Mines) made the following concluding remarks :</p> <ol style="list-style-type: none"> 1. Some of the issues on forest clearance considered by MOEF are positive step towards exploration. However the CGPB is requesting MOEF to grant permission with larger number of boreholes with 16cm diameter in place of 10cm diameter for mineral exploration. [Action: MOM/MOEF] 2. On the issue of free and easy availability of GSI reports, henceforth operational offices of GSI can be approached for obtaining the same and for further easy system the matter is under consideration of MOM. [Action: GSI/MOM] 3. State DGMs may send a list of pending requests for Reports/Maps to GSI from time to time and GSI would include this as part of a regular item in CGPB in order to eliminate communication gap. 4. The SGPB meeting ought to be held by the states regularly and on time. GSI should take up this matter at the Operational/Regional level in each state. In case, SGPB meetings are not held for over 6 months, DG, GSI should bring the matter to the notice of the

	<p>Ministry so that matter can be raised at the level of Chief Secretary.</p> <p>[Action: GSI/ all DGMs]</p> <p>5. GSI will take the training requirement of states in SGPB as well as CGPB meetings so that at least 50% of the States take part in GSI training calendar. States may consult GSITI calendar in the GSI website. Training need not be specifically for the States, but a few slots in some training programmes can be reserved for States. GSI will include a regular item in CGPB regarding efforts made for training of the State DGMs. [Action: All DGMs]</p> <p>6. The various issues of relinquishment and filing of RP and PL data should be a regular agenda item in the SGPB meetings as well as CGPB and GSI and IBM must put in place systems to put data (after completion of lock in) in the public domain through their portal/website and GSI should also use the data for improving their own spatial database where tenable.</p> <p>[Action: MOM/ All DGM]</p> <p>7. On the issue of reassessment of iron ore in lease hold area, MOM will be considering whether it is feasible to issue some guidelines with respect to Section 18 of MMDR Act for fresh exploration.</p> <p>[Action: MOM]</p> <p>8. IBM, GSI and MECL will make proposals for completing the switchover during current Plan and the issue will be made a regular item in CGPB. FIMI will separately study the success of operationlisation of UNFC and suggest steps required to be taken.</p> <p>[Action: FIMI]</p> <p>9. IBM, which produces Mineral Year Book, will put in place a mechanism to ensure data integrity and periodic updation of dynamic data using UNFC. [Action: IBM]</p> <p>10. GSI will make proposals for partnership with States in specific issues at SGPB level and will report progress in CGPB.</p> <p>[Action: GSI]</p> <p>11. The issue of pricing of maps and data with GSI will be taken up with MOM so that systems are in line with best international practice, which is that information is given free of cost on internet, with only production charges levied in case of hard copies.</p> <p>[Action: GSI]</p>
43.09.02	<p>The Chairman in his concluding remarks reiterated that the entire mining sector is moving to a new era. There is tremendous scope to contribute in the national economy. The State governments are advised to gear up their own set-up and cooperate to enable the goal to be achieved. MOM will</p>

	support and render help all State Govt. in every issue and will lead from the front. Chairman invited more suggestions from the members in future. He thanked everybody for their contributions and fruitful deliberations.
43.10.00	VOTE OF THANKS
	Dr. P.N. Razdan, Sr. Dy. Director General, GSI, offered vote of thanks.

Annexure – I

Members/Participants in the 43rd meeting of the Central Geological Programming Board held on 29th September, 2008 at New Delhi.

Sl. No.	Name	Designation	Organisation
1.	Shri Shantanu Consul	Secretary (Mines) and Chairman, CGPB	Ministry of Mines
2.	Sri S. Vijay Kumar	Addl. Secretary (Mines)	Ministry of Mines
3.	Shri P.M. Tejale	Director General	Geological Survey of India
4.	Smt. Ajita B. Pande	Jt. Secretary	Ministry of Mines
5.	Shri V.K.Thakral	Jt. Secretary	Ministry of Mines
6.	Shri Sanjiv Mittal	JSFA	Ministry of Mines & Coal
7.	Dr. B. Chattopadhyay	Dy. Director General & Member Secretary, CGPB	Geological Survey of India
8.	Shri G.Srinivas	Director	Ministry of Mines
9.	Shri A.K. Bhandari	Advisor, TPPC	Ministry of Mines
10.	Shri K. Ayyasami	Director (Tech)	Ministry of Mines
11.	Dr. G. Madhukar	Jt. Director,	Deptt of Mines & Geology Govt of Andhra Pradesh
12.	Shri U. K. Baruah	Chief Geologist	DGM, Govt of Assam
13.	Shri. M. K. Tyagi	Director	DGM, Govt of Chhattisgarh
14.	Shri Vir Singh	Geologist (Jr.)	DGM, Govt of Haryana
15.	Shri Arun Kumar Sharma	State Geologist	Deptt of Industries & Commerce, Govt of Himachal Pradesh
16.	Dr. A.S. Sodhi	Geologist	DGM. Govt of Jammu & Kashmir
17.	Shri J.P. Singh	Director (Geol)	DGM, Govt of Jharkhand
18.	Shri. M.E. Shivalinga Murthy	Director (Mines & Geology)	DGM, Govt of Karnataka
19.	Shri K.L. Krishnamoorthy	Director	DGM. Govt of Kerala
20.	Shri R. K. Sharma	Director	DGM, Govt of Madhya Pradesh
21.	Shri V.S. Sawabhande	Director	DGM, Maharashtra
22.	Shri Dhiraj Yumnam	Director	Directorate of Commerce & Industries (Geology Wing), Govt of Manipur
23.	Dr. D.K. Bhattacharyya	Joint Director	Directorate of Mineral Resources. Deptt of Mining & Geology, Govt of Meghalaya
24.	Dr.H. Lallenmawia	Joint Director	Directorate of Industries (Geology Wing), Govt of Mizoram.
25.	Smt. Smita Das	Director (Geology)	DGM. Govt of Orissa
26.	Shri S.C. Rai	Superintending Geologist	DGM, Govt of Rajasthan
27.	Shri S. Bhaskaran	Joint Director	DGM, Govt of Tamil Nadu
28.	Shri G.D. Prasad	Deputy Director	DGM, Uttaranchal
29.	Dr. S.A. Farooqui	Jt. Director	DGM, Govt of Uttar Pradesh

Sl. No.	Name	Designation	Organisation
30.	Shri Hector Fernandes	Senior Tech. Assistant	DGM, Govt of Goa
31.	Shri V. K. Ojha	Deputy Director (Geology)	DGM, Govt of Jharkhand
32.	Shri Bhaskar Khulbe	Adviser	Deptt of Commerce & Industry, Govt of West Bengal
33.	Shri Manoj Kumar	Director	Department of Industries, Govt of Himachal Pradesh
34.	Shri N.M. Pitliya	Superintending Geologist	DMG, Govt of Rajasthan
35.	Raj Gopal, IAS	Commissioner	DGM, Govt of Gujarat
36.	Shri K.S. Ramaprasad	Secretary	Deptt of Commerce & Industries, Govt of Karnataka
37.	Sri I.M. Das	Joint Seretary	Mines & Minerals Deptt, Govt of Assam
38.	Shri Hari Krishna Palinal	Principal Secretary	Govt of Arunachal Pradesh
39.	Shri Rajeev Yaduvanshi, IAS	Secretary	Govt. of Goa
40.	Shri C.L. Bhairam		AMD, Deptt of Atomic Energy
41.	Shri Rana Chatterjee	Scientist 'D'	Central Ground Water Board
42.	Shri N. Ahmad	General Manager (GS)	Central Mine Planning & Design Institute Ltd (CMPDIL)
43.	Shri O.P. Chugh	Executive Director	Hindusthan Copper Ltd (HCL)
44.	Shri Ranjan Sahai	CCOM I/C	Indian Bureau of Mines
45.	Dr. A.K. Srivastava	CMG	Indian Bureau of Mines
46.	Dr. A.K. Lomas	CMD	Mineral Exploration Corporation Ltd
47.	Shri N. Sundaraj	R.M. NALCO, Delhi	National Aluminium Co. Ltd
48.	Dr. K.S. Rao	Dy. General Manager (G)	National Mineral Development Corporation Ltd
49.	Shri S. Maheshwari	AGM (CRMG)	Steel Authority of India Ltd (SAIL)
50.	Shri M. Basava Chary	CGM (Exploration)	Singarani Collieries Co .Ltd. (SCCL)
51.	Shri R.M. Bhardwaj	Scientist 'C'	Central Pollution Control Board (CPCB)
52.	Shri V.C. Gupta	Deputy Director	Central Water Commission (CWC)
53.	Shri Amitava Sengupta	Sr. Adviser	Directorate of Hydrocarbon
54.	Shri K.S. Misra	Adviser	Directorate of Hydrocarbon
55.	Shri J. Krishnamurthy	Prog. Co-ordinator (NRR), EOS	Indian Space Research Organization (ISRO)
56.	Shri Imran Sayeed	Chief (Geology)	National Hydroelectric Power Corp'n Ltd
57.	Dr. Manoj Asthana	Group General Manager	Oil & Natural Gas Commission (ONGC)
58.	Shri A Sahay	EIC TB & GM(NRD)	Tata Iron & Steel Co. Ltd (TISCO)

Sl. No.	Name	Designation	Organisation
59.	Shri R. K. Sharma	Secretary General	Federation of Indian Mineral Industries (FIMI)
60.	Dr. K.R. Gupta	Secretary	Geological Society of India
61.	Brig R.C. Padhi	Dy. Director General	Ministry of Defence, Govt of India
62.	Dr. S.K. Aggarwal		Ministry of Environment & Forest, Govt of India
63.	Shri C.D. Singh		Ministry of Environment & Forest, Govt of India
64.	Shri B.K. Singh		Ministry of Environment & Forest, Govt of India
65.	Smt. Parveen Dhanji	Director/SCF	Ministry of Non-Conventional Energy, Govt of India
66.	Shri M.L. Chotani	Addl Chief Planner	Ministry of Urban Development, Govt of India
67.	Dr. Sandeep Kr. Raut		Ministry of Urban Development, Govt of India
68.	Shri Yogesh Sharma	Sr. Manager (B.D.)	MECL
69.	Shri S.K. Lagoo	Manager (Geology)	MECL
70.	Shri S.B.S. Chauhan	FIMI Adviser	FIMI, New Delhi
71.	Shri R. K. Sharma	Adviser/Sct 'G'	Ministry of Earth Sciences, Govt of India
72.	Shri L.P. Sonkar	Adviser (Mineral)	Planning Commission, Govt of India
73.	Shri R.B. Tyagi	Dy. Adviser (Mineral)	Planning Commission, Govt of India
74.	Dr. B. K. Bansal	Advisor / Sct /G/	Ministry of Earth Sciences, Govt of India
75.	Shri M.L Raina	Director	CEA, HDRO Appraisal Divn
76.	Shri P.R. Mandal	Advisor (Planning)	Ministry of Coal
77.	Shri S. Suresh Kumar		National Disaster Management Authority
78.	Shri Anil Attavar	AGM	Engineers India Ltd, New Delhi
79.	Shri C.C. Babu	Sr. Manager	Engineers India Ltd, New Delhi
80.	Dr. A.K. Shukla	Director	BREC, IMD, New Delhi
81.	Dr. P.N. Razdan	Sr. Dy. Director General	Geological Survey of India
82.	Shri N.K.Dutta	Dy. Director General	Geological Survey of India
83.	Shri Abhinaba Roy	Dy. Director General	Geological Survey of India
84.	Shri Gautam Mukhopadhyay	Dy. Director General	Geological Survey of India
85.	Shri R. K. Singh	Dy. Director General	Geological Survey of India
86.	Shri P.K.Sinha	Dy. Director General	Geological Survey of India
87.	Shri U.K.Ray	Dy. Director General	Geological Survey of India
88.	Shri G. Dhar	Dy. Director General	Geological Survey of India
89.	Shri Deepak Srivastava	Dy. Director General	Geological Survey of India

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90.	Smt. Anuradha Banerjee	Dy. Director General	Geological Survey of India
91.	Shri V. K. Kalluraya	Dy. Director General	Geological Survey of India
92.	Shri A. Sundaramoorthy	Dy. Director General	Geological Survey of India
93.	Shri A. Mishra	Dy. Director General	Geological Survey of India
94.	Shri J. Singh	Dy. Director General	Geological Survey of India
95.	Shri A.K. Majumder	Dy. Director General	Geological Survey of India
96.	Shri A.K.Mathur	Director	Geological Survey of India
97.	Shri Anil Mehrotra	Director	Geological Survey of India
98.	Shri S. Neogi	Director	Geological Survey of India
99.	Shri J. N. Ray	Director	Geological Survey of India
100.	Shri S. C. Mehrotra	Director	Geological Survey of India
101.	Shri Pratip Gupta	Director	Geological Survey of India
102.	Shri Girish Malhotra	Director	Geological Survey of India
103.	Shri M. Sridhar	Director	Geological Survey of India
104.	Shri S. K. Mukhopadhyay	Director	Geological Survey of India
105.	Shri K.K.K. Nair	Director	Geological Survey of India
106.	Shri A. K. Mathur	Director	Geological Survey of India
107.	Shri R.N. Ghosh	Director	Geological Survey of India
108.	Shri M.S. Jairam	Director	Geological Survey of India
109.	Shri A.K. Bhandari	Director	Geological Survey of India
110.	Shri P. Naskar	Director	Geological Survey of India
111.	Shri S.K. Chakraborty	Director	Geological Survey of India
112.	Shri V.C. Srivastava	Director	Geological Survey of India
113.	Shri S.K. Biswas	Director	Geological Survey of India
114.	Shri S. Dasgupta	Director	Geological Survey of India
115.	Shri T.K. Chakravorty	Director	Geological Survey of India
116.	Shri J. Srinivasan	Director	Geological Survey of India
117.	Shri S. Sengupta	Director	Geological Survey of India
118.	Shri S. Bhattacharyya	Director	Geological Survey of India
119.	Shri N. Kutamba Rao	Director	Geological Survey of India
120.	Shri S. Sharma	Director	Geological Survey of India
121.	Shri Somnath Chattopadhyay	Geologist (Sr.)	Geological Survey of India
122.	Dr. T. Rajesham	Geologist (Sr.)	Geological Survey of India
123.	Shri N. Das	Geologist (Sr.)	Geological Survey of India
124.	Shri K.K. Gangopadhyay	Geologist (Sr.)	Geological Survey of India
125.	Shri Debasis Saha	Geologist (Sr.)	Geological Survey of India
126.	Shri A. Acharyya	Geologist (Sr.)	Geological Survey of India
127.	Shri T. Dutta Gupta	Geologist (Sr.)	Geological Survey of India
128.	Shri G. S. Jaggi	Geologist (Sr.)	Geological Survey of India
129.	Shri S. Guha	Geologist (Sr.)	Geological Survey of India
130.	Shri D.K. Mukhopadhyay	Geologist (Sr.)	Geological Survey of India
131.	Shri P. Sinha	Geologist (Sr.)	Geological Survey of India
132.	Dr. V.V. Sessa Sai	Geologist (Sr.)	Geological Survey of India
133.	Shri Asit Saha	Geologist (Sr.)	Geological Survey of India

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134.	Shri D. Ray	Geologist (Sr.)	Geological Survey of India
135.	Shri G. S. Jaggi	Geologist (Sr.)	Geological Survey of India
136.	Ms. S. Gupta	Geologist (Sr.)	Geological Survey of India
137.	Ms. Puspalata	Geologist (Sr.)	Geological Survey of India
138.	Shri A. K. Gupta	Geologist (Sr.)	Geological Survey of India
139.	Shri G. Malhotra	Geologist (Sr.)	Geological Survey of India
140.	Shri C. K. Sengupta	Geologist (Sr.)	Geological Survey of India
141.	Shri Rakesh Kumar	Geologist (Sr.)	Geological Survey of India
142.	Shri Joyesh Bagchi	Geologist (Sr.)	Geological Survey of India
143.	Shri Alok Kumar		Geological Survey of India
144.	Shri Hemant Kumar		Geological Survey of India
145.	Shri S.L. Nag		Geological Survey of India
146.	Shri S.R. Samadder		Geological Survey of India