

**MINUTES OF THE 64th MEETING OF THE CENTRAL GEOLOGICAL
PROGRAMMING BOARD**
State Convention Centre, Lok Seva Bhawan, Bhubaneswar, Odisha
(19th January 2025)

64.01.00	The 64 th meeting of the Central Geological Programming Board (CGPB) was held on 19 th January 2025 at State Convention Centre, Lok Seva Bhawan, Bhubaneswar, Odisha. The list of participants is given Annexure-I.
64.01.01	Shri V.L. Kantha Rao, Secretary, Mines, in presence of senior officials, inaugurated an exhibition showcasing various exhibits on diverse themes of geoscience, in which GSI, MECL, NALCO, DMG Odisha, NIRM, CSIR-IMMT, Kartikay Exploration & Mining Services Limited, Critical Mineral Trackers, Geovale Services, Steiger Geoscience & Engineering Private Limited and Tata Advance Systems Limited showcased their achievements. Eight teams who participated in the Hackathon of GSI also displayed their solutions.
INAUGURAL SESSION	
Welcome address by Shri Asit Saha, Director General, GSI	
64.02.00	Shri Asit Saha, Director General, GSI extended a hearty welcome to Shri V. L. Kantha Rao, IAS, Secretary, Mines; Shri Sanjay Lohiya, IAS, Additional Secretary, Mines; Dr. Joyesh Bagchi, ADG, PSS, GSI; delegates and participants of the Central Ministries/organizations, PSUs, State Departments, academic institutions, private entrepreneurs and media personnel to the 64 th meeting of the Central Geological Programming Board (CGPB), held annually to discuss future mineral exploration strategy, geoscience programs and inter-organizational coordination. He also conveyed that the annual field season programs (FSP) of GSI will be placed before the Board for discussion.
Presentation on achievements of GSI by Shri Asit Saha, Director General, GSI	
64.02.01	<p>Shri Asit Saha, Director General, GSI presented achievements of GSI during the last one year and elucidated the following:</p> <ul style="list-style-type: none"> • Thrust has been given on exploration of Critical and Strategic Minerals and 87 mineral blocks (G2, G3, and G4 reports) have been handed over, of which 25 got successfully auctioned, including 22 critical mineral blocks. For the first time, critical mineral blocks have been auctioned from North-East India.

	<ul style="list-style-type: none"> • 13 offshore blocks including 7 polymetallic nodule blocks were put up for auction marking a new era in harnessing critical marine resources under the ambit of Blue Economy. • About 11,000 exploration and baseline reports along with new geospatial layers have been integrated into the National Geoscience Data Repository (NGDR). • GSI has organized the first hackathon on 'Innovative Mineral Hunt Techniques' using AI/ML which was launched on 20th July 2024 by the Hon'ble Minister of Coal and Mines. The final results will be declared today and various awards will be distributed to the winners. Winners have used various Machine Learning algorithms to generate predictive maps. In order to align with the net zero target, GSI is participating in DPR appraisal of 30+ pumped storage hydel projects and also taken up projects on carbon sequestration studies, natural hydrogen, geothermal energy, alternative uses of fossil fuel, etc. either in collaboration with eminent institutions or through GSI's fundamental research units. • GSI has now started taking up Drone-based Magnetic and Topographic Surveys and is taking several measures for capacity building in the field of Magneto-tellurics (MT). • GSI would be launching pilot project on MT survey in the current year in potential areas for targeting concealed and deep-seated minerals. • GSI has planned to cover the entire nation through Aero-geophysical mapping. • GSI is in the process for setting up a state-of-the-art knowledge center for AI based mineral targeting. • GSI has established a state-of-the-art National Landslide Forecasting (NLFC) facility at GSI, Kolkata to develop and operationalize the regional Landslide Early Warning Systems (LEWS) in all the landslide prone States/ UTs in India. After its inauguration, operational forecast bulletins for Darjeeling and Kalimpong districts in West Bengal, and Nilgiris district in Tamil Nadu are being issued. Additionally, experimental bulletins are being issued for 13 districts across the country as part of a phased approach. • The state-of-the-art Geological Survey of India (GSI) Geoscience Museum was inaugurated by the Hon'ble Vice-President of India at Gwalior, Madhya Pradesh which is the first Geoscience Museum in the country. This Museum will serve as a Centre for education and inspiration for future generations.
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Address by Shri Sanjay Lohiya, Additional Secretary (Mines)	
64.02.02	<p>Shri Sanjay Lohiya, Additional Secretary (Mines) began his address by announcing that the holding of 64th CGPB meeting at Bhubaneswar in the year 2024-25 stands significant as Geological Survey of India shall start celebrating its 175 years of formation of GSI from March, 2025. He requested the officers of GSI for participating in the yearlong activities of the 175th foundation day of GSI.</p> <p>With the initiation of this event, the Additional Secretary (Mines) emphasized modernizing the geological research and activities in the country. He stated that CGPB should serve as a platform for stakeholders, whereby mining companies can generate opportunities to introduce the latest technologies and IT models in the field of geosciences. He mentioned about the recently launched National Landslide Forecasting Centre (NLFC) by GSI which has become India's first operational system for issuing landslide forecast bulletins. In this regard, he invited the support of stakeholders- Ministry of Earth Sciences, NDMA and respective State Governments for strengthening NLFC so as to provide more accuracy in prediction of landslides by the system. He informed that the Ministry of Mines is soon going to auction the offshore mineral blocks. He requested to expedite efforts in order to bring a large number of offshore and critical mineral blocks to successful auctions. In order to keep pace with the modern world today, he requested DG, GSI to compress the field season year including preparation of Geological Report to one year with the idea of speeding up the exploration activity in the country. He requested GSI to specifically consider the following two suggestions received from Industries. First, to provide larger size G2/G3 blocks including mineralized areas for carrying out the ancillary activities related to mining. Secondly, one is to have focused study on quantity of resources reported in the geological report so as to develop confidence among the bidders/investors. He also emphasized the importance of allocating larger areas for deep-seated minerals:-</p>
Announcement of the results of Hackathon 2024 titled “Innovative Mineral Hunt Techniques”	
64.02.03	<p>The following teams were awarded as the winners of GSI Hackathon 2024 titled “Innovative Mineral Hunt Techniques”:</p> <ul style="list-style-type: none"> • Team AMD was awarded with the first prize. The team was led by Shri Ajoy Kumar Padhi along with Shri Venkateswar Reddy C.

	<ul style="list-style-type: none"> • Team Terra Trek was awarded with the second prize. The team was led by Shri Bodhisattwa Saha. The team members were Shri Amardeep Singh, Shri Utsab Kundu and Ms. Sohini Halder. • Team sRCg IIT-ISM was awarded with the third prize. The team was led by Dr. Partha Pratim Mandal. The team members were Shri Litan Dutta, Shri Dinesh Munda, Shri Tanmay Singh and Prof. G S Rao. <p>The consolation prizes were awarded to the following five teams:</p> <ul style="list-style-type: none"> • Team Mineral Maverick, led by Dr. Anasuya Das. The team members were Shri Bhaktu Chandrashekar and Dr. Sandhya Jagannathan. • Team CDAC, led by Ms. Sayantani Bhattacharya. The team members were Shri Yaythish Kannaa G S, Ms. Prema S. and Shri Suresh Kumar D. • Team Rock Lens, led by Mr. Leonardo Junior. The team members were Mr. Meilani Sukandi and Affan Aji Wiwatama. • Team Earth Byte, led by Ms. Deepa- Kumari. The team members were Shri Ankit Kumar Saini, Shri Ansuman Bakshi, Shri Vanga Mounika, Dr. Ch Ravi Kumar and Shri Aju Mohanan. • Team Ntangle, led by Shri Sabyasachi Nag along with Shri Shrey.
Release of publications by dignitaries	
64.02.04	<p>Following publications were released on the occasion:</p> <ol style="list-style-type: none"> 1) Publication of Records of GSI Vol. 158, Part-9 (Annual Report of GSI for Field Season 2023-24). 2) Publication of GSI Misc. Publication 30, Pt. XX, “Geology and Mineral Resources of Andaman and Nicobar Islands” (2nd Edition). 3) Publication of GSI Misc. Publication No. 30: Part-VA “Geology and Mineral Resources of Jharkhand” (Revised Edition). 4) Publication of Bulletin Series-B: Seismic Hazard Assessment of selective towns of North East India. 5) Geology and Mineral Resource Map of North Eastern Region (on 1:2 Million Scale). 6) District Resource Maps of the following- <ul style="list-style-type: none"> • Odisha (Angul and Nabaranpur Districts- 2nd Edition) • Bihar (Madhubani District- 2nd Edition) • Jharkhand (East Singhbhum District- 2nd Edition) • West Bengal (Purulia District- 2nd Edition)

	<ul style="list-style-type: none"> • Andaman and Nicobar Islands (North and Middle Andaman- 1st Edition)
Address by Secretary, Mines & Chairman, CGPB	
64.02.05	<p>The Secretary, Mines appreciated the impressive participation in the CGPB having an equal mix of stakeholders from Central Govt. Agencies, State Govts., Industries, PSUs and private agencies. He raised awareness about the two significant budget announcements made by the Govt. of India related to the mining sector in the Union Budget-launch of National Critical Mineral Mission (NCMM) and auction of offshore blocks. NCMM aims to secure a long-term sustainable supply of critical minerals and bolster India's critical mineral value chains. This Mission encompasses all stages, from mineral exploration and mining to beneficiation, processing, and recovery from end-of-life products. The mission will intensify the exploration of critical minerals within the country. He apprised that 13 mineral blocks have been put on auction in offshore areas.</p> <p>He mentioned that National Landslide Forecasting Centre has been established at Kolkata. Agencies like GSI, NDMA are undertaking extensive work on landslides. He also apprised that GSI has recently signed a MoU with CNR-IRPI, Italy for collaboration on landslide forecasting and hazard mitigation. He mentioned that 48 critical mineral blocks have been recently put for e-auction, out of which 24 critical mineral blocks have been successfully auctioned in four rounds of auction. He raised awareness on the new exploration licence regime which will be launched shortly at around 50 places. He requested the hackathon participants and the young geo-scientists for working on such areas to derive new AI models in the field of mineral exploration.</p> <p>He further spoke on the launch of NGDR and requested all stakeholders for using the data and to come up with inferences so that the end-product can be used by the user agency. He also mentioned about the restructuring of GSI taken up during the last one year. He informed that a number of technical posts (IT) have been increased in GSI with the idea of handling geosciences data better.</p> <p>He suggested for replicating the idea of CGPB by holding regular smaller group meetings with focussed group of stakeholders so as to monitor and fasten up the implementation of the decisions taken during the meetings. He suggested for changing the term “Geological” to “Geosciences” in the name of the</p>

	current forum, i.e., Central Geological Programming Board (CGPB). Lastly, he called for working in collaboration and building synergy among the diverse group of stakeholders.
PLENARY SESSION-I	
64.03.01	Minutes of 63 rd CGPB meeting held on 22 nd January 2024 was placed by Dr. Joyesh Bagchi, ADG, PSS, GSI and was unanimously approved by the House.
Review of Follow-up Action on Minutes of 63rd CGPB Meeting by Dr. Joyesh Bagchi, ADG, PSS, GSI	
64.04.01	<p>Issue: (Suggestion: DGM, Assam)</p> <p>1. If the Geological Survey of India, SU: Assam can explore the surrounding area of Burahungdong, namely Therevelongso area with latitude 92°39'15" and longitude 25°27'23" of SOI toposheet No. 83 C/11, Dima-Hasao district, the State of Assam will be benefited for new Limestone area or any other valuable mineral.</p> <p>ADG, PSS apprised that GSI handed over G3 stage geological report on Limestone in Sikilangso area, Dima Hasao District, Assam, adjoining to the Bura Hungdong area, to the State Government in the 2nd State Mining Minister's Conference on 23.01.2024. The Preliminary exploration (G3 stage) report on limestone in Krungming area, Dima Hasao District of Assam, FS 2023-24 will be handed over in upcoming NMMC-2025 on 20.01.2025.</p> <p>Furthermore, GSI has proposed a new item entitled "Preliminary exploration for limestone in Thervelangso Block, Dima Hasao district, Assam" for carrying out in the upcoming FS 2025-26.</p> <p>2. DGM, Assam had done preliminary exploration work for Beryl abundance in pegmatite veins in gneissic group of rocks (by Dr. B.C. Barooah & J.D. Goswami in F.S. 1971-72) in the following areas:</p> <p style="padding-left: 40px;">A. Dwarka (26° 3' 0" N 90° 30' 40" E) and Kharmuja (26° 26' 11" N 90° 33' 45" E) in the Goalpara district and (Dr. B.C. Barooah and A.H. Choudhury in F.S. 1976-77) in pegmatite veins of Shillong Group of rocks.</p>

B. Rangali (26° 35' 0" N 93° 45' 0" E) in Karbi Anglong District and found crystalline and light green coloured Beryl upto 30 cm length and 20 cm diameter.

Therefore, we request GSI, SU: Assam to take up a G4 level exploration programme in the next Field Season for ensuring economic status of the beryl and associate deposits.

ADG, PSS apprised that reconnaissance traverses were taken up by the officers of GSI, SU: Assam in and around Dwarka area covering toposheet no 78J/12 in Goalpara district (26° 3' 0" N, 90° 30' 40" E). During the course of field work, neither any occurrence nor surface manifestation of beryl bearing pegmatite was found in the area. So, the proposal on Beryl Exploration in the said area is not feasible.

Reconnaissance traverses by the officers of GSI, SU: Assam were taken up in and around Rangali area, Karbi Anglong District. He mentioned that the area is covered by granite and older alluvium but beryl occurrences were not found in the area. So, the proposal on Beryl Exploration in the said area is not found to be feasible.

Secretary, Mines enquired about the status of auction in the state of Assam.

DGM, Assam replied that seven limestone blocks have been put for auction but due to the status quo put by the CEC committee of the Supreme Court, auction could not be held.

Secretary, Mines requested DGM, Assam to expedite the matter for obtaining NoC and holding auction in the state at the earliest. He further inquired about the status of auctioning of new limestone blocks.

DGM, Assam informed that request has been sent to the Autonomous Council to obtain necessary NoC for new limestone blocks. The auction for these blocks is scheduled to commence in February 2025 tentatively.

(Action: DGM, Assam)

	<p>3. DGM, Assam also would like to request the GSI, SU: Assam for taking up G4 level mineral exploration programme in Singhasan Pahar of the Barail Range in the Karbi Anglong district which has been seen as a store house of iron ore and other mineral deposits for many years.</p> <p>ADG, PSS apprised that reconnaissance survey (G4 stage) for REE and associated mineralisation in and around Samchampi-Samteran alkaline-carbonatite complex, Karbi Anglong District, Assam (near Singhasan Pahar of the Barail Range) has been taken up in FS 2024-25 and work is under execution.</p>
64.04.02	<p>Issue: (Suggestion: DMG, Punjab)</p> <p>In the SGPB meeting, it was discussed that the resource for Potash and Halite will be calculated and report will be handed over to the State Government Punjab. It is submitted that additional boreholes should be drilled for delineation of Potash, Halite in Evaporite basins in the State of Punjab, with the request that the drilling and deep exploration may be carried on fast-track basis. This will enhance the economic and mineral potential of the State of Punjab.</p> <p>ADG, PSS apprised that the final report pertaining to G4 stage mineral investigation project on potash in Shergarh- Dalmirkhera block, Fazilka district, Punjab, has been circulated and will be handed over in upcoming NMMC-2025 on 20.01.2025.</p> <p>Secretary, Mines raised concern if any other area is yet to be explored for potash in the State of Punjab, which has further potential for exploration.</p> <p>Secretary of Mines & Geology, Punjab, informed that out of the four blocks in Punjab, one report is scheduled to be handed over to the state during the upcoming NMMC-2025. However, he requested that the remaining three blocks also be considered for further exploration, as they may hold significant potential for mineral exploration.</p> <p>Secretary, Mines directed the ADG & HoD, GSI, NR to carry out exploration of potash in the remaining blocks of Punjab State.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p>
64.04.03	<p>Issue (Suggestion: DGM, Maharashtra)</p>

	<p>Proposed Field Programme for Field Season 2022-23, Directorate of Geology and Mining, Government of Maharashtra, Nagpur in Collaboration with Geological Survey of India:</p> <p>Preliminary exploration for locating Copper and associated mineralization in Motegaon-Aregaon area, Tah. Chimur, Dist. Chandrapur (T.S. No. 55 P/11) (G3 stage).</p> <p>ADG, PSS apprised that the G3 stage mineral exploration item on copper and associated minerals in Motegaon-Aregaon area, has been completed and will be handed over in the upcoming NMMC-2025 on 20.01.2025.</p>
64.04.04	<p>Issue: (Suggestion: DGM, Karnataka)</p> <p>To take up detailed mapping of Bauxite/Aluminous laterite deposits of Belgavi district, Karnataka during FSP 2023-24.</p> <p>ADG, PSS apprised that the report on “Reconnaissance Survey for Bauxite, REE & associated minerals in Bailur-Tirth Kunde area, Khanapur Taluk, Belagavi District, Karnataka (G4)” has been circulated. Based on the outcome of reconnaissance survey, a preliminary exploration (G3 stage) program has been proposed to be taken up during 2025-26.</p> <p>He further stated that one G4 stage investigation titled “Reconnaissance survey for bauxite and associated elements in Belvatti-Yellur area, Belagavi district, Karnataka” has been taken up during FS 2024-25 and it is under execution.</p> <p>Secretary, Mines emphasized on facilitating the exploration work in the state of Karnataka.</p> <p>DMG, Karnataka informed that a joint committee has been constituted under the chairmanship of ACF (Forest) in Karnataka, which has been helping in getting forest clearances faster and bringing more blocks to auction.</p>
64.04.05	<p>Issue: (Suggestion: DCI, Manipur)</p> <p>DCI, Manipur has requested GSI for taking up preliminary Exploration for chromite, Ni, Cu, and PGE in Hangkau village, Kamjong District, Manipur (G3). GSI is requested to take up G3 stage chromite exploration in the area.</p>

	<p>ADG, PSS apprised that exploration could not be taken up in Kamjong District, Manipur due to resistance and unrest still prevailing in the area. DCI, Manipur is in the process of obtaining necessary permission from the local authorities. Proposal can be made once the situation improves.</p> <p>He further informed that during current field season 2024-25, two (02) Critical Mineral Assessment Programme (CMAP) are being carried out in Kamjong district, Manipur.</p> <ol style="list-style-type: none"> 1. Critical Mineral Assessment Programme in and around Nampisha area, Naga Hills Ophiolite Belt, Kamjong district, Manipur. 2. Critical Mineral Assessment Programme in and around Hangkau Village, Naga Hills Ophiolite Belt, Kamjong district, Manipur. <p>Secretary, Mines directed ADG & HoD, GSI, NER to intensify efforts for enhancing the exploration activities in North-East so as to increase the number of reports which can be put on auction by the state. He congratulated DGM, Arunachal Pradesh for being the first state in North-East to do auction in major mineral block. Secretary, Mines suggested for conducting a workshop on 'Handholding of North Eastern States on auctioning of mineral blocks'.</p> <p>Shri Asit Saha, DG, GSI informed that a workshop is being planned by GSI to be conducted in North-East in April, 2025.</p> <p>Secretary, Mines directed GSI to invite M/o DoNER in the upcoming workshop.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p> <p>ADG & HoD, NER, GSI informed that eighteen blocks have been handed over to DMG, Meghalaya.</p> <p>Secretary, Mines requested DMG, Meghalaya for holding auction of major minerals in the state at the earliest as Meghalaya holds most of the area as a private land and hence no approval is required from the Government.</p> <p style="text-align: right;"><i>(Action: DMG, Meghalaya)</i></p>
64.04.06	<p>Issue: (Suggestion: DMG, Odisha)</p> <ol style="list-style-type: none"> 1. Directorate of Geology had undertaken an investigation for subgrade chromite and nickel ore stacked in the old abandoned stabilized dumps within the

Talangi chromite mines of M/s IDCOL in Sukinda Ultramafic Complex during F.S. 2016-17 which spread over an area of 0.6 Ha. During the investigation programme, 60 channel samples from seven channels, 110 trench / pits samples were collected and analyzed. It has been observed that out of 170 numbers of total samples about 24% of samples have been analyzed in which Cr₂O₃ value ranging from 10.23% to 20.94%. Out of the 110 pit samples, 30 samples indicated Ni values ranging from 0.52% to 0.86% and Co values ranging from 20 to 260 ppm. The height of the dumps varies from 5 to 11m and are partially stabilized. As mining of chromite ore in the Sukinda Chromite Ultramafic Complex dates back to early nineties and as practice less than 25% Cr₂O₃ ore were considered as mine rejects earlier and are now available in the dumps, so the stacked ores need to be assessed in view of revised threshold values. A good number of old stabilized dumps are available in the ML areas in Sukinda & Baula-Nuasahi Complex, which are believed to host appreciable quantities of Co, Ni & Cr₂O₃ ores.

With the above backdrop, it is suggested to carry out a collaborative assessment programme involving State Directorate of Geology and Geological Survey of India to assess the commodities in a scientific manner by geo-statistical method.

ADG, PSS apprised that a research project entitled “Assessment of Low grade Chromite and associated Nickel in the stabilized Mine dumps of Sukrangi Chromite Mines of Odisha Mining Corporation, Jajpur district, Odisha” was undertaken in collaboration with DMG, Odisha, and about 4.50 million tons of resource with average 0.86% Ni at 0.5 % Ni cut-off has been estimated in the mine dump.

He also mentioned that during the 63rd CGPB meeting, Secretary (Mines) suggested to cross-check the analytical results of the samples from agencies like IBM or any other CSIR research institute. In this regard, ADG, PSS informed that fifteen check samples were submitted to CSIR-IMMT, Bhubaneswar, and the results are in conformity with the earlier analysis submitted in the GSI report.

- 2. The mineral blocks explored by agencies may host more than one mineral where one mineral is the primary minerals while other mineral(s) may be**

	<p>recovered after necessary processing of ROM. In such cases, Priority and nomenclature should be given to major commodity during auction process.</p> <p>Ministry of Mines informed that the matter is being examined in consultation with IBM.</p>
64.04.07	<p>Issue: (Suggestion: GSI)</p> <p>1. Information regarding block explored by State DGMs/DMGs (prior to MMDR Amendment Act, 2021) which has neither been auctioned nor given for further stage of exploration.</p> <p>ADG, PSS apprised that initial analysis has been done for 2629 reports of seven States (Karnataka, UP, Odisha, Gujarat, Rajasthan, Chhattisgarh, UT Ladakh) out of which 1455 are of major minerals and rest 1048 reports are of minor minerals and other reports. Based on a rapid examination of 2629 reports, approximately 6% has the possibilities for further exploration at first glance. Along with this exercise, these 6% reports will again be reviewed by GSI to reconfirm the areas which require further exploration.</p> <p>The Secretary, Mines suggested for holding a separate review meeting with all the State DGMs/ DMGs. The objective is to make early decisions on these 6% reports, allowing them to be handed over to GSI or NPEAs for further exploration and preparation of the final geological report for auction.</p> <p style="text-align: right;">(Action: GSI)</p> <p>Secretary, Mines cited the example of DGM Chhattisgarh. The State DGM will be handing over three lapsed mining lease reports in the form of Geological Memorandum/Geological Report to the Ministry of Mines. These reports will then be taken to further stages of exploration for the purpose of auction.</p> <p>ADG, PSS apprised that DMG Odisha has identified 20 blocks which can be upgraded by other exploration agency.</p> <p>DMG, Odisha informed that these 20 reports mainly comprise commodities like bauxite and limestone. However, critical minerals like Nickel and Platinum Group of Elements (PGE) may also occur in association with bauxite.</p> <p>Secretary, Mines directed DMG, Odisha to thoroughly review these 20 reports so that further exploration activities can commence at the earliest.</p>

	<p style="text-align: right;"><i>(Action: DMG, Odisha)</i></p> <p>ADG, PSS apprised that 171 reports are being examined by DGM, Maharashtra pertaining to the State of Maharashtra out of which 20 baseline data information reports has been shared to GSI by DGM, Maharashtra to explore for further geological investigation. Out of these 20 reports, only one report has tentatively yielded two blocks (one on Copper-Gold and associated minerals, the other on Iron-Vanadium). DGM Maharashtra will carve out these blocks after ascertaining the forest cover/eco-sensitive zones etc. for further exploration in collaboration with GSI. He also informed that DGM, Maharashtra has not shared any exploration reports to GSI for uploading in NGDR portal and requested DGM, Maharashtra to share the reports at the earliest.</p> <p>DGM, Maharashtra informed that after examining 171 reports, 20 reports were provided to GSI. Out of these 20 reports, two blocks have been carved out by GSI which will be taken up for further exploration at the earliest. DGM, Maharashtra further informed that all reports have been scanned and will be uploaded to the NGDR portal shortly.</p> <p style="text-align: right;"><i>(Action: DGM, Maharashtra)</i></p> <p>Secretary, Mines directed DGM, Maharashtra, to examine the 171 reports expeditiously in association with GSI, aiming expanding exploration activities in Maharashtra.</p> <p style="text-align: right;"><i>(Action: DGM, Maharashtra)</i></p> <p>2. Report uploading status of Stakeholders in NGDR</p> <p>ADG, PSS informed the house that communication was sent to 54 Stakeholders for uploading of reports in NGDR, out of which, reply has been received from 25 stakeholders while, 20 stakeholders have furnished reports for uploading in NGDR. In this regard, he requested all stakeholders for sharing the reports for uploading in NGDR. He also informed that DGM Jharkhand has not been able to share the reports as the data dissemination policy of the State DGM is under preparation.</p> <p style="text-align: right;"><i>(Action: All stakeholders)</i></p> <p>ADG, PSS apprised the house that DMG, Karnataka has faced technical issues related to uploading maps of 1:50000 and 1:4000 scale, resource estimation methods (Polygon method is not available in NGDR) & Cut-off grades of various elements. These issues of DMG, Karnataka has been resolved with the help of NGDR team.</p>
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	<p>3. Secretary (Mines) directed GSITI for organising IT related workshop on NGDR for all the stakeholders.</p> <p>ADG, PSS apprised that GSI has successfully conducted a series of workshops for all State DGMs/DMGs, Government Organizations, and private Agencies engaged in geoscience activities. However, DGM Arunachal Pradesh and DGM Goa were not able to participate in the workshop-cum-training. Response from DGM Arunachal Pradesh and Goa is still awaited.</p> <p>4. Secretary (Mines) directed GSITI to explore possibility for making video clips of 2-3 minutes' duration having the glimpse of NGDR and for circulation of the same in different social media platforms.</p> <p>ADG, PSS informed that GSITI has created a 2-minute and 20-second video that introduces the National Geoscience Data Repository (NGDR). The video has been uploaded to social media and can be viewed at https://www.youtube.com/watch?v=pM5XjT0cXKY.</p> <p>5. Secretary (Mines) invited the comments of Industries on the feedback of NGDR.</p> <p>FIMI suggested to update the data on Obvious Geological Potential (OGP) areas in every two years.</p> <p>ADG, PSS elucidated on the fact that concept of OGP was adopted in the past in continuation of well-known mineral belts. However, with the introduction of new exploration technologies in the current scenario, the exploration activities are taken up on the basis of high-density datasets available within the country such as NGCM, NGPM, NAGMP data etc. These datasets extend well beyond the traditional OGP areas. In view of this, the concept of OGP in the current scenario needs to be transcended, since the exploration programs are being prepared using these modern datasets.</p> <p>FIMI requested that the NGDR be updated with the areas covered using techniques such as NAGMP, NGPM, and others. ADG, PSS informed that the data has already been placed in the NGDR.</p>
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	<p>Secretary (Mines) directed DDG & In-charge, NGDR for working towards resolving the issues faced by the industries pertaining to usage of NGDR portal.</p> <p><i>(Action: DDG, GSI & In-charge, NGDR)</i></p>
64.04.08	<p>Issue (Suggestion: DMG, Karnataka)</p> <p>Considering the time required for uploading all such data in NGDR portal, DMG Karnataka suggest to have GSI layers of ongoing FSP and next FSP proposal boundaries by GSI and ongoing exploration programs of DMG (including mineral concession boundaries), NEA's & NPEA's published either in NMET portal or state remote sensing centre website/portal. This will definitely help all the stakeholders to access the data at single point of source while carving out any new proposals.</p> <p>ADG, PSS apprised the house that status map of the field season projects of GSI pertaining to FS 2022-23, 2023-24 and 2024-25 are available in NGDR portal for consultation of the stakeholders, and also to avoid duplication and overlapping issues. Besides GSI, SCCL has uploaded the annual programme in NGDR portal. He further requested all the Stakeholders to upload their annual programme.</p> <p><i>(Action: All Stakeholders)</i></p>
64.04.09	<p>Issue: (Suggestion: CGM, Tamil Nadu)</p> <p>Declaration of the non-metallic industrial minerals like Calcite, Dolomite and Dunite as major mineral.</p> <p>ADG, PSS conveyed that Ministry of Mines has informed about the constitution of a committee under NITI Aayog to address mining related issues.</p> <p>Secretary, Mines mentioned that the above issue has been put up in public consultation paper for decision-making.</p> <p><i>(Action: Ministry of Mines)</i></p>
64.04.10	<p>Issue (Suggestion: HZL)</p> <p>The auction blocks under mining lease (ML) do have information of G2 level exploration, which indicates presence of mineral in ground with certain confidence. However, there is very limited / no data is available related to other 2</p>

	<p>axes as per UNFC. The work for ML should be taken up to pre-feasibility level, wherein mining plan can be submitted with IBM.</p> <p>ADG, PSS apprised that IBM has specified that it is not possible for exploration agencies to carry out a pre-feasibility or feasibility study as this depends upon a number of assumptions such as cut-off grade, mining factors, metallurgical factors, cost and revenue factors, market assessment and various other modifying factors. Most of these parameters of a prefeasibility study are techno-commercial decisions based on which a prospective miner evaluates a deposit. With this situation, it may not be practicable for any exploration agency to do a prefeasibility study to evaluate the mineability of a deposit as this is purely a commercial decision and each person participating in bidding of a deposit will have their own considerations based on which they may participate in the bidding process.</p> <p>HZL reiterated that as per UNFC, in cases of auction blocks falling under mining lease (ML), the data is also required for the other two axes, i.e., E and F axes in order to prepare a mining plan.</p> <p>Secretary, Mines mentioned that few pilot cases will be worked on by IBM, GSI involving HZL in this regard. If found suitable, it will be replicated so that people get imparted with necessary trainings for developing such a model with these assumptions.</p> <p style="text-align: right;"><i>(Action: GSI, IBM, HZL)</i></p>
64.04.11	<p>Issue: (Suggestion: DMG, Bihar)</p> <p>1. During the SGPB Meeting held on 28.07.2023, it was opined that for the development of the state and strengthening of the DMG, Bihar following steps must be taken up immediately:</p> <p>(i) As a follow up of the discussion with the Dy. Director General, State Unit: Bihar, GSI a Memorandum of Understanding (MoU) between DMG, Bihar and State Unit: Bihar, GSI, Patna to be arrived at, on the following aspects:</p> <p>a) Geologists of DMG to be associated with different items of GSI to get guidance from Geologists of GSI in understanding different aspects of mapping and mineral investigation.</p>

	<p>b) Utilisation of the facility of Chemical Laboratory of GSI for analysis of samples collected by geologists of the Department.</p> <p>c) To help geologists of the Department in the use of different software at GSI, Patna.</p> <p>d) Petrological study support to the officers of DMG, Bihar by Petrology Laboratory.</p> <p>ADG, PSS apprised that a draft MoU has already been submitted to DGM, Bihar. He further informed that DGM Bihar is in the process of developing exploration wing in the State and the draft MoU between DMG, Bihar and State Unit: Bihar, GSI, Patna will soon be taken into consideration as soon as the exploration wing gets operative.</p> <p>2. Items on Geochemical Mapping/ Environmental Geology/ Public Good Geoscience may also be taken up which will help in identification of areas of contamination of groundwater, surface water, soil etc. due to presence of deleterious elements.</p> <p>a. Geochemical mapping of the area falling between hard rock terrain of south Bihar and River Ganges: Total 8 nos. of toposheets (63O/12, 63O/16, 72C/12, 72C/16, 72G/12, 72G/16, 72K/16, 72O/04) which have not been taken up earlier may be taken up as several outcrops of hard rock are exposed in these toposheets. Geochemical mapping will help in identification of geochemical anomalies resulting in formulation of items on Mineral Investigation or Environmental Geology.</p> <p>ADG, PSS apprised that Geochemical Mapping under NGCM in four toposheets viz. 63O/12, 63O/16, 72G/12 & 72G/16 was already completed. However, the remaining four toposheets viz. 72C/12, 72C/16, 72K/16 & 72O/04 falling in parts of Indo-Gangetic Alluvium has been proposed to be taken up in FS 2025-26.</p> <p>b. Replenishment study of rivers originating from southern hilly terrain of Bihar except Sone, Phalgu, Kiul and Chanan for assessment of sand replenishment and identification of inland placer pockets.</p>
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	<p>ADG, PSS informed that GSI is in discussion with DGM, Bihar to understand the replenishment issue.</p> <p>c. Revisiting the potential of thermal springs in Bihar from the perspective of thermal energy.</p> <p>ADG, PSS apprised that Geothermal sites were identified in the Rajgir and Munger districts. Notably, the geothermal site in Bhimband (Munger) shows potential for geothermal energy, with a surface temperature of approximately 65°C.</p> <p>Further, in response to the suggestion given by Secretary, Mines during 63rd CGPB, regarding auction of mineral blocks in Bihar, ADG, PSS informed that three blocks of critical and strategic minerals in the state of Bihar, namely two blocks of glauconite mineral in Rohtas district and nickel, chromium and PGE block in Gaya district have been auctioned by the Government of India for composite license, while one Bhora-Khatra limestone block in Rohtas district have been auctioned by the State. Secretary, Mines congratulated the State DGM, Bihar, on the successful completion of one limestone block auction. He directed DGM, Bihar to resolve the aforementioned agenda points/issues and other likewise related issues in future through holding internal meetings at State Level in consultation with other agencies.</p> <p style="text-align: right;"><i>(Action: DGM, Bihar)</i></p>
64.04.12	<p>Issue (Suggestion: CWC)</p> <p>CWC is involved in the survey & investigation and DPR preparation works of water resources projects for which Geo-Technical investigations are being done in consultation to concerned GSI Office. Currently, process for taking up the work for survey & investigation and DPR preparation for two water resources projects namely Pachnad Barrage Project, Uttar Pradesh and Subarnarekha-Mahanadi interlinking project is underway and MoU for the aforesaid projects will be signed very soon. The work for survey & investigation and DPR preparation of above-mentioned projects is likely to be started in January-2022. Therefore, it is requested that work of Geotechnical investigations for above mentioned projects may be included in agenda items of 61st CGPB meeting. Exact quantum of work shall be intimated once MoU is finalized.</p>

	<p>ADG, PSS apprised that the work of geotechnical investigations has been completed for Pachnad Barrage Project, Uttar Pradesh.</p> <p>Regarding Subarnarekha-Mahanadi Interlinking Project, ADG, PSS apprised that CWC is yet to submit contour plan and profile of the entire alignment.</p> <p>CWC informed that the issue of submitting contour plan and profile of the entire alignment of the respective project would be intimated to Chairman, CWC.</p> <p>Secretary, Mines directed to expedite the work pending at CWC for Subarnarekha-Mahanadi Interlinking Project.</p> <p style="text-align: right;"><i>(Action: CWC)</i></p>
New Agenda Items received from stakeholders were placed before the house for discussion by Dr. Joyesh Bagchi, ADG, PSS, GSI	
64.05.01	<p>Issue (Suggestion: Ministry of Mines)</p> <p>To take up exploration work within 20 km of international border areas.</p> <p>In the review meeting on the ATR of 63rd CGPB meeting held on 06.05.2024, Secretary, Mines advised to take up significant number of exploration projects by all exploration agencies within the 20 km buffer zone.</p> <p>ADG, PSS apprised the house that GSI has taken up 6 nos. of mineral exploration projects including 2 nos. focused on strategic and critical minerals within 20 km of the border areas in FS 2024-25. In the forthcoming FS 2025-26, GSI plans to undertake eleven mineral exploration projects, including four on strategic and critical minerals within 20 km of the borders.</p> <p>Secretary, Mines informed that Ministry of Defence has now allowed all types of mineral exploration within the 20 km of international borders. He requested the State DGMs/DMGs to take initiatives for enhancing the exploration activities in the border areas.</p> <p style="text-align: right;"><i>(Action: All State DGM/DMGs)</i></p>
64.05.02	<p>Issue (Suggestion: CGPB Committee-I & III)</p>

	<p>Revision of CGPB committee:</p> <ol style="list-style-type: none"> 1. For strategic and critical commodities, separate committee can be introduced. 2. There are some mineral commodities such as graphite which is included in CGPB Committee-IV (industrial and Fertilizer minerals) now considered as critical mineral. It is crucial to revisit and update the classification of mineral commodities across the various CGPB committees. The addition of critical minerals in the CGPB sub-committee III, may be considered. <p>Secretary, Mines suggested to revamp the framework of main CGPB and its Committees which shall encompass larger group of focussed stakeholders for discussing specific agenda through holding frequent meetings. He further directed for submitting the revamping proposal of CGPB within next two months.</p> <p style="text-align: right;"><i>(Action: CGPB Secretariat)</i></p>
64.05.03	<p>Issue (Suggestion: NRSC, ISRO)</p> <ol style="list-style-type: none"> 1. Extension of collaborative study on Monitoring and Assessment of Glaciers using Remote Sensing and Field-based Observations (NRSC/ISRO & GSI). <p>Ongoing collaborative project between NRSC, Hyderabad & GSI-NR on “Non-climatic glacier parameters extraction using remote sensing techniques for Hamtah glacier, Himachal Pradesh” is ending in February, 2025. Considering the successful validation of field-based and satellite-derived glacier parameters (snout dynamics, glacier velocity, etc.), such study can be extended to other inaccessible glaciers. Further, integrated EO and field-based studies on assessment of GLOF susceptibility, exposure, hazard & vulnerability can be also taken up in selected areas.</p> <p>ADG, PSS apprised that GSI welcomes NRSC/ISRO’s proposal for collaborative study for other inaccessible glaciers. Additionally, GSI has proposed five GLOF projects for the year 2025-26.</p> <p>Secretary, Mines informed that the work on glacial lakes is being done under the guidance of Ministry of Home Affairs and a good coordination exists between Ministry of Mines and Ministry of Home Affairs in this regard.</p>

	<p>2. Collaborative study on identification of potential areas for REE and Critical Minerals using Remote Sensing and Reflectance Spectroscopy (RRSCs/NRSC/ISRO & GSI).</p> <p>ADG, PSS apprised that GSI has two ongoing projects on mineral exploration using remote sensing techniques in collaboration with Space Application Centre, Ahmedabad.</p> <p>Secretary, Mines directed GSI to study the satellites developed by Indian/foreign companies in the space sector to know as to how their services can be utilized in the field of geosciences.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p>
64.05.04	<p>Issue (Suggestion: GSI)</p> <p>1. Collaboration with NRSC/ISRO for Hydrogen Exploration: Identification of Sub-Circular Depressions (SCDs)/Fairy Circles.</p> <p>ADG, PSS apprised that GSI has proposed a collaboration project with NRSC for hydrogen exploration for identification of fairy circles and NRSC, ISRO has agreed to the proposal.</p> <p>2. Request to ISRO for jointly launching a national project on monitoring of active landslides and potentially failing slopes in the Indian mountains using very high-resolution optical earth observation (EO) data, and Synthetic Aperture Radar (SAR) data for InSAR/ DInSAR based modelling to delineate subtle surface movement.</p> <p>ADG, PSS informed that GSI has requested ISRO's assistance for landslide forecasting using INSAR data analysis for real time monitoring of slope movement. On 19th December, 2024, a meeting was held with Director, ISRO, where NRSC, ISRO has agreed to submit a proposal. Joint study will be carried out in eight priority districts in Phase-1 of the study.</p> <p>Secretary, Mines directed Head, National Mission-IV, GSI to strengthen the National Landslide Forecasting Centre (NLFC) with the help of satellite data, to upgrade the</p>

	<p>system at regular intervals and to expand the prediction beyond the three existing districts. He also directed to prepare a future perspective plan for strengthening NLFC.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p> <p>NRSC, ISRO apprised that they have shared the satellite imageries of landslide data of the catchment areas with GSI and further expressed willingness to be a partner to GSI's collaboration with other countries on learning about the latest technologies on forecasting landslides.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p>
64.05.05	<p>Issue (Suggestion: CGWB)</p> <p>1. Addendum to the Existing MoU: CGWB is proposing an addendum to the existing MoU between CGWB and GSI for studies on the contamination of surface and ground water by Uranium, Lead, Arsenic, Fluoride, and Mercury. Currently this MoU has scope to take up studies in the states of Punjab, Haryana, Andhra Pradesh, Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, and Assam. The addendum will broaden the scope, allowing GSI and CGWB to extend these studies to all states and Union Territories of India (based on mutual interests), rather than being restricted to specific states.</p> <p>ADG, PSS apprised that GSI welcomes the proposal of CGWB and would like to extend the scope of such studies in the existing MoU to all the States/ UTs of India for further five years.</p> <p>2. Setting up a Joint Centre for geochemical and hydrochemical mapping: A joint centre can be set up in GSI drawing officers from GSI, CGWB and other allied departments. The ToR of the Centre may include the following:</p> <p style="padding-left: 40px;">(i) Preparing Annual Action Plan under the above MoU, (ii) Monitoring Activities under the MoU, (iii) Integrating all similar studies and (iv) Collating geochemical and hydrochemical data and updating them in NGDR portal.</p>

	<p>ADG, PSS, apprised that GSI proposes to set-up a Joint Working Group instead of Joint Working Centre for preparation and monitoring of the collaborative projects.</p> <p style="text-align: right;">(Action: CGWB)</p> <p>CGWB requested for extending the MoU on pan-India basis which is currently applicable only for some states regarding taking up hydro-geochemical and environmental studies. He also stated that a request was made in a meeting held between Ministry of Mines and Ministry of Water Resources regarding signing of MoU for the purpose of co-relating the studies and frequently monitoring the high frequency ground water data with early warning system in order to monitor the seismic activities. He further informed that the signing of MoU is in process in this regard. Meanwhile, he informed that CGWB in consultation with GSI has installed two piezometers and 38 observation wells in North-East.</p> <p>Secretary, Mines directed Director (Technical), Ministry of Mines to coordinate with the Ministry of Water Resources for fast-tracking the progress of signing of MoU.</p> <p style="text-align: right;">(Action: Ministry of Mines)</p> <p>ADG, PSS requested CGWB for providing the aquifer data for integrating to NGDR.</p> <p>Secretary, Mines advised for shortlisting the data to be kept in public domain so that it can be integrated with NGDR portal.</p> <p style="text-align: right;">(Action: CGWB)</p> <p>CGWB apprised that due to the bar being placed by Ministry of Defence, permission is required to be obtained from Ministry of Defence for sharing the data by CGWB.</p> <p>Additional Secretary, Mines referred to the latest geo-spatial policy released by DST, wherein, no such stringent bar exists and data can be shared pro-actively.</p> <p style="text-align: right;">(Action: CGWB)</p>
64.05.06	<p>Issue (Suggestion: GSI)</p> <p>Geological Logging of AMD boreholes by GSI (excluding the cores having atomic minerals).</p>

	<p>In IOCG mineral system, Copper & Gold is often associated along with Uranium. AMD, while carrying out exploration for atomic minerals, basemetal sulphides along with Gold is often observed. However, these additional commodities are not completely evaluated. Therefore, Geologists of GSI may be allowed to log the drill cores drilled by AMD excluding the cores having atomic minerals.</p> <p>Presently, AMD carries out Geophysical logging of GSI's boreholes for indication of any atomic minerals.</p> <p>ADG, PSS, GSI apprised that as per the synergy document signed by GSI and AMD dated 19.09.2016, GSI and AMD shall allow the other party to log or study the bore holes of their interest. However, ADG, PSS voiced his concern about facing difficulties in implementing the policy at operational levels of AMD. He further requested AMD for issuing a circular for implementation of the policy at operational levels.</p> <p>AMD recalled the aforesaid synergy document signed by GSI and AMD dated 19.09.2016 and expressed consent for allowing GSI to log the drill cores which have been drilled by AMD without any further hindrances in future.</p> <p style="text-align: right;"><i>(Action: AMD)</i></p>
64.05.07	<p>Issue: (Suggestion: GSI)</p> <p>Threshold/ Cut-off value of Critical minerals for exploration.</p> <p>The Ministry of Mines has identified 30 mineral commodities as critical. However, except for rock phosphate, whose threshold values were standardized by the Indian Bureau of Mines (IBM) in April 2018, no uniform cut-off grades or threshold values have been established for most of these minerals. Further, the Atomic Mineral Concession Rules (AMCR), 2016, provides limited information on threshold values for select minerals such as Niobium (Nb+Ta), Tantalum (Ta+Nb), Lithium and Beryllium and other atomic minerals. Therefore, standardization of cut-off grade/threshold values for all critical minerals identified for India is required for exploration purpose.</p> <p>ADG, PSS, GSI apprised that as per IBM, fixing of threshold value for these minerals has no significance because the cutoff itself is very low and production is also either nil</p>

	<p>or very low. In view of this, it is desired that while carrying out mining operations for critical and strategic minerals, the entire mineralized portion should be mined out and the lower grade ore which is not suitable for feeding to the beneficiation plant should be stacked separately for use in future.</p> <p>However, in order to fix threshold value of critical minerals for exploration purpose, IBM suggested that a committee may be constituted to deliberate on the issues related to fixing of threshold value of critical minerals for exploration purpose.</p> <p style="text-align: right;"><i>(Action: IBM)</i></p>
64.05.08	<p>Issue (Suggestion: Tata Steel)</p> <p>The Forest (Conservation) Amendment Act, 2023 was published in gazette notification (CG-DL-E-05082023-247866) on 4th August 2024, wherein, it was mentioned under section 5 subsection (2) that ‘The Central Government may, by order, specify the terms and conditions subject to which any survey, such as, reconnaissance, prospecting, investigation or exploration including seismic survey, shall not be treated as non-forest purpose.’</p> <p>Subsequently, on 29th November 2023, set of rules has been published in the Government Gazette (CG-DL-E-30112023-250313) with guidelines in connection with the FC amendment act 2023. As per the section 2 of the Guideline, it is clearly mentioned that Prospecting in forest land can be done as long as the activity involves felling up to 100 trees and drilling of 25 nos. of boreholes of 4” diameter /10 sq. km. area. In case of more than 25 boreholes per 10 sq km, approval from Central Government is required (Form-C). A consolidated Handbook incorporating FC act and new amendments and Guidelines also released on 29-Dec-2023.</p> <p>It is to be noted that a large part in many of the deposits especially Iron and manganese Leases in Odisha and Jharkhand, is covered under various types of Forests (RF, Sabik, DLC, Khesra). The above guidelines are inadequate to completely fulfil the exploration obligations mentioned under various acts and rules (e.g. rule 12 (4) of MCDR-2017, Mineral Auction Rule, 2015, rule no. 22, Minerals (Evidence of Mineral Contents), 2015 as amended on 14.12.2021) as the above guideline allows drilling of only 25 nos. of boreholes per 10 sq. km. areas,</p>

	<p>and for higher exploration borehole density, permissions are still required from Central Govt under Adhiniyam (forest clearance permission required for prospecting of minerals in Form-C). Therefore, it is requested that CGPB take up the matter with MoEFCC to help the mining companies and exploration agencies for taking these exploration activities like trenching/drilling/geophysical surveys as a non-forest activity with simplified permission or no-objection from local DFO level.</p> <p>Issue discussed under Para 64.09.01.</p>
64.05.09	<p>Issue (Suggestion: DMG, Jharkhand)</p> <p>1. Ministry of Mines, Govt. of India may consider the following proposals:</p> <p>(i) Declaration of Mica as Major Mineral. Secretary, Mines informed that the proposal of declaring mica as a major mineral is under active consideration by Ministry of Mines.</p> <p>(ii) Fixation of threshold value of Lithium, REEs and other Critical and Strategic Minerals. Issue discussed under Para 64.05.07.</p> <p>2. The Dolomite mineral can be considered to be declared as major mineral. Secretary, Mines informed that the issue of dolomite has been kept in the public consultation paper for receiving public feedbacks on the proposal.</p> <p>3. Declaration of Average Sale Price (ASP) for Emerald. ADG, PSS, GSI informed that Ministry of Mines vide letter dated 17.03.2022 has inter-alia specified the formula for calculation of ASP of mineral Emerald. He requested DMG, Jharkhand for consulting the said circular.</p>
64.05.10	<p>Issue: (Suggestion: MECL)</p> <p>1. Review Part-IVA (Geological Report format) as outlined in the MEMC Amendment Act 2021 to eliminate repetition of sub chapters and ensure a seamless flow of chapters across the Geological Report.</p>

	<p>ADG, PSS, GSI requested MECL for specifying the modifications required in Part IV-A so that the proposal can be examined in the Ministry.</p> <p style="text-align: right;"><i>(Action: MECL)</i></p> <p>2. While finalizing exploration blocks, additional non-mineralized areas should be considered for inclusion in the block for auction purposes.</p> <p>Secretary, Mines requested GSI and MECL to arrange an internal meeting to discuss and work out for solutions on the aforesaid issue.</p> <p style="text-align: right;"><i>(Action: GSI and MECL)</i></p> <p>3. Establishing a digital core library by digitizing drilled cores generated during exploration using a core scanner is crucial. This will help reduce the costs of maintaining a physical core repository, and the resulting data can be integrated into the NGDR portal.</p> <p>ADG, PSS, GSI informed that 7000 legacy boreholes data have already been uploaded in NGDR portal. Further, he stated that the procurement of one (01) Digital Core Logger for the establishment of a Digital Core Library has also been initiated by GSI.</p> <p>4. High resolution ground geophysical survey data acquired during exploration by different exploration agencies may be integrated into NGDR portal.</p> <p>ADG, PSS, GSI apprised that the ground geophysical data under the NGPM programme is being uploaded on the NGDR portal. In addition, he also mentioned that the available interpreted geophysical data/ maps that are part of the reports are also being digitized in GIS format and uploaded.</p> <p>5. The restructuring of the CGPB sub-committees may be aligned with the MMDR Act of 1957 (as amended through 2023). For example, fertilizer minerals fall under the scope of both CGPB-IV and CGPB-III, the latter also considering them as critical minerals. Similarly, graphite is classified under CGPB-I as a nonferrous mineral, while also being included in CGPB-III as a critical mineral.</p> <p>Issue discussed under Para 64.05.02.</p>
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	<p>MECL requested data incorporated in PM-GATISHAKTI portal such as the forest layers and ecosensitive zones to be integrated with NGDR.</p> <p>Director (Technical), Mines, apprised that approval has been obtained for integrating the data on additional layers like land record layers, forest layers and ecosensitive zones from PM-GATISHAKTI to NGDR portal.</p> <p>Secretary, Mines directed that GSI may arrange a workshop for all stakeholders involved in exploration activities so as to generate awareness among the stakeholders on the layers which have been newly integrated to NGDR portal. Furthermore, he stated that a demonstration session may also be arranged for stakeholders on handling of these layers.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p>
64.05.11	<p>Issue (Suggestion: DMG, Odisha)</p> <ol style="list-style-type: none"> 1. Geological Reports (GRs) be submitted in an auction format to facilitate prompt evaluation instead of approved GRs as being submitted in CGPB. The date of handing over of GR in Part IV A may be accounted as date of submission to State Govt. <p>ADG, PSS further apprised that the matter is being examined by Ministry of Mines in consultation with IBM.</p> <ol style="list-style-type: none"> 2. Revision of the Obvious Geological Potential (OGP) areas in the state, taking into account the GRs of state DGM, OMC & ML holders. <p>Issue discussed under Para 64.04.07.</p> <ol style="list-style-type: none"> 3. The mineral blocks under exploration which are contiguous blocks with common boundaries should be amalgamated for larger blocks to facilitate deeper mining especially copper blocks of Mayurbhanj districts, graphite blocks of Nayagarh district, manganese & graphite blocks of Balangir district. In such cases, a single GR for the larger block may be handed over to State Govt. instead of submitting individual GRs.

	<p>ADG, PSS apprised that the proposals for amalgamation of exploration blocks are being taken up regularly during JWG meetings held in the State of Odisha. He stated that few blocks are being under consideration for amalgamation. However, he informed that such work is taken on case-to-case basis.</p> <p>DMG, Odisha requested for keeping block sizes larger in cases of copper blocks. Moreover, he suggested the copper mineralisation in the entire Kesharpur area to be amalgamated as a single block.</p> <p>Secretary, Mines requested DMG, Odisha for holding auctions in the state of Odisha at the earliest.</p> <p style="text-align: right;"><i>(Action: DMG, Odisha)</i></p> <p>4. Recommendation of a threshold percentage of the critical & strategic minerals when found in association with major minerals, so that State Govt. can auction the major mineral block keeping in view the Amendments of MMDR Act, 1957.</p> <p>Issue discussed under Para 64.05.07.</p> <p>DMG, Odisha suggested for fixing a capping percentage of critical & strategic minerals when found in association with major minerals.</p> <p>Secretary, Mines advised DMG, Odisha for submitting such specific issues to Ministry of Mines.</p> <p>DMG, Odisha apprised about the occurrence of lignite in association with an iron block. In this regard, it was stated that a letter has been written to the Central Government seeking clarification on whether to classify this block as an energy mineral block or an iron ore block.</p> <p>Additional Secretary, Mines requested DMG, Odisha to share the copy of the letter with Ministry of Mines.</p> <p style="text-align: right;"><i>(Action: DMG, Odisha)</i></p>
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- 5. The Gazette Notification by IBM for revised Threshold values of iron ore does not specify the ore types or any litho types for 'Siliceous ore' and threshold values for SiO₂ percentage limit to be considered as siliceous ore. It is suggested for a clarity in the definition of 'Siliceous ore'.**

ADG, PSS apprised that as per IBM, the threshold value of iron ore was revised in 2018 vide notification No. C-284/3/CMG/2017 dated 25th April, 2018. In the notification, the threshold value of hematitic siliceous ore has been given as 35% Fe (Min.). The hematitic siliceous ore has also been defined in the notification as “hematitic siliceous ore” means silica in the ore is contributed predominantly due to presence of quartz/chert in the gangue and Fe in the ore is contributed predominantly by presence of hematite and subordinate to minor amounts of martitised magnetite/maghemite”.

- 6. IBM should share break up of mineral resource and reserve figures commodity wise and deposit wise for each district for asset accounting performed by Accountant General.**

ADG, PSS apprised that upon request from DGM, Odisha; IBM has provided the data on mineral resource and reserve figures commodity wise and deposit wise for each district for the state of Odisha. Further, the data of mineral resource and reserve figures commodity wise and deposit wise for each district is available on IBM website.

DMG, Odisha expressed concerns about the challenges faced in resource accounting due to non-availability of mining lease and auction block data on the IBM website.

IBM clarified that the aforementioned data has been provided to DMG, Odisha vide letter no. 213-11/1/2023-ME-IBMHQ dated 12.01.2024 through an email. He also referred Indian Mineral Years Book, which has been uploaded on the website of IBM, comprising the data on mineral resources. He assured all kind of support to DMG, Odisha in future.

	<p>Secretary, Mines suggested that the office of the Regional Controller of Mines (RCOM), Odisha, to coordinate regularly with the DMG, Odisha. He directed IBM to handhold the State DMG, Odisha in resolving exploration related issues.</p> <p style="text-align: right;"><i>(Action: IBM)</i></p> <p>7. The critical and strategic minerals may be brought under one CGPB sub-committee.</p> <p>Issue discussed under Para 64.05.02.</p>
64.05.12	<p>Issue (Suggestion: DGM, Chhattisgarh)</p> <p>1. DGM Chhattisgarh has handed over all the legacy data and other exploration reports (360 Geological Reports) available to BISAG for necessary upload into the NGDR portal. BISAG representative had collected all the data in soft copy by scanning all the reports which are yet to be uploaded into the portal.</p> <p>ADG, PSS, GSI apprised that after QA/QC, a total 397 reports of DGM, Chhattisgarh have been selected and sent to BISAG-N for digitization and uploading in NGDR out of which 25 nos. of reports have been uploaded in NGDR portal.</p> <p>Secretary, Mines suggested to increase the number of empanelled agencies for expediting the scanning and digitization of the reports of DGM, Chhattisgarh for further uploading in NGDR.</p> <p style="text-align: right;"><i>(Action: DDG & In-charge, NGDR and BISAG-N, Gandhinagar)</i></p> <p>2. During the 24th SGPB meeting held on 07.08.2024, DGM, Chhattisgarh had suggested GSI State Unit Chhattisgarh to take up Exploration activities in South Chhattisgarh. Considering the Geological potential of the area, GSI should focus more on exploration of important commodities such as Critical and Strategic minerals.</p> <p>ADG, PSS, GSI apprised that GSI has recently submitted three (03) Exploration Blocks in and around Kondagaon and Bastar district South Chhattisgarh. He further mentioned that during FS 2023-24 and 2024-25, GSI has taken up a total 49 nos. mineral</p>

	<p>exploration projects in Chhattisgarh State. This includes 33 projects focusing on strategic and critical minerals. In addition, GSI has proposed to undertake 27 nos. of mineral exploration projects during FS 2025-26. This includes 19 projects focusing on strategic and critical minerals.</p> <p>He also mentioned that FSPs in South Chhattisgarh poses a challenge due to security concerns.</p> <p>Secretary, Mines opined for involving NPEAs in the exploration activities at South Chhattisgarh.</p> <p style="text-align: right;"><i>(Action: DGM, Chhattisgarh)</i></p> <p>3. DGM Chhattisgarh has handed over 08 GM blocks which were annulled due to insufficient response from bidders. Furthermore, out of all GMs handed over to DGM Chhattisgarh by GSI, 08 GMs were found not viable/ feasible for auction. But as per the instruction of Additional Secretary, Ministry of Mines, these blocks are still being processed for auction. In connection to above, GSI should provide GM/ GR block considering the economic viability and make block lucrative from Bidder's perspective for successful auction.</p> <p>ADG, PSS, GSI apprised that a total of 08 nos. of blocks (GMs) handed over by GSI to the state government for the CL auction have been annulled due to insufficient response from the potential bidders. Out of the following eight (08) GMs returned by DGM Chhattisgarh on 26.11.2024, the two (02) GMs are being taken up by GSI for further upgradation.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p> <p>Secretary, Mines suggested DGM, Chhattisgarh for holding a workshop in the state, whereby, all NPEAs may be invited to the workshop for taking up exploration activities in South Chhattisgarh and getting engaged in discussions with local senior officers of the state with the idea of improving the ground condition and encouraging NPEAs to carry out exploration in South Chhattisgarh.</p> <p style="text-align: right;"><i>(Action: DGM, Chhattisgarh)</i></p>
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	<p>4. NEA's and NPEA's involved in exploration activities in the state should share all the relevant data with DGM Chhattisgarh including the MPR and Final Geological Report.</p> <p>In light of the above suggestion, it would be preferable that the NEA's and NPEA's may share their exploration reports submitted to NMET to the respective state government also.</p> <p>ADG, PSS, GSI apprised that it has been informed from NMET that all the exploration agencies are uploading the completed Geological Reports in the NGDR Portal, which is freely accessible.</p>
64.05.13	<p>Issue: (Suggestion: DGM, Ladakh)</p> <p>Guidance in construction / Establishment of Geological Museum at Lamayuru Khaltsi, Leh.</p> <p>ADG, PSS, GSI apprised that GSI has proposed to make a joint visit to Gwalior Museum, but due to delay in receiving the nominations from DGM, Ladakh, the joint visit could not be planned. After completion of the joint visit to Gwalior Museum, the preparation of DPR may be started by DGM, Ladakh.</p> <p>Secretary, Mines sought information from DGM, Ladakh on the framing of minor mineral rules.</p> <p>DGM, Ladakh apprised that 63 minor mineral blocks have been prepared by DGM, Ladakh for putting these blocks on e-auction, out of which 43 blocks have been cleared. As the land powers vested with the Ladakh Autonomous Hill Development Council, Leh & Kargil, with repeated requests made to them, NoC has been obtained for 25 blocks in the first instance, out of which 13 blocks are from Leh and 12 blocks are from Kargil. DGM, Ladakh will soon conduct an auction for these 25 blocks.</p> <p style="text-align: right;"><i>(Action: DGM, Ladakh)</i></p> <p>2. To associate Geologists of DGM UT Ladakh in Geotechnical studies like landslide zonation mapping etc.</p>

	<p>ADG, PSS apprised that GSI will associate Geologist from UT: Ladakh as and when geotechnical studies are taken up in UT: Ladakh.</p> <p>3. To associate Geology & Mining Department UT Ladakh in Geo-tourism activities in Ladakh region.</p> <p>ADG, PSS informed that GSI is ready to extend all necessary technical support to DGM, Ladakh regarding geotourism activities in Ladakh region.</p> <p>4. To share the Annual Calendar of GSI for attaining Training Courses.</p> <p>ADG, PSS informed that the training calendars of GSI Training Institute for the FY 2024-25 and 2025-26 have been shared with DGM Ladakh.</p> <p>5. To provide facilities of Geo-chemical labs of GSI for chemical analysis of samples of DGM Ladakh.</p> <p>ADG, PSS apprised that GSI is ready to share its laboratory facility for chemical analysis of samples from DGM, Ladakh.</p> <p>6. To help in e-auctioning of Minor Mineral and guidance in securing of Environmental Clearance from concerned Ministry w.r.t Ladakh.</p> <p>Ministry of Mines mentioned that minor minerals do not come under the purview of the Central Government. However, DGM, Ladakh may share the block specific details which can be taken up with MoEFCC.</p> <p style="text-align: right;"><i>(Action: DGM, Ladakh)</i></p>
64.05.14	<p>Issue (Suggestion: DGM, Assam)</p> <p>The following exploration projects may be taken up by GSI or MECL:</p> <ol style="list-style-type: none"> 1. Exploration of REE and RM in Engleng Gaon near Dokmoka-Baghpani, Sikarighat of Karbi Anglong district; Balram Gaon, Ramani Pathar and Raja Gaon area of Nagaon and Karbi Anglong district and in Bura Raja Block of Morigaon, Nagaon and West Karbi Anglong district. The exploration may be taken up by GSI or MECL. 2. Reconnaissance survey of REE in Garbhangra near Jorabat area of Kamrup (M) district.

	<p>3. Reconnaissance survey of REE and associated minerals in and around Samelangso area, Karbi Anglong district and Kamranga area, Kamrup district, Assam.</p> <p>4. Reconnaissance survey for placer gold in Himalayan foothill sediments of Buroi, Bargang River sub-basins of Brahmaputra basin, Biswanath district, Assam.</p> <p>5. Preliminary exploration for limestone in Thervelangso block, Karbi Anglong district, Assam.</p> <p>ADG, PSS, GSI apprised that DGM, Assam has proposed specific requests to initiate projects in various areas. He also mentioned that the details of the projects undertaken by GSI and the MECL are documented in the Agenda Notes-2025, and requested DGM, Assam to study the summarised notes as provided in Agenda Notes-2025.</p>
64.05.15	<p>Issue (Suggestion: DMG, Karnataka)</p> <p>1. To take up G3 level exploration for Kyanite & Sillimanite in Honaganahalli blocks & Shantipura blocks of HD Kote taluk, Mysuru District, Karnataka.</p> <p>ADG, PSS, GSI apprised that exploration of Kyanite & Sillimanite in Honaganahalli block & Shantipura block of HD Kote taluk, Mysuru District, Karnataka will be taken up by GSI during the FS 2025-26 under G4 stage.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p> <p>2. To take up seamless G4/G3 exploration for Manganese in Jammapura Village, Jagalur taluk, Davangere district, Karnataka.</p> <p>ADG, PSS, GSI apprised that the proposed area was previously explored by GSI and the investigations revealed scanty, inconsistent and patchy outcrops of manganese. However, DGM may consider getting the area explored further by private agency.</p> <p>3. To take up seamless G4/G3 exploration of Bauxite/ Aluminous Laterite in Swarnagadde blocks, Haldipura blocks and Karki-Ramthirtha Block of Honnavara Taluk, Uttara Kannada district, Karnataka.</p>

	<p>ADG, PSS, GSI apprised that the blocks (Swarnagadde block, Haladipura block and Karki-Ramthirtha block in Honnavara Taluk, Uttara Kannada district, Karnataka) will be taken up under G3 stage exploration for bauxite/Aluminous laterite during the FS 2025-26 after confirming the Eco sensitive zone and Western Ghat boundary.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p> <p>4. To take up slope stability and risk assessment of landslide prone areas in Kodagu, Chikamagalur, Hassan, Dakshina kannada, Uttar Kannada & Udupi district of Karnataka.</p> <p>ADG, PSS, GSI informed that Meso-scale Landslide Susceptibility Mapping (1: 10,000) projects will be taken up by GSI in FS 2025-26 for Barebelachalu Kalur area, Madikeri Taluk, Kodagu District and Baluru and Attigere areas, Chikkamagaluru District.</p> <p>In addition, GSI will carry out Post-disaster Landslide Studies in all landslide-prone districts of Karnataka & Goa, including Kodagu, Chikkamagaluru, Uttara Kannada, Dakshina Kannada, Udupi, Hassan, and Shimoga, or any other affected districts following landslide events.</p> <p>GSI will also undertake “Site-specific Geotechnical Investigation: Stabilization of vulnerable sections along NH-66 in Uttara Kannada District, Karnataka”.</p>
63.05.16	<p>Issue (Suggestion: SCCL)</p> <p>As per the approved program, M/s. MECL is conducting promotional (regional) (G2) exploration (as per revised BE) during 2024-25 under CSS scheme of MoC in Bellampalli dip side/Shanti Khani dip side/ Mandaram dip side block in GVCF, Telangana state. This promotional (regional) (G2) exploration is to be continued. Also as per the discussions held during 20th CGPB Committee-V and other guidelines issued by government, some of the samples may also be collected for REE analysis".</p>

	ADG, PSS, GSI apprised that fifteen proposed boreholes are yet to be taken up for drilling by MECL. Hence, any one borehole from the remaining proposed boreholes will be identified in consultation with CMPDIL for REE analysis.
63.05.17	<p>Issue (Suggestion: CMPDI)</p> <p>Relinquishment of the CBM leasehold areas by DGH which are non-potential from CBM point of view for systematic coal exploration.</p> <p>ADG, PSS, GSI apprised that ADG, PSS, GSI apprised that the proposed exploration area along with the cardinal points of block boundaries and shape files are shared with DGH. In few selected boreholes, CBM study is carried out and the outcome is shared with DGH. Based on the CBM data/report, DGH will take decision on relinquishment of the area and consent for future coal exploration.</p>
64.05.18	<p>Issue (Suggestion: Hindmetal Exploration Services Pvt. Ltd.)</p> <p>It is pertaining to the data published for auction blocks.</p> <ol style="list-style-type: none"> 1. Various geochemical methods have sensitivity towards analysis of a particular element; Hence it is requested to provide details of the analysis methodology used for geochemical/ drilling samples analysis along with the data set. 2. Since various coordinate systems are used, hence it is requested to provide the name of coordinate systems used in the data set. 3. Drill hole survey system to be upgraded from HF method to borehole camera/ gyro survey tools it will improve the accuracy & quality of bore hole drilling data. <p>ADG, PSS, GSI apprised the following:</p> <ul style="list-style-type: none"> GSI is carrying out borehole deviation test using borehole camera in mineral exploration projects especially for deeper boreholes. The SOP of chemical analysis are also available in the GSI's OCBIS portal. The geographic coordinate system-WGS-84 datum and UTM coordinates are presently used in GSI.

	<p>Hindmetal Exploration Services Pvt. Ltd. emphasized for using borehole camera or Gyro instead of using HF while doing borehole surveys.</p> <p>DG, GSI apprised that borehole cameras will also be used for shallow boreholes in due course of time.</p>
64.05.19	<p>Issue (Suggestion: NMDC)</p> <p>NMDC is interested in exploration and exploitation of critical minerals, gold and SMS grade dolomite in India specially in the North-Eastern States as these areas are under explored in the country, in close association with GSI.</p> <p>ADG, PSS, GSI apprised that GSI is ready for collaborative work and requested NMDC to submit the proposal, if any.</p> <p>NMDC apprised that the work is going on for PGE in Kamjong district, Assam. The report will be shared with GSI after the finalization of the project.</p> <p style="text-align: right;"><i>(Action: NMDC)</i></p>
64.05.20	<p>Issue (Suggestion: WIHG)</p> <ol style="list-style-type: none"> 1. Laboratory experiments on CO₂ sequestration and Orange Hydrogen production potential of ultramafic and basaltic rocks of Himalaya. Proposed Collaborating Organization: DGH, ONGC 2. Ore genesis, Fluid evolution, and Physico-chemical characterization of Pb-Zn-Cu (poly metallic) deposit in Gorubathan eastern lesser Himalaya: Implication for the Himalayan metallogenic model. Proposed Collaborating Organization: GSI, IBM 3. Petrological and geochemical assessment of natural-occurring elements and minerals (environmentally sensitive, economically valuable, and Rare Earth Elements) in Indian coal deposits and important action plans for their utilization. Proposed Collaborating Organization: CSIR-CIMFR, CMPDI 4. Crust-basement and Identification of subsurface transverse tectonic structures in the Dehradun re-entrant using gravity and GNSS Geodesy.

	<p>Proposed Collaborating Organization: Geological Survey of India</p> <p>5. The concentration and distribution of lithium in the catchment of areas of Himalayan belts.</p> <p>Proposed Collaborating Organization: Atomic Minerals Directorate (AMD); National Geophysical Research Institute (NGRI)</p> <p>ADG, PSS, GSI welcomed the idea of collaboration and further stated that collaboration can be finalised after detailed discussion. However, he informed that GSI has no provision of providing financial support to other department. Regarding the proposed agencies, WIHG was advised to consult and deliberate with the concerned agencies.</p>
64.05.21	<p>Issue (Suggestion: DGM, Nagaland)</p> <p>Proposal of collaborative projects between DGM, Nagaland and GSI, SU: Manipur-Nagaland as:</p> <ol style="list-style-type: none"> 1. Detailed Site-Specific Investigation of Rockfall/Rockslide Phenomena of Tsenukru Mountain (Pakala Pahar) along NH-29 from Patkai Bridge to Khukhidulong Bridge (5.6 km Length) with special reference to affective mitigation measures. 2. Detailed Site-Specific Investigation of Phesema/Kisema Landslide along NH-2, Kohima District (area of about 33 hectares or 0.33 sq. km.) with special reference to affective mitigation measures. 3. Detailed Site-Specific Investigation of Viswema Landslide along NH-2 as well as Viswema village, Kohima District (area of about 42.6 hectares or 0.43 sq. km.) with special reference to affective mitigation measures. <p>ADG, PSS, GSI apprised that GSI will prioritize taking up projects as requested by Nagaland for the proposed landslide sites. He further mentioned that GSI also welcomes participation of officers of DGM, Nagaland in these studies and logistic supports during fieldwork. However, GSI investigated Phesema landslide site during 2020-21 and its report has been shared with DGM Nagaland.</p>
64.05.22	<p>(Suggestion: DGM, Arunachal Pradesh)</p>

	<p>The preliminary exploration of 02 (two) coal blocks i.e. Rangrinkan (Namtok Circle) of Changland District and Phinbero area under Jairampur Circle of Changland District for providing fund under Central promotional Scheme.</p> <ol style="list-style-type: none"> 1. Location: Rangrinkan area (Namtok Circle) of Changland, Area: 10 sq. km. 2. Location: Phinbero Area (Jairampur Circle) of Changland District, Area: 10 sq. km. <p>ADG, PSS, GSI informed that DGM, Arunachal Pradesh has been asked by CMPDIL for submitting the exploration proposals for funding in the two blocks under NER component of Promotional (regional) exploration for coal by MoC.</p> <p style="text-align: right;"><i>(Action: DGM, Arunachal Pradesh)</i></p>
Placing of proposals of GSI by ADG, PSS, GSI	
64.06.01	<p>ADG, PSS presented “Proposals of GSI pertaining to FS 2025-26” and conveyed the following:</p> <ul style="list-style-type: none"> • Thrust has been given to clean energy/net zero goals viz. Critical mineral, offshore/ carbon sequestration/ hydrogen exploration/ geothermal/ pumped storage projects etc. • GSI has also placed significant emphasis on Regional Magneto-telluric survey, Re-appraisal of the previously explored/under explored areas, Mineral Prospectivity Analysis using AI/ML technologies, R&D programme with a focus on critical minerals, Geoscience investigation and mineral exploration in the border areas, Natural Hazard studies including landslide GLOF and public good geoscience. • GSI has formulated 1065 standard programs for the year 2025-26. These include 129 projects on baseline data generation, 402 projects focused on mineral development, and 168 projects dedicated to mineral discovery. • A total of 227 programs have been proposed on critical minerals for FS 2025-26. • Total 65 programs have been taken on Geoinformatics & Data Analysis. • Total 141 programs have been proposed under Natural Hazard Studies/ Public Good Geoscience/ Fundamental Geoscience and Research & Development. • 160 programs have been taken on Training & Capacity Building catering to

	<p>GSI as well as other agencies.</p> <ul style="list-style-type: none"> • Total 39 items have been proposed based on the request received from the State, SGPB, CGPB etc. • Total 57 programs have been taken in collaboration with Institute/ University/ Govt. Dept./ State govt. etc. • 25 projects have been formulated in international border region which includes 15 exploration projects spread in Western, Northern and North-Eastern Region. In total, 40 projects have been taken in international border districts.
PLENARY SESSION-II	
Presentation by Hackathon Winners	
64.07.01	<p>Technical presentations were made by the Hackathon winners on the solutions of different mineral ore deposits such as Gold, Graphite, base metal, Phosphorite etc. in the southern part of Rajasthan over a large coverage of 14,780 sq. km. area. The top 3 winners of the hackathon are as follows:</p> <ol style="list-style-type: none"> 1) Team AMD was awarded with the first prize. The team was led by Shri Ajoy Kumar Padhi along with Shri Venkateswar Reddy C. 2) Team Terra Trek was awarded with the second prize. The team was led by Shri Bodhisattwa Saha. The team members were Shri Amardeep Singh, Shri Utsab Kundu and Ms. Sohini Halder. 3) Team sRCg IIT-ISM was awarded with the third prize. The team was led by Dr. Partha Pratim Mandal. The team members were Shri Litan Dutta, Shri Dinesh Munda, Shri Tanmay Singh and Prof. G S Rao. <p>Secretary, Mines requested GSITI for organizing a training module on the solution prepared by Team Terratrek so that the field teams working in various State Units of GSI can be benefitted by this application in carrying out field-work. He further added that embracing such kind of initiatives may help in taking up Artificial Intelligence to new heights in mineral exploration. Additional Secretary, Mines advised for applying all the three models to other datasets to refine these models and to understand the variation in their predictions.</p> <p style="text-align: right;"><i>(Action: GSI)</i></p>
Open session for discussion chaired by Secretary, Mines	

64.08.01	<p>Member, NDMA acknowledged the partnership between NDMA and GSI which has got strengthened over the past few years. He apprised that NDMA has been working closely with GSI in the studies of landslides, glacial lake outburst flood (GLOF), Joshimath land subsidence, and numerous other activities. He highlighted two programs approved by the Government of India that will be undertaken by the NDMA: National Landslide Risk Mitigation Program and the GLOF Risk Reduction Program, both to be implemented in four hill states. He emphasized GSI as a key partner for both programs. Additionally, he mentioned the National Earthquake Risk Reduction Program, where NDMA shall be seeking expertise of GSI.</p> <p>He submitted the following suggestions to GSI:</p> <ul style="list-style-type: none"> • All Geological Hazards to be looked at by GSI other than landslides, including earthquakes, GLOF and mountain hazards. He emphasized the need for GSI to develop the technical capacity to effectively manage these hazards. • For risk assessment of the geological hazards and their mapping, NDMA shall extend all possible assistance to GSI in taking up risk mapping at meso and macro scales. • As Landslide Early Warning System is being developed, GSI needs to collaborate with larger community to develop sensors for improving the accuracy of the early warning system. These sensors are then to be installed by GSI to further monitor the results. • Joint research to be done by GSI and NDMA to develop Earthquake Early Warning System and address mitigation measures at the local level. <p>In order to strengthen the National Landslide Forecasting Centre, Secretary (Mines) advised GSI to send few proposals to NDMA on the subject of developing sensors for early warning systems and monitoring the results.</p> <p>NDMA informed that a workshop is to be conducted by NDMA, in the month of January, 2025, wherein, discussions would be done on the issue of developing sensors. He further stated that a request would be sent to GSI for participating in the workshop.</p> <p>Director, WIHG apprised about the various kinds of expertise available within the department such as mapping landslides using AI and computer simulation methods,</p>
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	<p>carrying out geophysical studies on earthquakes, expertise in crustal dynamics of Himalayan regions including north-eastern Himalayas. He also made aware of the facilities available within WIHG such as petrology and petrography, OSL dating and carbon isotope dating. He also mentioned about the works being carried out by WIHG on REE studies; hydrogen generations from the granites in Higher Himalayas; active fault mapping systems and the lithium concentrations in the catchment areas of Higher Himalayan belts. He expressed his happiness in providing support to GSI in any of these areas in future.</p> <p>CMPDI informed that they have been actively participating in the meetings of CGPB Committee-V. He further apprised that all the map data have been submitted and the bore hole data is being sequentially provided for uploading in NGDR.</p> <p>CIL suggested to take up more promotional drillings in the areas which are falling beyond the potential areas so as to increase the extraction of coal in future.</p> <p style="text-align: right;">(Action: CGPB Committee-V)</p> <p>CIMFR replied that they work in close association with CIL and CMPDIL and address all requirements related to coal.</p> <p>NCPOR apprised that they are well in contact with M&CSD office of GSI situated at Mangaluru. He further stated that three officers of GSI have taken part in the cruises of NCPOR in international waters. Furthermore, he stated that the officers of Ministry of Mines and GSI have participated in the international trainings which were organized by MoES and NCPOR.</p> <p>Secretary, Mines requested NCPOR to include GSI officers in the upcoming Antarctica delegation to be organized by NCPOR.</p> <p style="text-align: right;">(Action: NCPOR)</p> <p>NIO apprised that they are also well connected with M&CSD, GSI, Mangaluru and are involved in providing trainings on offshore surveys.</p>
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	<p>Secretary, Mines highlighted that during the offshore roadshow in Gujarat and Cochin, bidders expressed the need for studies on marine biology and ecosystems to ensure proper mitigation measures for mining activities. He requested the National Institute of Oceanography (NIO) to develop a Standard Operating Procedure (SoP) to assist bidders in conducting such studies. Additionally, he asked IBM to be in touch with NIO for developing SoP.</p> <p style="text-align: right;">(Action: NIO and IBM)</p> <p>NEERI requested GSI to conduct studies on uranium contamination in groundwater in Punjab.</p> <p>ADG, PSS, GSI responded that project has already been taken up on groundwater contamination and geo-environmental study in Punjab as a part of MoU between GSI and CGWB.</p> <p>NLC apprised that they work in close association with CGPB Committee-V. NLC also stated that the Geological Reports on Lignite exploration will be uploaded in NGDR once concurrence is obtained from Ministry of Coal.</p> <p>ONGC appreciated GSI's work in MT domain. He further stated that ONGC has gained expertise in MT surveys as they have been working in this domain since last two to three decades and are hence ready to extend support to GSI for MT surveys. He emphasized on the careful selection of sample cell size while using AI/ML techniques. He suggested for testing the efficacy of the three hackathon models by using these models over the areas being awarded by GSI.</p> <p>Secretary, Mines directed GSI to discuss with ONGC regarding MT survey and the advanced 3D seismic survey technique being developed by ONGC.</p> <p style="text-align: right;">(Action: GSI)</p> <p>SCCL apprised that they are involved in discussions on REE with GSI, CMPDI and IMMT. He further stated that SCCL has been looking out for identifying few labs where they may send REE samples for further correlation and interpretation.</p>
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	<p>CSIR-IMMT, Bhubaneswar extended all kind of support to stakeholders in providing lab facilities for carrying out beneficiation studies in critical minerals.</p> <p>NITI Aayog threw attention on the exploration of fertilizer minerals as well as uranium.</p> <p>Secretary, Mines & Geology, Govt. of Punjab acknowledged the informative session held during the meeting on deep sea exploration techniques and use of AI/ML in mineral exploration. He apprised that DGM Punjab is actively engaged with IIT-Ropar for the surface data related to mining.</p> <p>Principal Secretary, Industries & Mines Department, Govt. of Gujarat appreciated the fact that one of the first offshore mining session was held in Porbandar, Gujarat, which holds potential for deep seated minerals. She emphasized the need for collaboration in this regard. She also mentioned that the state of Gujarat has conducted 25 auctions in the last few years and has received permission to hold, another 16 auctions.</p> <p>DMG, Rajasthan informed that 87 blocks have been auctioned by the State Government of Rajasthan. As larger number of blocks are facing the issue of falling within Aravalli definition, he requested Ministry of Mines for resolving the said issue. Secretary, Mines responded that the M/o. Mines is working with the State Government and MoEFCC on the issue.</p> <p>DMG, Telangana informed that two limestone blocks have been auctioned by the state. Secretary, Mines suggested for assigning DMG as a nodal officer to pursue on obtaining various types of clearances from the other departments. Secretary, Mines quoted the model of DGM, Madhya Pradesh to be studied in this regard.</p> <p>DMG, Kerala informed that seven blocks have been handed over to the State by GSI. He also mentioned that the Kerala DGM is planning to issue a Notice Inviting Tender (NIT) for one block by the first week of February 2025, and the auction of another block is planned to be completed by 31st March 2025.</p>
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	<p>Adani Group requested to prepare the Geological Report for auction purpose as per international standards. Secretary, Mines directed to constitute a committee in this regard under the chairmanship of Director (Technical), Ministry of Mines including HZL and Adani Group as members to the committee for drafting a report on the submission of Geological Report as per international standards for auction purpose.</p> <p style="text-align: center;"><i>(Action: Director (Tech.), Mines, HZL and Adani Group)</i></p>
<p style="text-align: center;">Presentation on “Forest Clearance with respect to Prospecting and Exploration” by Shri A.T. Mishra, Dy. DGF, Regional Office, Bhubaneswar, MoEFCC</p>	
64.09.01	<p>Shri A.T. Mishra, Dy. DGF, Regional Office, Bhubaneswar explained about the recent guidelines on Forest Clearance with respect to Prospecting and Exploration through a presentation. The salient points of the presentation are as follows:</p> <ul style="list-style-type: none"> • For survey by way of drilling involving felling of more than hundred trees or drilling of more than twenty- five bore holes per ten square or more than eighty shot holes of six-inch diameter per square kilometre shall require prior approval of the Central Government. • For survey by way of drilling involving cutting of trees up to 100 or drilling of ≤ 25 bore holes up to 4” diameter (10 sq. km.) seismic surveyor ≤ 80 shot holes of 6” diameter per square kilometre, in such cases, DFO is competent to issue permission. Form C simplified in Parivesh 2.0. NPV to be paid @ 0.1ha per bore hole. If no tree felling is involved, no NPV is to be paid. • For exploration, if density is up to 0.7 density, permission is to be taken from regional office. If density being more than 0.7, permission is to be taken from ministry. • In principle approval is given for drilling beneath the forest area using Extended Reach Drilling (ERD), with the condition of installing ERD station 500 m from forest and ERD station to be 1.0 km from protected area, corridor and wildlife sensitive area. • Non-applicability of NPV in survey proposals involving drilling without felling of trees. • Charging of NPV (@0.1 hectare/per borehole and CA: 110 plants per borehole) only in proposal involving felling of trees which will be adjusted against the diversion proposal.

	<ul style="list-style-type: none"> • Allow user agency to collect sample from the forest area for the relevant purpose • A separate category 'Mining of Critical Minerals' have been created on Parivesh. • Non applicability of CA and NPV in case of pitting and trenching. Permission to be given on simple offline application and DFO is authorized to give the permission in those cases. • No application under form C is required for broken up area for which FC approval is there. <p>Dy. Director General, SU: Jharkhand, GSI stated that due to the area being reduced for drilling the bore holes in cases of G3/G2 exploration projects, the forest approval is required to be routed through Parivesh portal. In this regard, he raised concern on the long delay caused by the Forest Dept. in providing forest clearances to G3/G2 exploration projects submitted through Parivesh portal.</p> <p>Secretary, Mines requested representative from MoEFCC for taking steps on reducing the pendency of the forest approval applications which are to be cleared by the Central Govt.</p> <p>Shri A.T. Mishra, Dy. DGF, Regional Office, Bhubaneswar mentioned that Forest Regional Committee Meetings (FRCM) are being held twice a month every year for reviewing the pendency of the projects of Govt. of India. He further requested all stakeholders for submitting a list of the pending projects which are pending at the level of the Central Govt.</p> <p>Tata Steel raised concern on obtaining forest clearances in mining lease projects, wherein, plenty of boreholes are required to be drilled in such cases. In this regard, he suggested for easing out the process of obtaining forest clearances through Parivesh portal.</p> <p>Tata Steel also raised query for carrying out drilling in the mining projects, wherein, Stage II approval has been obtained.</p>
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	<p>Shri A.T. Mishra, Dy. DGF, Regional Office, Bhubaneswar stated that drilling can be done in those cases where the mining lease still stands valid. In the cases, wherein, tree-felling is involved, he mentioned that permission can be sought at DFO level by referring the letter of MoEFCC dated 17.01.2025.</p> <p>FIMI voiced their concern on the condition imposed by MoEFCC over the safety zones falling within Mining Leases, which says that, such proposals, wherein the CA and NPV have already been deposited by the User Agency till 30.09.2024, are hereby granted further extension of time till 30.09.2026 to obtain the requisite approval of the Central Govt. In this regard, he suggested for eliminating the condition of paying CA by 30.09.2024 as certain time period is required to be spent in identification of land for paying CA. He further requested for releasing a booklet comprising all the forest guidelines altogether.</p> <p style="text-align: right;"><i>(Action: MoEFCC)</i></p> <p>DMG Jharkhand requested for issuing separate forest guidelines on taking up geophysical surveys.</p> <p>Secretary, Mines suggested for submitting the issues separately which are being faced by the State in taking up geophysical surveys in forest areas.</p> <p style="text-align: right;"><i>(Action: DMG Jharkhand)</i></p> <p>HZL raised concern on the condition imposed by MoEFCC while carrying out Extended Reach Drilling (ERD), which mentions that, ERD station is to be kept 500 m away from forest and ERD station to be 1.0 km away from protected areas, corridor and wildlife sensitive area. He suggested for eliminating the condition.</p> <p>Secretary, Mines suggested for holding a meeting with MoEFCC at New Delhi on all of the aforementioned issues brought forward by the stakeholders.</p> <p style="text-align: right;"><i>(Action: Ministry of Mines and MoEFCC)</i></p>
	<p style="text-align: center;">Presentation on “Additional data layers added in National Geoscience Data Repository (NGDR)” by Shri P. K. Singh, DDG, Mission-IIIC, GSI & In-charge, NGDR</p>

64.09.02	<p>Dr. P. K. Singh, DDG, Mission-IIIC, GSI & In-charge, NGDR presented the latest additions made in the past year, including new functionalities developed and API link integration in NGDR. He briefed that 2351 exploration reports; 2905 baseline reports; 126 NGPM & 246 NGCM data reports and 1 Block of Airborne Geophysics have been newly added in NGDR in last one year. He also talked on the additional data layers added in NGDR since January 2024, and provided a detailed break-up of the exploration reports submitted by other stakeholders and its subsequent uploading to the NGDR portal.</p> <p>He briefed about the improvements made in search preferences and options available in NGDR in order to make it user-friendly and added that there have been over 17,000 downloads from the platform. He requested all the stakeholders to provide the geological reports for uploading in NGDR portal.</p> <p>Secretary, Mines directed Shri P. K. Singh, DDG & In-charge, NGDR, GSI, to work on improving the NGDR system based on feedback from various stakeholders. He also advised to handhold all the State DGM/DMG by providing regular trainings on the usage of NGDR so that two to three personnel in each State DGM/DMG can acquire the necessary expertise.</p> <p style="text-align: right;"><i>(Action: DDG, GSI & In-charge, NGDR)</i></p>
<p style="text-align: center;">Presentation on “Magnetotelluric (MT) Survey and National Aerogeophysical Mapping Programme (NAGMP) Phase-III by Shri Debkumar Bhattacharyya, DDG & HoD, RSAS, GSI</p>	
64.09.03	<p>Dy. DG & HoD, GSI, RSAS presented talk on MT Survey and NAGMP Phase-III.</p> <p>The salient points of the presentation on MT Survey are as follows:</p> <ul style="list-style-type: none"> • MT is one of the few techniques capable of sensing through the Earth’s crust to upper mantle: 1-2 Km / ~10 Km / up to LVZ (~200 Km). • It is very useful for finding deep seated deposits that has origin related to deeper part of crust/ upper mantle. • MT in combination with other data like seismic, gravity, magnetic, has provided path breaking discoveries like Olympic Dam (Giant IOCG deposit) in Australia. • GSI has planned to take up Baseline “Magnetotelluric Data Acquisition” in grid pattern with Broadband Magnetotelluric (BBMT) & Long period Magnetotelluric (LPMT) Surveys.

	<ul style="list-style-type: none"> • Two pilot projects have been initiated in Dharwar & Singhbhum craton for finalization of the survey parameters and SOP. • From FS 2025-26 onwards, work of the First phase will be launched for 5 years. • Primary deliverable will be generation of 3D Mineral System Frameworks of known mineralized belts as well as finding new areas. • Pilot projects in Singhbhum and Dharwar Cratons will be done during January, 2025 to July, 2025. Based on the result, SOP will be prepared in August 2025. <p>The salient points of the presentation on NAGMP Phase-III are as follows:</p> <ul style="list-style-type: none"> • GSI has taken up survey in 21 Blocks (12 in Phase-I and 9 in Phase-II) covering a total of 11.64 lakh sq. km. So far, 7 blocks have been completed. Work in other blocks is at various stages of implementation. • Data of all the completed blocks are uploaded and available in NGDR. • In 7 blocks, 322 potential target areas have been identified for future exploration. • During NAGMP Phase-III, 12 Lakh sq. km. area will be covered in 21 Blocks. • Survey will be done in 4 priority blocks as Pilot Projects in four distinct geological terrains- Deccan Traps, Indo-Gangetic Plains, North-Eastern Region and North-western Himalayas.
CONCLUDING SESSION	
Summary of CGPB deliberation discussion by Director General, GSI	
64.10.01	<p>Summing up the day's proceedings, DG, GSI assured that the recommendations received from most of the stakeholders on restructuring of CGPB meetings and the suggestion of Secretary, Mines for transforming the word "Geological" in CGPB to "Geosciences", would soon be attended. He emphasized the importance of holding regular, smaller group focused meetings with stakeholders to resolve issues related to Action Taken Reports. He further stated that the issue of taking up studies on the feasibility of a Geological Report would soon be looked into with all receptiveness. He threw light on the hackathon organized by GSI for the first time in the mining sector and GSI will take forward this concept of use of AI/ML in mineral exploration. He welcomed the idea of NDMA on having collaboration between the two organizations not only on landslides but also on all other natural hazards. He mentioned that further steps would be taken up for resolving the issues that still persists in the process of</p>

	obtaining forest clearances by the stakeholders. He laid emphasis on the use of geophysical technologies by the stakeholders in field for targeting deep and concealed deposits and to have better understanding of the subsurface. Lastly, he suggested for utilization of the high-resolution satellites developed by Tata Advance Services Limited in GSI for taking up various studies on geosciences and likewise requested the utilization of other high-tech emerging technologies.
Closing remarks by Shri V. L. Kantha Rao, Secretary, Mines	
64.10.02	In his closing remarks, Secretary, Mines emphasized the importance of utilizing AI/ML in mineral exploration and requested to strive hard to build advanced technique for ensuring better exploration projects with higher success rates. He talked on increasing the number of collaborations with the State Govts. and working on the reports of State Govts. to generate resources through auctions. He reiterated the suggestion of Additional Secretary, Mines to fast track the field work including preparation of the Geological Report, to one year, allowing for more exploration projects within the same timeframe through proper planning and also with the use of the online monitoring system being developed by GSI. He requested GSI to strengthen its existing workforce to undertake parallel studies on the other aspects of geosciences especially on natural hazards and their mitigation, assuring collaboration with NDMA in this regard. He stressed the urgency of keeping up the pace with the high-tech advancements which is going to happen in GSI and the simultaneous need for faster analysis of high-tech data. He also emphasized on the utilization of high-tech satellites in geosciences and stressed on deeper interaction between ISRO and GSI on usage of advanced technology aspects. Lastly, he suggested restructuring of CGPB with the objective to involve more agencies, increasing the number of meetings among other agencies and integrate Geosciences into the Board to elevate the mining sector to new heights.
Vote of thanks	
64.11.01	The meeting ended with vote of thanks by Dy. DG, GSI, SU: Odisha, Bhubaneswar.

Annexure-I

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