

MINUTES OF THE 58th MEETING OF THE STATE GEOLOGICAL PROGRAMMING BOARD HELD ON 27th JULY, 2022 AT BHUBANESWAR

58.01.00	<p>The 58th meeting of the State Geological Programming Board (SGPB) was organized under the Chairmanship of Sri Deoranjana Kumar Singh, IAS, Principal Secretary to Government of Odisha, Steel & Mines Department on 27th July on the virtual platform.</p> <p>The list of participants is enclosed in ANNEXURE-I.</p>
58.02.00	<p>WELCOME ADDRESS BY THE DIRECTOR OF GEOLOGY, ODISHA & MEMBER SECRETARY, SGPB</p>
	<p>Sri Manoranjan Mahapatra, Director of Geology, Odisha, and Member Secretary, SGPB extended a warm and hearty welcome to Sri Deoranjana Kumar Singh, IAS, Principal Secretary to Government, Steel & Mines Department and Chairman SGPB, Sri Debidutta Biswal, IFS, Director of Mines, Odisha, Sri Balwant Singh, IAS, MD, OMC & OMECL, Dr Saibal Chandra Mitra, Dy. Director General, GSI, (SU) Odisha, Sri B.L Gurjar, RCOM ,IBM, Bhubaneswar and all other distinguished dignitaries of Member Organisations participating in the 58th SGPB meeting.</p> <p>The Member Secretary highlighted that Amendment of MMDR Act-2015, Mineral Auction Rule, MEMC Rule and Mineral Concession Rule, facilitated the grant of Mineral Concession in a transparent manner through e-auction. The increasing level of confidence from G4 to G2 stage of exploration in resource assessment plays a vital role in facilitating concession process and Geological report is inevitable for auction of the mineral blocks.</p> <p>State Geological Programming Board (SGPB) meeting is being convened to review the approved proposals of previous field season and finalises the exploration programmes for the next field season for various minerals by different agencies in the State. This Board is also assigned with the task of making recommendations to the CGPB in Government of India on various issues for improvement in the mineral exploration sector. He appreciated all the Notified Exploration Agencies for their efforts in meeting the desired level of exploration and welcomed those NPEAs to contribute significantly in the coming years.</p> <p>He informed that as per approval in the 57th meeting of the SGPB, Directorate of Geology has formulated 19 investigation programmes (4 at G2 level, 11 at G3 level and 4 at G4 level of UNFC) during F.S 2021-22 out of which two iron ore projects around Thakurani and Baliapahar blocks could not be executed due to forest issues. The investigation projects include coal, Iron & manganese, Limestone, Graphite, Base metal, Pyrophyllite, Iolite, Quartz/Quartzite, DDS & Artisan grade decorative stone projects in different districts for targeting and assessment of mineral resources with a view to generate more auctionable blocks. He also appraised the august house regarding the achievement of DG (O) till end of March, 2022 wherein Geological</p>

	<p>mapping of 225 sq km in regional scale, 36.02 sq km in larger scale and 13.365 sq km in detailed scale supported by 7028.42 m of core drilling, 411 cubic meter of trial excavation with collection of 3311 rock/mineral samples along with 219.19 meters of coal samples have been achieved. Out of 7028.42m of drilling out of which, 2446.92 m was achieved through in-house means and 4581.5 m through outsourcing. In addition, 1.4865 sq km area was covered by geophysical SP survey. The current investigations would result in 6 major mineral blocks and 8 specified mineral blocks for auction.</p> <p>During the year, recast Geological Reports of 3 earlier explored blocks and 3 Geological Reports of Expired leases & one GR of in-house exploration block namely Lukapada Limestone Block have been submitted. Further, Geological Reports of 8 DDS blocks & 2 Quartz/quartzite Blocks have also been submitted for auction. In addition, 21 Geological reports of in-house explorations have been finalised with approval of 617 mining plans of minor minerals.</p> <p>During the ensuing field season, 2022-23, the Directorate of Geology proposes to take up 24 investigations viz: 6 investigations at G2 level, another 12 in G3 and 6 projects in G4 level of UNFC & MEMC Rule for different mineral commodities out of which seven are spill over projects. Special emphasis has been laid on exploration of bulk commodities for leasing out through auction as soon as possible. Member Secretary, appreciated the initiatives of other exploring agencies like MECL, OMECL, and GSI in availing the NMET funds for different exploration programmes in the State. Recently, DG (O) has got approval of TCC for Manganese exploration in Hardatal block, Balangir District in G3 level and other 4 NMET project proposals are in the pipeline.</p> <p>Member Secretary, appreciated pro-active initiative, endeavor and guidance of Chairman, SGPB and Pr. Secretary to Govt. Steel & Mines Department, Director of Mines & Directorate of Geology have put the state right at the top of the table of States, for successful auctioning of mineral blocks. Several path breaking decisions have been taken in the recent times to strengthen the mineral exploration sector and for overall development of mineral resources of the state.</p>
58.03.00	ADDRESS BY SRI SAIBALA CHANDRA MITRA , DEPUTY DIRECTOR GENERAL, GSI, STATE UNIT, ODISHA
	<p>Dr S. C Mitra, Deputy Director General, GSI, (SU) Odisha in his opening address summarized the themes of activities and achievements of GSI, Odisha during the year 2021-22 and emphasized its untiring effort to acquire and update the baseline geo-scientific data (Mission-I) where baseline data forms the backbone for all sorts of geological investigations and exploration of mineral resource (Mission-II) in order to augment the resource potential of the state.</p> <p>During the F.S 2021-22, GSI has carried out 16 investigations under Mission-I, 17 investigations under Mission –II, for commodities like iron, manganese, base</p>

	<p>metal, gold, graphite, diamond, REE and coal which include 5 items under G2 basemetal, coal & manganese, two items under G3 level for gold & graphite and 7 items under G4 level for minerals like base metal, diamond, REE and coal. Apart from this, specialized projects for mineral prognostication are being taken up. He indicated that, 26,701m drilling was completed in coal and non-coal investigation and priority was given to reassess the resource of 12 non-working mining leases which were expired in March, 2020. During the 2021-22, GSI has handed over 9 GRs (6 GRs of non-working mines) to State Government for auction. Besides this, GSI has also handed over 23 Geological memorandum of G-4 level to Government of India. He highlighted that forest clearance is the major constraint for executing the investigations in time. Keeping in view the recent Amendments in MM (R&D) Act and MEMC Rule, some geologically potential areas have been carved out as G4 blocks for auctioning as Composite License. In the end, he concluded that 32 investigation projects for various commodities have been proposed for F.S 2022-23.</p>
58.04.00	ADDRESS BY DEBIDUTTA BISWAL, IFS, DIRECTOR OF MINES, ODISHA
	<p>Sri Debidutta Biswal, IFS, Director of Mines, Odisha in his address highlighted the importance and significance of SGPB meeting and role of exploration agencies in making the State leader in the mining sector. Foremost, he praised all the exploring agencies for their endeavor as the State Government received the first prize for “ Rastriya Khanij Vikas Puraskar” in Category-I (for minerals like Iron, Limestone & Bauxite) & second prize in Category-II (for minerals other than Iron, Limestone & Bauxite) on the occasion of National Conclave on Mine and Minerals which was held on 12th July at New Delhi.</p> <p>He briefed that NIT has been issued for 44 mineral blocks, out of which 37 mineral blocks were successfully auctioned, out of which, 23 mineral blocks are being made operational. Apart from these, 10 major mineral blocks & 9 specified minor mineral blocks are in pipeline for auction. About 200 mineral blocks have been identified for further exploration followed by auction. DM (O) informed that a technical committee meeting will be convened soon where 20 to 30 expired or lapsed mineral blocks will be prioritized for different exploring agencies. He appealed all the exploring agencies to expedite their exploration activities to upgrade more and more G4 level blocks through NMET funding, so that more and more blocks will be put to auction.</p> <p style="text-align: right;">(Action: All Members)</p>
58.05.00	ADDRESS BY SRI DEORANJAN KUMAR SINGH, IAS, PRINCIPAL SECRETARY TO GOVT. OF ODISHA, STEEL & MINES DEPARTMENT AND CHAIRMAN, SGPB.
	<p>Sri Deoranjana Kumar Singh, IAS, Principal Secretary to Government of Odisha, Steel and Mines Department and Chairman, SGPB welcomed all the dignitaries and delegates to the 58th SGPB meeting. He opined that, exploration is the key to success of auction of mineral blocks. He congratulated all the exploring</p>

	<p>agencies for making the State a pioneer in the field of exploration and auction to get the 1st Prize in India for “ Rastriya Khanija Vikas Puraskar ” in Category-I & second prize in Category-II at New Delhi for successful auctioning of the mineral blocks. He emphasized & appealed to keep up this momentum. Chairman, SGPB, quoting the revelation of DM(O) that about 200 mineral blocks have been identified for exploration, he suggested to prioritize those blocks for exploration from G4 to G2 systematically. Out of those 200 blocks, DG(O) & DM(O) would prioritize about 30 blocks for auction in phased manner. He reiterated that, all the bulk mineral commodities be upgraded to G2 level for better participation in the auction process and to fetch better price for the State. He appealed to DG (O) & OMECL to have an aerial survey over the total state for different types mineral being available so that, further exploration programmes for the State could be chalked out. Chairman wished all success of the meeting.</p> <p style="text-align: right;">(Action: All Stakeholders)</p>
58.06.00	CONFIRMATION OF THE MINUTES OF THE 57TH SGPB MEETING
	Member Secretary, SGPB placed the Minutes of the 57 th SGPB meeting circulated vide Letter No. 5598/DG, dated 20.09.2021 before the members for confirmation and the Minutes was unanimously confirmed by the Board without any change.

58.07.00	REVIEW OF ACTION TAKEN ON MINUTES OF THE 57TH SGPB MEETING
	The Member Secretary, SGPB, initiated discussion on the follow up action on the Minutes of the 57 th SGPB meeting with due permission of the chairman, SGPB.
58.08.01	<p>In response to Para: 57.04.00</p> <p>In order to put impetus to explore G3 and G4 level of mineral blocks by all the exploring agencies to make them ready for auction; Member Secretary, SGPB informed that Directorate of Geology, Odisha has been engaged in exploration of major & specified minor mineral blocks in G-3 & G-4 level of UNFC/MEMC-Rule. As per advice of the Chairman, SGPB & Principal Secretary, S & M Dept. the potential major mineral blocks will be upgraded to G-2 level.</p> <p>In response to Para: 57.05.00:</p> <p>Regarding the unexplored area, Member Secretary, SGPB informed that Directorate of Geology, Odisha is prioritizing the exploration blocks keeping in view the mineral auction Rule, 2015. However, an attempt has been made by the State and as per the advice of the Joint Working Group, a Technical Committee has been constituted to identify the gap areas incorporating the areas under ML, exploration blocks of different agencies, freehold areas & areas under erstwhile 10 A(2)(b) Cases. GSI is prioritizing the OGP areas in the first phase.</p> <p>In response to Para: 57.08.01:</p> <p>i) Regarding G4 investigation for gold mineralisation around Suriagora and south of Gorumahisani, by GSI; Member Secretary informed that GSI had completed</p>

	<p>G-4 stage investigation and based on the results, the item will be proposed for G-3 stage investigation during FS 2023-24.</p> <p>ii) Regarding search of lithium minerals in pegmatites and manganese deposits of EGMB and BK belt; Member Secretary, clarified that no such items for pegmatites are underway by GSI now. However, in the REE items, the pegmatites and its association are being studied.</p> <p>iii) Regarding pilot scale sampling of the known occurrences of nepheline syenite to ascertain its potash content through XRD studies, Member Secretary, informed that MECL is waiting for consent by the state Government to take up the exploration.</p> <p>iv) Regarding Stratigraphic reassessment in Jamda-Koira valley by deep boreholes, Member Secretary highlighted the STM item taken up by GSI in BK belt for resolving the stratigraphic controversies and suggested for drilling of a few stratigraphic boreholes in different parts of the belt. Depending on the suitable high capacity drilling rigs, drilling of stratigraphic boreholes will be taken up.</p> <p>In response to Para: 56.10.02:</p> <p>I. Regarding forwarding of soft copy and hard copy of draft MP/MMP/RMP by Indian Bureau of Mines for comments of State Government, Member Secretary, SGPB clarified that Director of Mines will provide the required information on specific request.</p> <p>II. Regarding information on Auction Blocks/ DMF/PMKKY etc, Member Secretary informed that relevant information is available with DM (O).</p> <p>III. Regarding sharing of exploration reports carried during the year 2016-17 onwards by all Government agencies (State Govt. /GSI) with IBM as per Rule 72 of MCDR 2017; Member Secretary, SGPB informed that as per prevailing practice, the relevant information are being shared in the prescribed format to IBM by GSI & Directorate of Geology, Odisha.</p> <p>In response to Para: 57.09.09:</p> <p>i) Regarding seismic micro zonation of Puri coast to mitigate the effect of coastal erosion & suggest remedial measures, Member Secretary, clarified that microzonation of Puri town is already included in FSP of GSI in 2022-23.</p> <p>ii) Regarding extraction of lithium from Mathili cassiterite and lepidolite in pegmatites of Bengpal Group of rocks, Member Secretary, SGPB informed that MECL is ready to take up exploration in the indicated area but DG (O) shared the inhouse GRs with OMECL.</p> <p>iii) Regarding Amendments in the MMDR Act, SGPB should seek clarity on role of Govt. agencies and robust monitoring mechanism while finalising this Amendment; Member Secretary, SGPB informed that Auction of potential CL blocks will be taken up as per the MEMC Rule & Mineral Auction Rules. However, where constraints to upscale the exploration level could not be resolved those blocks can be put to auction as CL.</p> <p>iv) Regarding availing of NMET fund to undertake detailed work of capital-intensive exploration projects on various critical and strategic commodities like</p>
--	---

Li, K, REE, cobalt etc., Member Secretary, SGPB informed that although MECL is ready to take up exploration but awaits consent from Govt. But DG (O) appealed MECL to give specific proposals. DG (O) is formulating a R & D proposal for assessing N P & K potentiality in the Stromatolitic Limestone prospects in Odisha. Besides, NMET fund is being availed by OMC & OMECL.

In response to Para: 57.10.01

- i) Regarding, G4 level blocks for auction, Member Secretary, SGPB informed that based on the commodity and geometry of target ore/mineral, the area needs to be finalised.
- ii) Regarding reservation of potential 10 A (2) (b) Areas for detailed exploration by Govt. agencies; Member Secretary, SGPB clarified that Technical committee has evaluated 54 GRs of erstwhile 10 A (2) (b) blocks and recommendations have been submitted to Govt. for next course of action.
- iii) Regarding identification of mineral blocks for exploration with background information on the geochemical and geological information as suggested by CMPDI; Member Secretary, SGPB informed that blocks will be allotted on specific exploration proposal with sufficient background information & justification.
- iv) Regarding Provision of FC relevant information to the forest cell of Directorate of Mines for examination in DSS. Member Secretary, SGPB informed that authentication of cadastral sheets as per SABIC status is time consuming which need to be facilitated by Govt. Directorate of Geology, Odisha is regularly submitting FC related information to the Forest Cell of DM (O). He appealed to DM(O) that District circle office need to be instructed to facilitate timely compliance of cadastral sheet authentication by Revenue Department. For expeditious disposal of forest clearance issues and carrying out reconnoitry and exploratory drilling activities Member Secretary, SGPB informed that periodic meeting is now facilitated by State Forest Department on 5th of every month.
- v) Regarding Gamma ray logging in deep drilling carried out by different exploring agencies, Member Secretary, SGPB informed that Directorate of Geology, Odisha is undertaking deep drilling in Ib valley coal field but in the current field season, there were technical difficulties in progressing the BH midway. However, it will be taken care of in future.
- vi) Regarding prioritization of exploration target areas to meet the energy demands dependent on Lithium & Manganese, Member Secretary informed that efforts are being taken by GSI, DG(O) and MECL to determine the Lithium content in manganeseiferous metasedimentaries & manganese are horizon.
- vii) Regarding assessment of the potentiality of base metal in Raidhanipur, Bhaludongri and Mundapala areas in Kalahandidist and Gangajal area in Deogarh dist alongwith further investigation for Gold in Baskeram-Charkadisahi and Champani-Hatia blocks of Gorumahisani belt, Mayurbhanj dist,. Member Secretary, SGPB informed that GSI may be provided with the background

	<p>information so that the same can be assessed for further action.</p> <p>viii) Regarding Systematic coastal zone mapping along the coast of Odisha by GSI, Member Secretary, SGPB informed that such items on coastal survey and mapping can be taken up on specific request from state govt. to the ADG & HOD, ER,.</p> <p>ix) Regarding preparation of maps on decorative and dimension stone and road metals by GSI and DGO, Member Secretary, SGPB informed that DG (O) is updating the decorative & dimension stone status in the hard rock terrains of Odisha. And it does not come under the purview of exploration by GSI.</p> <p>x) Regarding gap areas between two consecutive Iron ore mining leases, Member Secretary, SGPB informed that data base of all the mineral blocks under ML, CL, exploration blocks, erstwhile 10A (2) (b) cases are under compilation after which Gap areas could be identified.</p> <p>xi) Regarding exploration/reserve estimation of nepheline syenite rocks in Koraput and other districts of Odisha for its potassium values, Member Secretary, SGPB appraised that economic extraction of K from nepheline syenite is yet to be established by pilot scale experimentation. Once, utility of nepheline syenite as a source of potash is proved, necessary geological studies can be taken up to assess the resource.</p> <p>xii) Regarding investigation on the north-western part of Daitari hill range, to probe the possibility of multi-metal mineral assemblages, Member Secretary, suggested that if the location of the suggested area is provided, it can be verified from the available record with GSI. As it is a R & D activity, these programs will be taken up in future.</p>
58.09.00	PRESENTATION BY MEMBER ORGANISATIONS
58.09.01	<p>Sri K.K Behera, Director, GSI and Sri Jaydip Mukherjee, Director GSI made elaborate presentation on the exploration activities of GSI (SU) Odisha conducted during 2021-22. They explained regarding the activities of 11 NGCM project and 5STM projects under Mission – I. Under Mission –II, 17 investigations have been carried out on commodities like iron, manganese, base metal, gold, graphite, diamond, REE and coal. There were 5 items under G2 level including 1 item is on base metal & coal exploration whereas 3 items are on manganese, two items under G3 level including (each for gold & graphite) and 7 items under G4 level including mineral like base metal, diamond, REE and coal. Apart from this, specialized projects for mineral prognostication are being taken up. He indicated that 26,701m drilling was completed in coal and non-coal investigation and priority was given to reassess the resource of 12 non-working mining lease which were expired in March, 2020. During the 2021-22, GSI has handed over 9 GRs (6 GRs of non-working mines) to State Government for auction. Besides this, GSI has also handed over 23 Geological memorandum of G-4 level to Government of India. They presented a detailed account on the programme of the exploration activities for F.S. 2022-23 which includes 32 items. Out of which, 11 projects under Mission – I (08 NGCM project & 3 STM projects) and 20 mineral exploration</p>

	and 1 item on Engineering Geology.
58.09.02	<p>Dr. P C Mishra, Joint Director Geology, Directorate of Geology made an elaborate presentation on the exploration activities undertaken during 2021-22 in respect of coal, iron ore, manganese ore, limestone, graphite, base metal, iolite decorative stone, pyrophyllite, quartz & quartzite and one geophysical survey for graphite.</p> <p>Dr. Mishra mentioned that Coal exploration in Dip side of Block -IV of Ib valley where cumulative thickness of 275.5m coal have been intercepted during drilling. Exploration of Mankarnacha iron ore block at G2 level is in progress and so far achieved 7092m of drilling meterage and G3 level of investigation for manganese ore around Malda identified potential manganese ore which will be up scaled. Exploration for graphite at G2 level around Khalpadar Block in Rayagada district is continuing and so far achieved 1414.60 m of drilling. G3 level prospecting around Beheramunda of Balangir District revealed residual occurrence of graphite in the 12 scout boreholes. Investigation for graphite at G3 level & G4 level were carried out in Bandhabhuin area & Faqirparha of Dhenkanal district respectively. Exploration for graphite around Bandhabhuin will continue in next F.S. Investigation for limestone around Bimta of Sundargarh district at G4 level delineated the residual limestone outcrops. Geophysical survey for base metal around Bhikabahaki of Balangir district identified potential anomalous zones and IP survey will be continued. Investigation for Decorative stone around Garabandha of Gajapati district at G3 stage identified 2 prospective blocks. Investigation for assessment of quartz and quartzite was taken up around Maharajpalli of Malkangiri District, Gobira in Sundargarh district and Rautalipat-Tangia of Mayurbhanj at G3 stage were completed. Investigation for pyrophyllite around Baliadihi of Keonjhar District was carried out at G3 stage. Investigation for artisan grade stone at G3 stage carried out around Mathura of Ganjam District identified a workable potential block for exploitation to cater to the needs of artisans. Investigation for iolite around Bandoguda of Kalahandi district was completed. Dr Mishra briefly outlined the exploration programmes of the Directorate of Geology, Odisha for 2022-23. The programme comprises Iron & Manganese ore -7 blocks (G2-5 and G3-2) Graphite -4 blocks (G2-1 & G3-3), Limestone & Dolomite – 3 blocks (G4), Base metal-1 (G4), Decorative stone – 3 blocks (G3), Quartz & quartzite – 4 blocks (G3), Pyroxenite-1 block (G4) & MPS for Gemstone -1 block (G4). The proposed annual exploration programme was placed in the house for approval before finalization. (Annexure-II)</p>
58.09.03	<p>Sri S. K Sit, General Manager (Geology), OMC Ltd. outlined the review of work of OMC during 2021-22 in their leaseholds of chromite, iron ore and bauxite prospects. He appraised that as OMC Ltd. is a mining company, their exploration activities are confined in working leases to prove the reserve from G-2 to G-1 level. The major minerals like Iron, Manganese, Chromite, Bauxite, Limestone</p>

	<p>and minor minerals like Khondalite and gemstone are being explored in last field season. Iron ore has been explored in Tiring pahar, Jilling, Guali, Gandhamardan and Daitari mines; Chromite ore in south Kaliapani, Sukrangi, Kaliapani, Kalarangi, PL Block-1 and PL Block-2 mines. In 2021-22, OMC Ltd has undertaken geological mapping in 2173 Hectare area. In total, 69061.16m of core/RC drilling has been achieved and 40258 nos. of samples have been analysed. For F.S. 2022-23, OMC Ltd proposes geological mapping target over 3117 Ha and core/RC drilling target of 71000m. Target of drilling for iron and manganese ore in Kurmitar, Dalita, Mandajoda, Jajang, Lasi, Mahaparbat, Khandabandha, Banspani, Dalki, Parlipada, Roida, Jilling area and for chromite ore in South Kaliapani, Sukranngi, Kthpal and Baniapank area for assessment of ore reserves are envisaged subject to availability of required forest permission. The minor minerals like Khondalite is being explored in Jajpur, Cuttack and Khorda district.</p>
58.09.04	<p>Sri Saptarshi Ghosh, Asst. Manager (Geology), MECL presented the exploration activities of MECL in Odisha during 2021-22. He highlighted the quantum of work done for Manganese and graphite. 4 blocks of manganese are ready for auction in G-2 level namely Tamia, Rengali, Biarpalli and Babja. Dungurupalli block has been explored in G-3 stage. Kumiapalli, Antapalli and rengali block has been explored in G-4 stage and the geological reports have been submitted. The Rengali graphite block is not a potential block. For Iron ore, the agency has started exploration in G-3 level in Malangtoli-D, E & G blocks which are NMET approved projects. The Malangtoli-C block awaits forest clearance. Exploration for manganese in Larambha-Kanaital, Pudapadar-Bharatpahar block has started in G-4 stage which is also a NMET approved project. He also briefed the house regarding their mineral exploration programmes for F.S.2022-23. Dr P. C. Mishra, JDG appealed to MECL to relook into the sub-block notified areas in the event of revocation of 10 A (2) (b) cases which were earlier deducted from the block area. So these left out areas need to be explored while undertaking exploration in consultation with DM (O).</p> <p style="text-align: right;">Action: MECL & DM(O)</p>
58.09.05	<p>Sri B. L. Gurjar, RCOM, IBM presented the achievements of Bhubaneswar Regional Office during the period Dt 21.03.21 to 20.03.22. 145 mines were inspected during the period to ensure systematic mineral development as per MCDR Rule, 2017. The exploration of Iron, Manganese, Bauxite and Limestone have been taken place in existing leases. Stopping of applications, scale relaxation applications were also processed and mine closure plans were submitted. RCOM suggested to bring all exploration areas under GIS platform. Encouraged all the exploration agencies to submit geological reports to IBM and State Government before 30th June of every year.</p> <p style="text-align: right;">Action: All Exploring Agencies</p>

58.09.06	K. Chakrabarty, Regional Director, AMD, Jamshedpur presented the exploration activities of AMD in Odisha during 2021-22 for uranium, columbite-tantalite. Which are mostly carried out for QPC type uranium mineralization in Dhanjori basin, Mayurbhanj District and shear controlled hydrothermal vein type mineralization in Gangpur basin. The activities of AMD during 2021-22 were mostly concentrated in Bagiyabahal-Baratangra & Gangpur Basin in Sundargarh district & Pandikimal RMRE prospect where Nb-rich Columbite-Tantalite has been delineated in granite pegmatite. He added that the investigation taken up during F.S 2021-22 will be continued for F.S 2022-23 based on the merit and forest clearance. The exploration activities of AMD chiefly include hydrogeochemical sampling, geological mapping and radiometric survey along Garjanbahal-Rajpur area of Sundargarh and Jharsuguda District. Some important radioactive zones were also identified in Sundargarh and Jharsuguda districts. He appealed to exploring agencies for gamma ray logging in deep boreholes drilled by Directorate of Geology, Odisha in potential zones. Also, unconformity related uranium mineralization is being explored in Chhattisgarh basin of Baragarh District. He expressed his concern regarding the proposed drilling sites that fall in forest areas and thankful to Director of Mines, Odisha for constituting a nodal body to facilitate forest clearance for exploration projects.
58.09.07	Sri Vinod, R.V., Manager (Geology), OMECL presented the works undertaken during 2021-22 by OMECL. OMECL has completed G-2 stage exploration in Nunapaimali bauxite block. G-4 level of exploration is continuing in Khandadhar Iron Ore block which has got NMET approval for scout drilling. OMECL has shown interest in getting blocks for graphite exploration in future. G-2 stage exploration is being carried out in Thakurani Iron Ore block, Keonjhar district. Exploration of Talabasta fireclay block in G-3 stage and Thapen graphite block in G-4 stage are under progress.
58.09.08	Sri R. Tyagarajan, HOD (Exploration) CMPDIL presented the work undertaken by CMPDIL during 2021-22 in Talcher and IB valley Coalfields. He informed that CMPDIL has achieved 1,52,549.8 m of drilling over 20 blocks which includes CIL block – 35,554.5m, Non-CIL block – 1,16,995.3m. An estimated resource of 4866.615mt of coal in Talcher Coal field and 1066.438mt of coal in Ib valley coal field has been added to National Inventory. He also said that CMPDIL is planning to diversify the exploration activities by adding non-coal exploration into agenda. CMPDIL has submitted proposals Director of Mines, Odisha to carry out G-4 stage exploration of base metals (Pb, Zn, Mn) in Palam Block in Kalahandi District during F.S. 2022-23. In reply, it was clarified that a Committee meeting will be convened soon for allotment of exploration of mineral blocks among the agencies.
58.09.09	Sri Debasis Mohanty, DDG, O/o Chief Engineer, Planning of Water Resources Deptt., Odisha highlighted the achievement of the Department for F.S. 2021-22. He presented the work done in Chheligada Head Works Division, Kalahandi Investigation Division, Padampur, IB (Sundargarh) and Cuttack Investigation

	Divisions. 3-D geological logging, Rock Mass Classification and large-scale geological mapping have been taken up in the investigation projects. He briefed the number of boreholes drilled and the numbers of boreholes to be drilled in year 2022-23. He also summarized regarding the proposed projects for F.S. 2022-23.
58.09.10	<p>Dr B. M. Faruque, Member, SGAT briefed the findings of GSI in the pegmatite hosted Tin ore fields of Malkangiri districts where occurrence of lithium bearing mica pegmatites have been reported. He appealed to take up further exploration and assessment of lithium in the Bengpal Group of rocks. In this regard, DG(O) clarified that all the exploration data available with DG(O) have been compiled and process of digitization. As a part of data sharing for Mineral Resource Mapping of the State those data will be analysed and potential target areas will be taken up for exploration.</p> <p style="text-align: right;">Action: OMECL & DG(O)</p> <p>Dr Faruque, appraised the house regarding earlier findings of gold in Chakradihi area and basemetal in Adash area where GSI has already taken up exploration programmes and Adash block has been upgraded to G-2. He also highlighted the potential Madaguda graphite mines in Kandhamal district and urged to examine the extension of Madaguda graphite belt around Sirla, to which it was clarified by DG(O) that the Sirla area is coming within the Kotagada Elephant corridor so further exploration could not be taken up in Tumudibandh belt.</p> <p>Participating in the discussion, Sri G. C. Das of SGAT suggested for reappraisal of stratigraphy and structure of B-K Belt and remodeling of Fe/Mn ore bodies through deep drilling and compilation of exploration data of all exploring agencies to which Dy. D.G. clarified that GSI, SU has already taken up the assignment and the work is under progress. Further Sri Das, appealed to M/s OMC Ltd. for detailed structural analysis of steep dipping chromite Band-1 in South Kaliapani which exhibits low plunge as OMC is planning for underground mines. Similarly, martite has been reported in Gandhamardan iron ore prospect of OMC suggesting diverse nature of iron ore which should be taken care of for occurrence volcanics and hard ore in the other side which should be taken care up. GM (Exploration), M/s OMC Ltd. clarified that OMC formulated a geophysical survey to undertake more detailed study through experts to understand the structure.</p>
58.10.00	DISCUSSION ON AGENDA ITEMS OF THE 58TH SGPB
58.10.01	<p>SUGGESTION FROM DG (O):</p> <p>1) State Govt. is the beneficiary from auction of mineral blocks. Exploration of mineral blocks is the backbone for preparing a block for auction. But all exploration agencies are facing a lot of difficulties to carry forward the exploration in time for forest clearance issues which consumes a lot of time. In absence of a definite mechanism, it is suggested to engage a third party by Govt. through Forest Cell of DM (O) to facilitate the forest diversion proposals.</p> <p style="text-align: right;">Action: S&M Dept. & DM(O)</p>

2) As per the suggestion of the State JWG, a database is to be created in DG(O) incorporating the DGPS boundary co-ordinates, all MLs, CL blocks under exploration, auctionable blocks, blocks held under erstwhile 10A(2) (b)cases along with geological details and exploration details in a GIS environment. Hence all exploration agencies are required to submit the Shape files (.shp) to DG (O) while the Shape files of ML block need to be routed through DM (O) to organize the work and identify the gap areas for further cause of action.

Action: All Stakeholders

3) All bauxite processing plants are utilizing metallurgical grade bauxite having +40% Al₂O₃ and 4% SiO₂ while the threshold values of bauxite has been revised to +30% Al₂O₃ and <7% SiO₂. So the status of the low grade bauxite generated during exploitation by all the ML holders need to be apprised to Govt. for optimum utilization of the resource.

Participating in the discussion, Dr P.C Mishra, JDG, DG (O) urged M/s NALCO to declare the status of bauxite resources other than metallurgical grades utilised by NALCO, since its exploitation in Panchpatmali ML to which representatives of NALCO clarified that mineral rejects of bauxite generated during mining are being stockpiled and the resource and grade are also documented and submitted to IBM. In reply, Dr Mishra, JDG appealed to IBM to take up a project work on optimum utilization of low grade bauxite stored in the dump by NALCO and other miners after being assessed qualitatively and quantitatively.

He also suggested for fixation of average Annual Sale Price of all grades bauxite (Low alumina and high silica) by IBM. He clarified that after revision of the threshold values of bauxite grade to contain +30% Al₂O₃ and <7% SiO₂, it is observed during exploration and estimation of resource of bauxite blocks, there occurs a grade of bauxitised horizon where Al₂O₃ percentage goes up to 48% but silica content is high i.e. more than 7%. These horizons could be utilised by blending with high grade metallurgical bauxite. But IBM has not prescribed any ASP for high silicate bauxite. Hence IBM need to look into the matter for fixing up of High Silica Bauxite and its utilization through the price of aluminous laterite is being taken into consideration. Hence, IBM should look into the matter.

Further, Dr S.C Mitra, Dy, D.G GSI (S.U) opined that low alumina and high silica bauxite could be utilized as refractory material. He also added that this high silica bauxite may be used in production of mullite at high temperature.

Action: IBM. & DM(O)

4) (a) Consequent upon Amendment of MEMC Rule, 2022, Notified Private Exploration Agencies (NEA) will enter into the field of exploration. The background exploration data of DG (O) should be made available to the agencies with approval of Govt. for preparation of exploration proposals.

Action: S&M Deptt. & DG(O)

(b) For better implementation of the NMET approved exploration projects in the state, representative from GSI, IBM and State Govt. may take up a field level technical appraisal periodically, so as to examine the feasibility of expanding

	<p>the scope of exploration in the adjoining Geological milieu.</p> <p style="text-align: right;">Action: S&M Deptt.</p> <p>(c) Both hard copy and soft copy of the final GRs of major mineral blocks for auction submitted by different agencies need to be shared with DG (O) for record and data compilation.</p> <p style="text-align: right;">Action: DM(O)</p> <p>(d) Directorate of Minor Mineral and other intending institutions/societies like Institute of Geoscientist (IOG) & Geological Society of India (Odisha Chapter) dealing with R & D activities may be inducted as Member Organisation of SGPB.</p> <p style="text-align: right;">Action: All Members</p> <p>SUGGESTION FROM IBM</p> <ol style="list-style-type: none"> 1. Information on NMET fund reconciliation as per supplied format may be provided on Monthly basis. 2. Indian Bureau of mines is forwarding soft copy and hard Copy of Draft MP/MMP/RMP for comments of state government. The comments/suggestion/views of State Government will be helpful for better governance of the mineral sector. 3. Information on Auction Blocks/DMF/PMKKY etc may be provided regularly. 4. Report of exploration as carried during the year 2020-21 onwards by all Government agencies (State Govt./GSI/MECL, OMECL) may be provided to IBM as per Rule 72 of MCDR 2017. <p style="text-align: right;">Action: IBM & DM(O)</p>
58.11.00	After detailed deliberation on the activities of the exploration agencies during 2021-22 and their programme of exploration for 2022-23 in the State, the Annual Field Season Programme of the Directorate of Geology, Odisha, has been approved by all the members as no overlapping or duplication is found in the field programme.
58.11.01	Dr S.C Mitra, Deputy Director General, GSI, (SU) Odisha briefed the deliberations of all the member organizations. He emphasized on simplification and facilitation of forest clearance issues faced by the exploring agencies. He appreciated the effort of DG (O) for evaluating the resource of quartzite during exploration of pyrophyllite and appealed all the exploration agencies involved in mineral exploration to assess all the associated minerals in a block and appealed to execute the mandate of the SGPB for mineral development of the state.
58.12.00	VOTE OF THANKS
	Sri N.N Singhdeo, Joint Director Geology, DG (O) proposed Vote of Thanks. He thanked hon'ble Principal Secretary to Govt., Steel & Mines Department and Chairman SGPB for his active participation, keen interest and valuable guidance. He further thanked all the members of SGPB for their active participation and hearty cooperation.

ANNEXURE-I

**LIST OF PARTICIPANTS OF 58TH SGPB MEETING HELD ON 27TH JULY 2022
CHAIRMAN: SRI DEORANJAN KUMAR SINGH, IAS, PRINCIPAL SECRETARY,
STEEL & MINES DEPARTMENT, GOVT. OF ODISHA**

MEMBER SECRETARY: SRI MANORANJAN MAHAPATRA, DIRECTOR OF GEOLOGY, ODISHA

Sl. No.	Name	Designation	Organization
1.	Sri D. D. Biswal, IFS	Director of Mines, Odisha	Dir. of Mines, Odisha
2.	Sri Balwant Singh, IAS	MD, OMC Ltd	Odisha Mining Corporation Ltd.
3.	Dr. S.C Mitra	Dy. Director General	GSI, SU: Odisha
4.	Sri B.L. Gurjar	Regional Controller of Mines	Indian Bureau of Mines
5.	Ms. Soudamini Sethi, OAS	Addl. Secretary to Govt.	Steel & Mines Department
6.	Sri Kewal Krishan	RMG	Indian Bureau of Mines
7.	Sri R.K. Kar	JDG, Keonjhar	Dir. of Geology, Odisha
8.	Dr. P.C. Mishra	JDG	Dir. of Geology, Odisha
9.	Sri N.N. Singhdeo	JDG, Balangir	Dir. of Geology, Odisha
10.	Sri J.P. Behera	JDG	Dir. of Geology, Odisha
11.	Dr. P.K. Chand	JDG	Dir. of Geology, Odisha
12.	Sri N.K. Mishra	JDG, Sambalpur	Dir. of Geology, Odisha
13.	Sri S. Mishra	JDG, Berhampur	Dir. of Geology, Odisha
14.	Sri D. Sharma	JDG, Dhenkanal	Dir. of Geology, Odisha
15.	Md. Q.J. Khan	JDG, Koraput	Dir. of Geology, Odisha
16.	Dr. S.A. Jena	DDG	Dir. of Geology, Odisha
17.	Dr. S. Sahoo	DDG	Dir. of Geology, Odisha
18.	Sri D.K. Sahoo	DDG	Dir. of Geology, Odisha
19.	Sri S. Rout	DDG	Dir. of Geology, Odisha
20.	Ms. Sitoshna Sahoo	Geologist	Dir. of Geology, Odisha
21.	Ms. Swagatika Dash	Geophysicist	Dir. of Geology, Odisha
22.	Sri M. R Behera	Geophysicist	Dir. of Geology, Odisha
23.	Ms. S.S. Nayak	Geologist	Dir. of Geology, Odisha
24.	Sri B. Bhabesh Bal	Geologist	Dir. of Geology, Odisha
25.	Dr. Suman Krishna Sit	General Manager (Geology)	Odisha Mining Corporation Ltd.
26.	Sri B. Nayak	Sr. Manager (Geology)	Odisha Mining Corporation Ltd.
27.	Sri S. Sinha	Director, Geology(OMECL)	OMECL
28.	Sri B.C. Sahoo	DDG DG(O)	OMECL
29.	Sri Vinod R.V	Manager (Geology)	OMECL
30.	Sri K. Chakrabarty	Regional Director	AMD, Jamshedpur
31.	Sri Rabindran P	Head(Exploration)	MECL, Nagpur

32.	Sri Ramesh Tyagrajan	HoD, Exploration	CMPDIL
33.	Sri Debasis Mohanty	Deputy Director Geology	Chief Engineer, Planning, Water Resources Department
34.	Sri Saptarshi Ghosh,	Asst. Manager (Geology)	MECL, Nagpur
35.	Dr Bibhu Ranjan Nayak	Chief Scientist	IMMT
36.	Dr. Nilima Dash	Sr. Scientist	IMMT
37.	Sri S. Basak	GM (P& D)	RSP
38.	G. Rajesh	Nodal Officer	PCCF, Odisha
39.	Dr. Arya Nath	Sr. Manager	NALCO
40.	Sri Arijit Bera		NALCO
41.	Sri S.K. Patnaik	GM(Mining)	NALCO
42.	Sri P.T. Sahoo		NALCO
43.	Dr. B.M. Faruque	Representative, SGAT	SGAT, Bhubaneswar
44.	Sri G.C. Das	Representative, SGAT	SGAT, Bhubaneswar

DIRECTORATE OF GEOLOGY, ODISHA
Exploration proposals for F.S. 2022-23

Sl. No.	Name of exploration block
1	Exploration for Iron ore in Mankarnacha Block, Keonjhar & Sundargarh districts (G-2level) (<i>Outsourcing</i>)
2	Exploration for Manganese around Malda Block-II, Sundargarh District & Keonjhar District (G-2 level) (NMET Project)
3	Exploration for Manganese around Malda Block-III, Sundargarh District & Keonjhar District (G-2 level) (NMET Project)
4	Exploration for Iron ore in Baliapahar Block, Sundargarh district (G-2level) (<i>Outsourcing</i>)
5	Exploration for Iron ore in SGBK Mine, Keonjhar district (G-2level) (<i>Outsourcing</i>)
6	Exploration for Graphite around Khalpadar, Rayagada district (G-2 level) (<i>Outsourcing</i>) (Taken over ML)
7	Exploration for Iron ore in Thakurani Block, Keonjhar district (G-3level) (<i>Outsourcing</i>)
8	Exploration for Manganese around Hardatal, Balangir district (G-3 level) (<i>Outsourcing</i>) (NMET Project)
9	Exploration for Graphite around Narigapanga, Rayagada district (G-3level) (<i>Outsourcing</i>) (NMET Project)
10	Exploration for Graphite around Bandhabhuin, Dhenkanal district (G-3 level) (NMET Project)
11	Exploration for Graphite around Kanja-Kantakul, Angul District aided by Geophysical survey (G-3 level)
12	Investigation for assessment of DDS around Rasol & Giridharprasad in Dhenkanal District (G-3 stage)
13	Investigation for DDS around Deula, Gajapati district (G-3 stage)
14	Investigation for DDS around Rajasitapur in Gajapati district (G-3 stage)
15	Investigation for Quartz & Quartzite around Chandili, Subarnapur District (G-3 stage)
16	Investigation for Quartzite around Telipali, Subarnapur District (G-3 stage)
17	Investigation for Quartz around Sukruli, Mayurbhanj district (G-3 stage)
18	Investigation for quartz & quartzite around Katanpalli, Malkangiri district (G-3 stage)
19	Geophysical investigation for base metal around Bhikabahali, Balangir district (G-4 level)
20	Investigation for Pyroxenite around Chadiri, Mayurbhanj district (G-4 stage)

21	Investigation for Gemstone around Sardhapali & Jamlapadar Boudh District (G-4 Stage)
22	Investigation for Limestone & Dolomite around Bonrai, Sundargarh district (G-4 level) (Taken Over ML)
23	Investigation for Dolomite around Banki, Sundargarh District (G-4 Stage) (Taken Over ML)
24	Investigation for Limestone around Putka, Bargarh District (G-4 Stage)