

**Ministry of Mines**  
**National Mineral Exploration & Development Trust**  
**Minutes of 12<sup>th</sup> meeting of Technical-cum-Cost Committee - II (TCC - II)**  
**held on 22<sup>nd</sup>, 25<sup>th</sup>, 26<sup>th</sup> August, 2025 and additional session on 27<sup>th</sup> August, 2025**

The 12<sup>th</sup> meeting of Technical-cum-Cost Committee – II (TCC - II) of National Mineral Exploration and Development Trust (NMEDT) was held through video conferencing under the Chairmanship of Shri Pradeep Singh, Deputy Director General (DDG), Geological Survey of India (GSI) and Chairman, TCC-II, NMEDT on 22<sup>nd</sup>, 25<sup>th</sup>, 26<sup>th</sup> August, 2025 and additional session on 27<sup>th</sup> August, 2025.

Members of TCC-II, NMEDT and representatives from DGM Assam, Mineral Exploration and Consultancy Limited (MECL), DMG Rajasthan, DGM Mizoram, Central Mine Planning & Design Institute Limited (CMPDI), DGM Arunachal Pradesh, M/s Vardan Environet LLP, M/s Gemcokati Private Limited, M/s Envirogreen Consultants (India) Private Limited, M/s Bhushilp Mines and Minerals Private Limited, M/s Ocean Drilling & Exploration Private Limited, M/s Maheshwari Mining Private Limited (MMPL), FCI Aravali Gypsum & Minerals India Limited (FAGMIL), M/s Geo Marine Solutions Private Limited, M/s Geovale Services Private Limited, M/s APC Drilling & Construction Private Limited, M/s Critical Mineral Trackers (CMT), M/s Eartnenviro Lab Private Limited, M/s Enkay Enviro Services Private Limited, M/s Hindmetal Exploration Services Private Limited, M/s Novomine India Private Limited, M/s Natural Resource Division Tata Steel Limited, etc. have attended the meeting through video conferencing mode.

The list of participants is at **Annexure-1**.

Shri Pradeep Singh, DDG, GSI and Chairman, TCC-II, NMEDT warmly welcomed all TCC-II members and every participant representing various State DGMs/DMGs, Notified Exploration Agencies (NEAs) and Notified Private Exploration Agencies (NPEAs). In his opening remarks Shri Pradeep Singh informed that review and revision of present Schedule of Charges (SoC) of NMEDT is underway. Given that the costs for certain projects involve rates higher than the standard SoC rates, these costs will be provisional and subject to revisions based on the SoC of NMEDT.

**Agenda 12.1 Technical Evaluation of New Project Proposals**

**Agenda 12.1.1 Reconnaissance Survey (G4) for copper and associated mineralization in Salwari-Narsinghpuri-Pachlagi Area, Sikar District, Rajasthan.**

**[Implementing Agency: M/s Vardan Environet LLP]**

- a) The proposed exploration area, covering an area of 28.48 sq. km, is located on Survey of India Toposheet No. 45M/10 and falls within parts of Sikar District, Rajasthan. About 1.52 sq. km area falls within Salwari Protected Forest. In-principle-approval was given for this proposal in 7<sup>th</sup> TCC-II meeting held on 24<sup>th</sup> & 25<sup>th</sup> March 2025.
- b) Comments from DMG, Rajasthan were pending during the meeting.
- c) M/s Vardan Environet LLP informed that the proposed area lies within the southern part of the Khetri belt, where Uranium mineralization is currently being mined by UCIL at the Rohil site. This deposit also features an average copper content of 1500 ppm. The Geological Survey of India (GSI), during its field season 2015–16, conducted a Large-Scale Mapping (LSM) in part of the proposed G-4 exploration block. Five samples from this study reported copper values ranging from 0.36% to 3.45%, along with molybdenum concentrations up to 201.11 ppm and one sample indicating a TREE (Total Rare Earth Elements) value of 0.5%. Geophysical investigations by GSI (2016) in the north-eastern Narsinghpuri area have identified induced polarization (IP) chargeability anomalies with strike lengths between 1 km and 1.5 km, corroborated by

ground magnetic surveys. Based on these geophysical results, GSI also recommended drilling in two boreholes in the Salwari area. Additionally, a heliborne survey conducted by AMD identified conductive zones within the same region. Several boreholes drilled by AMD, and core samples studied by GSI (FS 2015–16), revealed multiple sulphide-bearing zones containing pyrite, pyrrhotite, covellite, and chalcopyrite. In the central part of the proposed block, GSI's detailed mapping in the Chokari–Bamnara area reported copper values ranging from 440 ppm to 0.36% across two channels in the northern portion of the mapping area, along with moderate TREE values. Further, while exploring for iron in the Pachlagi–Dhaniyal area, MECL drilled a borehole at the northern end of the current block. This borehole intersected two copper mineralized zones, with copper grades of 0.14% and 0.37%, respectively.

- d) Field investigations conducted by the Vardan Environet LLP team in November 2024 and July 2025, recorded significant surface indications of mineralization. These include brecciation, malachite staining, shearing, albitization of rocks of Ajabgarh Group. Hornblendite with magnetite-bearing albitite showing malachite staining, silicification, and the presence of calcite and fluorite veins. During fieldwork six boreholes were also planned in the area. Further, out of four samples collected in November 2024, one sample yielded a notably high copper value of 2930 ppm, along with elevated vanadium (2588 ppm) and titanium dioxide (TiO<sub>2</sub>) content of 27.03%. These results support the presence of sulphide mineralization in the area.
- e) The TCC-II agreed for total 1500m drilling in 6 boreholes with average depth of 250m each. However, the committee opined that the project will follow a phased implementation approach. In Phase-1, only 2 boreholes will be drilled with depth of 250m each and the subsequent drilling in remaining 4 boreholes will be decided after review.

#### **Recommendation TCC-II**

***The committee recommended the proposal for approval of EC for “Reconnaissance Survey (G4) for copper and associated mineralization in Salwari-Narsinghpuri-Pachlagi Area, Sikar District, Rajasthan” with an estimated cost of 331.00 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 2A & 2B. The item will be reviewed after 4 months. Total 6 boreholes planned, each borehole 250m depth. In first phase 2 boreholes to be drilled. Subsequent drilling will be after review of outcome of these boreholes.***

#### **Agenda 12.1.2 Reconnaissance Survey (G4) for Vanadium-Titanium in Risewada-Lodhiwada Area, Balaghat District, Madhya Pradesh.**

##### **[Implementing Agency: M/s Gemcokati Private Limited]**

- a) The proposed exploration area of 60.00 sq. km., falls in Survey of India Toposheet number 64C/11 in parts of Balaghat district, Madhya Pradesh. More than 90% of the proposed area falls within Forest area. In-principle-approval was given for this proposal in 7<sup>th</sup> TCC-II meeting held on 24<sup>th</sup> & 25<sup>th</sup> March 2025. As per the F.No. II-18015/68/2014-LWE-III dated 1 April, 2025, Ministry of Home Affairs, the district corresponding to the proposed block area has been removed from LWE most affected districts.
- b) Comments from AMD, GSI, MECL & DGM Madhya Pradesh were pending during the meeting.
- c) As informed by the implementing agency, in the proposed area the Geologists of the Exploration Wing of Gemcokati Exploration Pvt Ltd. visited the area on 17<sup>th</sup> & 18<sup>th</sup> March 2025. During their visit few grab samples were collected from the block areas

for chemical analysis. The chemical analysis shows  $Al_2O_3$  value range from 22 – 51%,  $Fe_2O_3$  12 – 60%,  $TiO_2$  3 -6%,  $V_2O_5$  0.06 – 0.12%, Sc 13-30% & Ga 47-51%. Chemical analysis report of Aluminous Laterite (Bed Rock Samples), collected during Reconnaissance survey shows in both adjacent NMET funded blocks (Maneri – Sitapala & Bhursadongri- Murum);  $V_2O_5$  ranges from 0.11 to 0.36 % for MS Block and 0.11 -0.24 % for BM Block, additionally  $TiO_2$  ranges 0.82 – 5.40 % for MS Block and 3.35 - 6.63% for BM Block. This area falls under Gold OGP Area.

- d) The TCC-II agreed for proposed reconnaissance survey at G4 level within the time schedule of 8 months.

#### **Recommendation TCC-II**

**The committee recommended the proposal for approval of EC for “Reconnaissance Survey (G4) for Vanadium-Titanium in Risewada- Lodhiwada Area, Balaghat District, Madhya Pradesh” with an estimated cost of 44.97 Lakh (including GST) within the time schedule of 8 months and submission of the report as per Annexures 3A & 3B. The item will be reviewed after 4 months.**

#### **Agenda 12.1.3 Preliminary Exploration (G3) for Bauxite in Ran Block, Dev Bhumi Dwarka District, Gujarat.**

##### **[Implementing Agency: M/s Gemcokati Private Limited]**

- a) The proposed exploration block, covering 7.87 sq. km area, is located on Survey of India Toposheet No. 41F/8 and falls within parts of Dev Bhumi Dwarka District, Gujarat. In-principle-approval was given for this proposal in 7<sup>th</sup> TCC-II meeting held on 24<sup>th</sup> & 25<sup>th</sup> March 2025.
- b) M/s Gemcokati Private Limited informed that the CGM, Gujarat has given NOC approval for the proposed block for G3 stage of exploration.
- c) As informed by the implementing agency, the proposed block was visited & validated on 7<sup>th</sup> April 2025 in association with the Geologists of CGM Gujarat, Khambhalia, Dwarka Region. Bed Rock Samples thus collected were urgently analyzed from M/S Shiva Lab yielding –  $Al_2O_3$  – (11.28 – 59.58%);  $TiO_2$  – (0.32 – 4.39%);  $Fe_2O_3$  – (1.45 – 7.33%);  $SiO_2$  – (2.13 – 48.68%); CaO – (0.55 – 11.01%); MgO – (0.24 – 0.90%); Ga – (13.77 – 48.7 ppm); Sc – (9.03 – 21.22 ppm) Li – (9.15 – 71.05 ppm); Nb – (<5 – 64 ppm) and Total Rare Earth Elements (TREE) – (35.27 – 179.2 ppm). The Laterite exposed area of roughly 1 sq. km. seems to be highly potential in view of Titaniferous Bauxite with high Ga & Li values. Rest of the area is covered by the Fossiliferous Limestone of Gaj formation over Deccan trap, which need to be verified through drilling. So, to supplement earlier works, a G3-stage exploration program has been proposed.
- d) The TCC-II agreed for total 480m drilling in 16 boreholes. However, the committee opined that the project will follow a phased implementation approach. In Phase-1, only 4 boreholes will be drilled with depth of 30m each and the subsequent drilling in remaining 12 boreholes will be decided after review. The committee agreed for pitting in 1m x 1m x 2m in grid of 800m x 800m.

#### **Recommendation TCC**

**The committee recommended the proposal for approval of EC for “Preliminary Exploration (G3) for Bauxite in Ran Block, Dev Bhumi Dwarka District, Gujarat” with an estimated cost of 115.76 Lakh (including GST) within the time schedule of 12 months and submission of the report as per Annexures 4A & 4B. The item will be reviewed after 5 months. Total 16 boreholes planned, each with 30 m depth. Phase-I, 4 boreholes (30 m each), Phase-II, 12 boreholes (30 m each) at spacing of 800m x 800m. Subsequent drilling will be after review of outcome of Phase-I boreholes.**

**Agenda 12.1.4 Preliminary exploration (G3) for Limestone in Choto Lakhindong block, Dima Hasao District, Assam.**

**[Implementing Agency: DGM Assam]**

- a) The proposed exploration block, covering an area of 3.00 sq. km, is located on Survey of India Toposheet No. 83C/11 and falls within parts of Dima Hasao District, Assam.
- b) As informed by the implementing agency, in accordance with the MMDR Act, 1957, and the Mineral (Auction) Rules, 2015, the Directorate of Geology and Mining (DGM), Assam, intends to undertake exploration activities within the proposed block. Maheswari Mining Private Limited has already conducted G-3 level exploration in the northwestern part of Boro Lakhindong, located in Dima Hasao District, approximately 100m northwest of the proposed block. Their findings revealed significant potential for limestone mineralization. Approximately 60% of their block is underlain by Upper Sylhet Limestone of the Shella Formation, with limestone thickness ranging from 4.00 meters to 100.00 meters across five boreholes, and an average thickness of about 85.32 meters. Analysis of core samples indicated CaO content ranging from 34.14% to 52.93%, and the total estimated limestone reserve stands at approximately 498.96 million tonnes. Given the proximity of the proposed block - only about 100m from the Boro Lakhindong Limestone Block - and the encouraging results obtained there, this block has been identified for G-3 level exploration. The exploration will be conducted in a systematic manner, beginning with geological mapping and surveying, followed by borehole drilling at 800m x 800m spacing as per the Minerals (Evidence of Mineral Contents) (MEMC) Rules, 2015, for G3 level exploration.
- c) The TCC-II advised modification in block boundary in the western part of the proposed block. Initially detailed geological mapping to be done followed by a total of 280m drilling in 4 boreholes with average depth of 60m in 3 boreholes and 100m depth in 1 borehole in grid of 800x800 m.
- d) The cost sheet is tentative and subject to revision of Schedule of Charges (SoC) of NMEDT.

**Recommendation TCC**

***The committee recommended the proposal for approval of EC for "Preliminary exploration (G3) for Limestone in Choto Lakhindong block, Dima Hasao District, Assam" with an estimated cost of Rupees 248.32 Lakh (including GST) within the time schedule of 12 months and submission of the report as per Annexures 5A & 5B. The item will be reviewed after 5 months. Total 280m drilling in 4 boreholes with average depth of 60m in 3 boreholes and 100m depth in 1 borehole will be done in grid of 800m x 800m.***

**Agenda 12.1.5 Reconnaissance Survey (G4) for REE and associated minerals in Silchang-Nellie Area in Morigaon, Nagaon and West Karbi Anglong District of Assam.**

**[Implementing Agency: DGM Assam]**

- a) The proposed exploration area, covering 55.00 sq. km, is located on Survey of India Toposheet No. 83B/8 and falls within parts of West Karbi Anglong District, Assam.
- b) As per the comments received from GSI, the proposed area has an overlap of 3.82 sq. km. with GSI's G4 stage exploration block of FS 2019-20. Also, as per the comments of MECL the proposed area has 50% overlap with the approved exploration block in favour of MECL in 42<sup>nd</sup> EC meeting held on 2<sup>nd</sup> June 2025.

- c) In view of the overlapping of proposed block with GSI's & MECL's exploration blocks, the TCC-II opined that the proposed block should not be recommended for a reconnaissance survey.

**Recommendation TCC**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.6 Preliminary exploration (G3) for Limestone in north of Krungming block, Dima Hasao District, Assam.**

**[Implementing Agency: DGM Assam]**

- a) The proposed exploration block, covering an area of 5.80 sq. km, is located on Survey of India Toposheet No. 83C/14 and falls within parts of Dima Hasao District, Assam.
- b) As informed by the implementing agency, in view of MMDR Act, 1957 and Mineral Auction Rule 2015, DGM, Assam is willing to take up the exploration in this block. Geological Survey of India (GSI), SU: Assam has carried out G-3 level of exploration in the Krungming, Dima Hasao District, which is in Southern direction from the proposed area. In their investigation, it was established that the area has a huge potential of Limestone mineral. About 2.56 sq km of the block is covered by the Upper Sylhet Limestone of the Shella Formation, while the Kopili Formation is exposed in the northeastern, southwestern, and parts of the southeastern regions. Limestone thickness varies from 30.00 m to 70.00 m across four (4) boreholes, with an average thickness of around 55.00 m. From the core samples collected from the Block, it was found that CaO% ranges from 32.21–53.12% with a total limestone reserve of 91.86 million tonnes with 21.10 million tonnes under Cement Grade and 60.76 million tonnes under Unclassified Grade. If the results of the Limestone block are found satisfactory, the block may be put up for auction.
- c) The TCC-II advised addition of 2 more boreholes with the proposed 10 boreholes. The committee agreed for total drilling of 760m with average depth of 60m in 11 boreholes and 100m depth in 1 borehole in grid of 800x800m. Borehole depth may vary as per the topography.
- d) The cost sheet is tentative and subject to revision of SoC of NMEDT.

**Recommendation TCC**

**The committee recommends the proposal for approval of EC for "Preliminary exploration (G3) for Limestone in north of Krungming block, Dima Hasao District, Assam" with an estimated cost of ₹ 409.81 Lakh (including GST) within the time schedule of 12 months and submission of the report as per Annexures 6A & 6B. The item will be reviewed after 5 months. Total 760m drilling in 12 boreholes with average depth of 60m in 11 boreholes and 100m depth in 1 borehole in grid of 800m x 800m will be done.**

**Agenda 12.1.7 Reconnaissance survey (G4) for REE and associated mineralization in Gol-Bagindi-tilwara Area, Siwana Ring Complex, Balotra District, Rajasthan.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The proposed exploration area, covering 82.50 sq. km, is located on Survey of India Toposheet No. 45C/1 and falls within parts of Balotra District, Rajasthan.
- b) As per the comment received from GSI, a Regional Mineral Targeting (RMT) project has been done during FS 2020-2021, 2021-2022, 2022-2023 and many G4/G3 blocks

were delineated. However, the proposed block does not fall within the delineated potential G4/G3 blocks.

- c) Comments from AMD and State Government were pending during the meeting.
- d) As informed by the implementing agency, Neoproterozoic Siwana Ring Complex (SRC), in western Rajasthan is a well-preserved collapsed caldera in the third largest felsic volcanism of Malani Igneous Suite, hosting multiple phases of magmatism comprising high silicic, low alumina and calcium, iron rich bimodal volcanic suite intruded by peralkaline granite ring dyke and younger microgranite, granophyre, felsites and aplites, rich in Y, Zr, Nb, LREE (La and Ce). It presents a diverse volcanogenic setting suitable for multi-metal mineralisation along the margins of caldera at the contact with acid volcanics and granites, and also strata-bound association with acid volcanic flows and Moat sediments within the caldera. Besides Siwana Ring Complex, there are many other favourable volcanic centres in Malani Igneous suite viz, Nakoda Ring Complex (north west of SRC), Sarnu-Dandali, Kamthai, Rama, Miniari-Pali, Tavidar, Doodhwa etc. The present proposed block lies in the Doodhwa Ring Complex. The proposed area, adjacent to the Nakoda Ring Complex, features bimodal volcanics and pyroclastic intercalations near Tilwara, Bagundi, and Gol, with notable geochemical anomalies (e.g., Ba – 383 ppm, Sc – 14 ppm, Na<sub>2</sub>O – 8.31%, La – 371 ppm, Ce – 579 ppm, Nd – 705 ppm, Pr – 208 ppm). These indicate strong REE mineralization potential, warranting detailed investigation. Carved out from the RMT block (FS 2020–23), the area overlies a buried ring structure, as indicated by aeromagnetic anomalies. Rhyolitic volcanic flows in the region have shown encouraging REE and RM values. EPMA and petrography confirm the presence of key REE minerals like Thorite, Britholite, Parisite, Monazite, and Allanite. TREE values range from 1,491–2,316 ppm in the southern limb (near Noser) and 1,029–1,490 ppm in the western limb. Regolith samples show elevated Nb (51–68 ppm), Zr (301–513 ppm), Hf (41–100 ppm), and Y (200–300 ppm), especially in Gol–Bagundi–Patodi. Similar aeromagnetic and gravity signatures in nearby REE-rich regions like the Siwana Ring Complex further support the area's potential. The presence of the Malani Volcanic Suite beneath soil cover enhances its prospectivity.
- e) The TCC-II advised the agency to reduce the quantum of geophysical survey. The committee agreed for total drilling of 500m in 5 boreholes with average depth of 100m each.

#### **Recommendation TCC**

***The committee recommends the proposal for approval of EC for “Reconnaissance survey (G4) for REE and associated mineralization in Gol-Bagindi-tilwara Area, Siwana Ring Complex, Balotra District, Rajasthan” with an estimated cost of 283.09 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 7A & 7B. The item will be reviewed after 5 months. Total drilling of 500m in 5 boreholes with average depth of 100m each will be done.***

#### **Agenda 12.1.8 Preliminary exploration (G3) for REE and associated mineralization in Dheeran-Mangi block, Siwana Ring complex, Balotra District, Rajasthan.**

##### **[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The proposed exploration block, covering an area of 6.50 sq. km, is located on Survey of India Toposheet No. 45C/6 and falls within parts of Balotra District, Rajasthan.
- b) As per the comment received from GSI, a Regional Mineral Targeting (RMT) project has been done during FS 2022-2023, 2023-2024 & 2024-2025. A G4 level exploration

has been done by GSI in FS 2021-2022 in Kundal-Dhiran area. The proposed block falls within this G4 area.

- c) Comments from AMD and State Government were pending during the meeting.
- d) As informed by the implementing agency, the proposed G-3 block has been carved out from the Kundal Dhiran area of G4 investigation by GSI in FS 2021-22, which is characterized by a volcanic phase represented by rhyolitic flows which is porphyritic in nature. Petrographic and EPMA analyses confirmed the presence of several primary rare earth element (REE) minerals, including parisite (REEfluoro-carbonate), bastnasite (REE carbonate), cerianite (REE oxide), monazite (REE phosphate) and REE bearing zircon. During the G4 stage of exploration, a total 36 Nos of bed rock samples were collected. The  $\Sigma$ REE+Y analysis value range from 134.25 ppm to 1796.47 ppm, with mean of 491.548 ppm. The standard deviation (SD) has been calculated as 321.63 ppm. Out of 36 no of samples it has been observed there are 11 samples which are showing  $\Sigma$ REE+Y value more than mean value, there are 4 samples (three samples from micro granite and one from pyroclastic flow) which are showing  $\Sigma$ REE+Y value more than mean + 1 SD value (813.19 ppm) and 3 nos of samples (two samples from microgranite and one from pyroclastic flow) which are  $\Sigma$ REE+Y value more than mean + 2 SD value (1134.82 ppm). One channel of 10.20 m length, i.e., CH-4 was cut on the outcrop in the region of microgranite dyke. Total 10 nos of samples were generated from these three channels. It has been observed that  $\Sigma$ REE+Y values in the channels varying from 396.98 ppm in pyroclast to 1856.43 ppm in microgranite dyke. Chemical analytical values of rare metals show appreciable values in Nb (3pm to 144ppm), Rb (36ppm to 434ppm), Zr (75ppm to 3007ppm), Sr (11ppm to 489ppm) and V (1ppm to 213ppm). It is also observed that concentration of  $\Sigma$ REE+Y is correspondence with the value of rare metals specially Nb, Rb, Zr, Sr and V.
- e) The TCC-II opined that the analytical results are not so encouraging from G4 investigation by GSI in FS 2021-22 in Kundal Dhiran area.

#### **Recommendation TCC**

***The committee did not recommend the proposal for approval of EC.***

#### **Agenda 12.1.9 Preliminary Exploration (G3) for Bauxite, Vanadium, Titanium and Associated minerals in Rudni Pat block, Lohardaga District, Jharkhand.**

##### **[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The proposed exploration block, covering an area of 1.10 sq. km, is located on Survey of India Toposheet No. 73A/10 and falls within parts of Lohardaga District, Jharkhand. Major part of the block lies in Rudni Pat Reserve Forest with Open jungle.
- b) As per the comment received GSI, there is no ongoing project of GSI in the proposed exploration block. Also, there is no overlapping of proposed block with GSI's previous exploration blocks.
- c) As informed by the implementing agency, the proposed exploration block forms part of the Precambrian shield of the Indian Peninsula and is predominantly composed of Chhotanagpur Granite Gneiss. Preliminary geological investigations have been conducted in the area by the GSI as well as the DMG, Jharkhand. Additionally, exploration activities at G3/G2 levels have been undertaken by MECL and CMPDI in the adjoining areas, which have confirmed the occurrence of bauxite with thicknesses ranging from 3.00 to 7.00 meters. A team from MECL visited the Rudni Pat block and nearby mining areas, where bauxite occurrences have been observed in existing mine pits up to depths of 25 meters. Field investigations revealed surface outcrops of

bauxite, and old excavations within the proposed block confirmed the presence of a Laterite/Bauxite profile in the Rudni Pat area. Surface samples of bauxite collected from the block yielded encouraging geochemical results, indicating high concentrations of Alumina ( $\text{Al}_2\text{O}_3$ : 55.00–57.00%), Titanium ( $\text{TiO}_2$ : 9.60–10.31%), Vanadium (500–800 ppm), and Gallium (135–149 ppm), along with low levels of Silica ( $\text{SiO}_2$ : 1.40–2.00%). Given the similar geological setting, the presence of known deposits, supportive literature, and recommendations by previous workers, the area demonstrates significant potential for detailed exploration. The Pakhar Bauxite Mine, operated by M/s Hindalco Industries Ltd., is currently operational to the northeast of the proposed block. Following discussions with the State Government, MECL decided to undertake exploration of Bauxite, Titanium, Vanadium, and associated minerals in the Rudni Pat block, District Lohardaga, Jharkhand, with funding support from NMET. A successful outcome from the present exploration initiative would aid and support the Government of India and the State Government of Jharkhand in the eventual auctioning of the block.

- d) The TCC-II advised drill spacing of 400m x 400m in the proposed block. The committee agreed for drilling of total 760m in 24 boreholes with average depth of 30m each in 22 boreholes and 50m depth in 2 boreholes. However, the committee opined that the project will follow a phased implementation approach. In Phase-1, only 8 boreholes will be drilled with depth of 30m each and 1 borehole with 50m depth, the subsequent drilling in remaining 15 boreholes will be decided after review.

#### **Recommendation TCC**

***The committee recommends the proposal for approval of EC for “Preliminary Exploration (G3) for Bauxite, Vanadium, Titanium and Associated minerals in Rudni Pat block, Lohardaga District, Jharkhand” with an estimated cost of ₹ 205.10 Lakh (including GST) within the time schedule of 15 months and submission of the report as per Annexures 8A & 8B. The item will be reviewed after 7 months. Drilling of total 760m in 24 boreholes with average depth of 30m each in 22 boreholes and 50m depth in 2 boreholes will be done. Initially, only 8 boreholes will be drilled with depth of 30m each and 1 borehole with 50m depth, the subsequent drilling will be decided after review.***

#### **Agenda 12.1.10 Reconnaissance Survey (G4) for Phosphorite and Siliceous Earth in Mandai Village, District Jaisalmer, Rajasthan.**

#### **[Implementing Agency: M/s Envirogreen Consultants (India) Private Limited]**

- a) The proposed exploration block, covering an area of 36.00 sq. km, is located on Survey of India Toposheet No. 45N/3 and falls within parts of Jaisalmer District, Rajasthan. In-principle-approval was given for this proposal in 11<sup>th</sup> TCC-II meeting held on 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> & 30<sup>th</sup> July 2025.
- b) The implementing agency informed that the proposal has been placed as per the instruction by Ministry of Mines, Govt. of India to NPEAs through NMET to explore area (non-Working mines / non-Working expired leases/Closed Mines/10A2 (b). India aims to be self-reliant in overall fertilizer production as the government is constructing new manufacturing units to reduce dependency on imports. “India to explore indigenous deposits of phosphatic rock, a step towards becoming Aatma Nirbhar in fertilizer production,” informed Minister of Chemicals and Fertilizers, Mansukh Mandaviya in the Parliament on Monday, July 26, 2021. Ministry of Mines already successfully auctioned two CL blocks of siliceous earth which fall nearby (Lalso Ki Dhani & Mandai II). The mineral is of good export value generating

foreign exchange for nation. Siliceous earth is one of the key minerals generating employments in desert area.

- c) The agency further informed that the block boundaries were modified as per the suggestion from DMG, Rajasthan and all overlapping ML/CL block areas have been excluded from the proposed area.
- d) The TCC-II advised to exclude trenching from the proposal and suggested pitting in 1m x 1m x 2m depth in grid of 800m x 800m. The committee agreed for total drilling of 150m in 5 boreholes in grid of 800m x 800m with average depth of 30m each.

#### **Recommendation TCC**

***The committee recommends the proposal for approval of EC for “Reconnaissance Survey (G4) for Phosphorite and Siliceous Earth in Mandai Village, District Jaisalmer, Rajasthan” with an estimated cost of ₹ 99.14 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 9A & 9B. The item will be reviewed after 5 months. Total drilling of 150 m in 5 boreholes in grid of 800x800m with average depth of 30m each will be done.***

#### **Agenda 12.1.11 Preliminary exploration (G3) for base metals and associated minerals in Kothara block, Banswara District, Rajasthan.**

##### **[Implementing Agency: M/s Bhushilp Mines and Minerals Private Limited]**

- a) The proposed exploration block, covering an area of 3.02 sq. km, is located on Survey of India Toposheet No. 46I/6 and falls within parts of Banswara District, Rajasthan.
- b) As per the comment received from GSI, a G4 stage exploration has already been done by GSI in FS 2026-17 for Cu and Iron Ore. Bhushilp Mines and Minerals Pvt. Ltd. had earlier submitted a G3 proposal in Hingoriya Gara, which overlapped with the Talwara–Kusalpura Geological Memorandum (GM) block, an area already investigated and formally handed over to the State Government by the GSI. Subsequently, the same NPEA has submitted a modified Kothara G3 block, located just south of the Talwara–Kusalpura GM block. As per GSI’s G4 stage investigation, brecciated zone and old workings are present within the proposed Kothara G3 block.
- c) Comments from DMG, Rajasthan were pending during the meeting.
- d) The TCC-II opined that the values of Cu (5 – 810ppm), Pb (40 – 100ppm), Zn (10 – 980ppm) etc. from 41 BRS samples, are not so encouraging from GSI report (FS 2026-17), which has been referred for formulation of this project proposal. The committee advised NMEDT, to seek comments from DMG, Rajasthan about the present status of above-mentioned GM block.

#### **Recommendation TCC**

***The committee did not recommend the proposal for approval of EC.***

#### **Agenda 12.1.12 Reconnaissance survey (G4) for Copper, Nickel, Cobalt and associated mineralization in Nare-Devipura Area of Sikar and Jaipur Districts of Rajasthan**

##### **[Implementing Agency: M/s Ocean Drilling & Exploration Private Limited]**

- a) The proposed exploration block, covering an area of 112.00 sq. km, is located on Survey of India Toposheet No. 45M/15 and falls within parts of Sikar and Jaipur District, Rajasthan. Total 27.1 Sq. km. of the proposed area lies within the Protected Forest. In-principle-approval was given for this proposal in 11<sup>th</sup> TCC-II meeting held on 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> & 30<sup>th</sup> July 2025. Also, the block boundary has been modified as per the advice given by TCC-II in 11<sup>th</sup> meeting.

- b) Comments from DMG, Rajasthan were pending during the meeting. As per the comments received from GSI, there is no overlap of the proposed area with GSI's exploration blocks.
- c) As informed by the implementing agency, GSI, during field season Programme for 2017-18, has carried out Specialized Thematic Mapping (STM) on 1:25,000 scale covering an area of 350 sq.km. in parts of Survey of India toposheets no. 45M/14 and M/15. The survey involved the systematic collection and analysis of various sample types, including 100 bedrock samples (BRS) and 15 PCS samples. Chemical analysis of these samples revealed anomalously high values of Cu, Co, Ni and Tungsten (W). i. BRS-35, Cu-0.22%, 0.22% Ni. ii. BRS-85, Cu-0.16%, 0.17% Ni, 430ppm Co. iii. BRS-97, Cu-0.64%, 0.35% Ni, 360 ppm Co. iv. BRS-100, Cu-2.21%, 320 ppm Co and anomalous values for tungsten (W) ranges from 515.88ppm to 989.22ppm in 12 BRS samples.
- d) The committee advised for integration of available geoscientific data of NGCM, NGPM and Aero-geophysics and preparation of a structural map for identification of prospective zone for mineralization. The TCC-II agreed for total 400m drilling in 4 boreholes with average 100m depth each. The committee suggested for Geophysical survey after review of LSM (Large Scale Mapping).

**Recommendation TCC**

***The committee recommended the proposal for approval of EC for "Reconnaissance survey (G4) for Copper, Nickel, Cobalt and associated mineralization in Nare-Devipura Area of Sikar and Jaipur Districts of Rajasthan" with an estimated cost of ₹ 158.57 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 10A & 10B. The item will be reviewed after 5 months. Total 400m drilling in 4 boreholes with average depth of 100m will be done. The committee suggested for Geophysical survey after review of LSM (Large Scale Mapping).***

**Agenda 12.1.13 Preliminary exploration (G3) for Limestone in Patehra Block, Maihar District, Madhya Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 6.86 sq. km, is located on Survey of India Toposheet No. 63D/16 and falls within parts of Maihar District, Madhya Pradesh.
- b) Consent/comment from DGM, Madhya Pradesh, for the proposed block was pending during the meeting.
- c) The TCC-II opined that obtaining consent from the State Government is essential for commodities such as limestone. The project proposal is kept on hold.

**Recommendation TCC**

***The committee did not recommend the proposal for approval of EC.***

**Agenda 12.1.14 Preliminary Exploration (G3) for Manganese and associated minerals in Sarishabasa Block, Jhargram District, West Bengal.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 8.10 sq. km, is located on Survey of India Toposheet No. 73J/10 and falls within parts of Jhargram District, West Bengal.
- b) As per the comment received from GSI, the proposed block has an overlap of 70% with the GSI's ongoing G4 exploration area of FS 2025-26.
- c) In view of the above, the TCC-II did not agree for the recommendation of the project proposal.

**Recommendation TCC**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.15 Preliminary exploration (G3) for Limestone in Tonga Block, Morena District, Madhya Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 6.49 sq. km, is located on Survey of India Toposheet No. 54F/8 and falls within parts of Morena District, Madhya Pradesh.
- b) Consent/comment from DGM, Madhya Pradesh, for the proposed block was pending during the meeting.
- c) The TCC-II opined that obtaining consent from the State Government is essential for commodities such as limestone. The project proposal is kept on hold.

**Recommendation TCC**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.16 Preliminary exploration (G3) for Limestone in Sabalgarh Block, Morena District, Madhya Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 4.50 sq. km, is located on Survey of India Toposheet No. 54F/8 and falls within parts of Morena District, Madhya Pradesh.
- b) Consent/comment from DGM, Madhya Pradesh, for the proposed block was pending during the meeting.
- c) The TCC-II opined that obtaining consent from the State Government is essential for commodities such as limestone. The project proposal is kept on hold.

**Recommendation of TCC-II**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.17 Reconnaissance Survey (G4) for Ni, Cr, Au, PGE and Ti in Pasubera-Chetansika Area, West Singhbhum District, Jharkhand.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 50.00 sq. km, is located on Survey of India Toposheet No. 73F/10 and falls within parts of West Singhbhum District, Jharkhand.
- b) As per the comment received from GSI, the proposed block is overlapping with G-4 stage investigation carried out by the GSI in FS 2016-17. It is also overlapping with the earlier exploration blocks of GSI carried out in FS 1961-62 and 1962-63 for chromite. Thus, further G4 stage investigation is not feasible. During the investigation of FS 2016-17, the analytical results were extremely encouraging. However, a G-3 proposal could not be taken immediately at that point in time, as the area faced pertinent law and order issues faced by the geologists also and in subsequent field seasons. In the present scenario of increased requirement of Mission-II program from the State of Jharkhand, GSI is already in the process of formulating a G-3 level program based on the outcome of the investigation for Cr, Ni & PGE in FS 2016-17. This proposal will be presented during Internal Peer Review of GSI scheduled on 9-10 September, 2025.
- c) The TCC-II did not agree for recommendation of the project proposal.

**Recommendation of TCC-II:**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.18 Preliminary exploration (G3) for Iron in Sandalpur Block, Gwalior District, Madhya Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block, covering an area of 6.00 sq. km, is located on Survey of India Toposheet No. 54J/4 and falls within parts of Gwalior District, Madhya Pradesh.
- b) As per the comment received from GSI, a G4 stage exploration has been done by GSI in the proposed block in FS 2022-23.
- c) MMPL informed that, during the 2022–2023 field season, the Geological Survey of India (GSI) conducted large-scale mapping at a 1:12,500 scale over an area of 100 sq. km around Santau, Kansar, and Mangor, located within parts of toposheet 54J/04 in Gwalior District. Geologically, the area is primarily composed of Archaean Bundelkhand Granitoids, the Lower Proterozoic Gwalior Group, and the Upper Proterozoic Kaimur Group of the Vindhyan Supergroup. As part of the investigation for potential iron ore mineralization zones in the Santau, Mangor, and Kansar areas, a total of 110 BRS (bedrock samples) and 50 pit/trench samples were collected. Analytical results from the BRS samples indicate  $Fe_2O_3$  values ranging from 6.39% to 86.72%, with total Fe content between 4.47% and 61.39%. Channel samples recorded  $Fe_2O_3T$  values from 16% to 87.11% and total Fe from 11.2% to 60.97%. In trench samples,  $Fe_2O_3$  values ranged from 14.99% to 68.58%, and total Fe ranged from 10.49% to 48%. Within the proposed area, nine G4-stage samples yielded Fe values of 25%, 23.17%, 39.43%, 37.96%, 38.82%, 35.09%, 43.28%, 42.26%, and 34.55%. Based on these findings, three potential zones for iron ore mineralization were delineated: 12.8 sq. km around Maheshwara and Mangor, 15.8 sq. km around Santau and Kushrajpur, and 14 sq. km around Londra. The proposed area lies within the Kushrajpur region. Currently, GSI is carrying out exploration activities in the remaining two potential zones identified under the G4 stage of work.
- d) The TCC-II opined that the implementing agency itself, should carry out limited field work and sample collection in the proposed block and resubmit the proposal with more mineral evidences in the block.

**Recommendation of TCC-II**

**The committee did not recommend the proposal for approval of EC.**

**Agenda 12.1.19 Preliminary Exploration (G3) for Potash mineralization in Kalu Block, Tehsil-Lunkaransar, Bikaner District, Rajasthan.**

**[Implementing Agency: FCI Aravali Gypsum & Minerals India Limited (FAGMIL)]**

- a) The proposed exploration block, covering an area of 10.00 sq. km, is located on Survey of India Toposheet No. 44H/15 and falls within parts of Bikaner District, Rajasthan.
- b) As per the comments received from GSI, there is no ongoing projects of GSI in the proposed block.
- c) As informed by the implementing agency, GSI has been investigating potash-bearing zones in the Nagaur-Ganganagar Basin since 1974. Between 1974 and 1991, a total of 68 boreholes were drilled in the region. So far, inferred reserves include 456.02 million tonnes with an average potassium (K) content of 4.39% in the Lakhasar sub-basin, and 16.13 million tonnes with an average K content of 5.81% in the Hanseran sub-basin. The proposed block lies within a zone of very low gravity anomaly, with a

Bouguer anomaly value of less than -59 mGal. Due to this geophysical signature, GSI has recommended the area for further investigation targeting halite deposits. Borehole P-8 intersected a 550.54-meter-thick evaporite bed, of which 430.48 meters comprised halite. The average potassium content in P-8 was recorded at 1.5%, while a polyhalite sample from the same borehole showed a significantly higher K content of 9.89%. Based on these findings, this block has been proposed for preliminary exploration (G3 stage) targeting the potash-bearing zone.

- d) The TCC-II advised modification in proposed block boundary based on location of GSI's earlier borehole (P-44) location. The committee agreed for total drilling of 2600m in 4 boreholes with average depth of 650m each at grid of 1600m x 1600m. The committee suggested for non-coring drilling up to 300 m.

### **Recommendation of TCC-II**

**The committee recommended the proposal for approval of EC for "Preliminary Exploration (G3) for Potash mineralization in Kalu Block, Bikaner District, Rajasthan" with an estimated cost of 416.83 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 11A & 11B. The item will be reviewed after 5 months. Total drilling of 2600m in 4 boreholes with average depth of 650m each at grid of 1600m x 1600m. The committee suggested for non-coring drilling up to 300 m.**

## **12.2 Review of Ongoing Procurement Projects & Timeline Extension**

### **Agenda 12.2.1 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.**

#### **[Implementing Agency: DMG Rajasthan]**

- a) DMG Rajasthan informed that the project was approved in the 27th EC meeting held on 10th January, 2023. The sanction order was issued on 24th March, 2023 with timeline of 12 months and approved cost was ₹470.20 Lakh.
- b) DMG Rajasthan informed that ₹1,88,08,000/- was released by NMET as 1<sup>st</sup> instalment, against which ₹1,83,61,200/- has been utilised until 23 July 2025. Utilisation certificates were submitted to NMET on 16<sup>th</sup> June 2025 & 23<sup>rd</sup> July 2025. Details are given in the table below

Sl. No.	Name of item	Number of items	Amount (in ₹)
1	GIS software	2	29,86,580/-
2	Digital Camera	5	2,49,400/-
3	Brunton Compass	20	88,500/-
4	Geological Hammer	20	1,18,000/-
5	Handheld GPS	20	6,99,740/-
6	Handheld XRF	5	1,42,19,000/-
Total			1,83,61,220/-

- c) DMG Rajasthan requested to release the 2<sup>nd</sup> instalment of ₹2,82,12,000/- of the procurement project. Below is the list of items to be procured further by DMG Rajasthan

Sl. No.	Name of item	No. of items	Tentative amount (in ₹)	Remarks
1	Research Polarising Microscope with software attached camera for Transmitted and Reflected Light with accessories & CAMC (Mixing of Two things) 18.57 & 25 Lakhs	Earlier 5, but revised to 1 high-end Microscope	Earlier 5 lac per no. but revised to 25 lakhs for high end	As per NMET upper Ceiling price
2	Pulverizer	1	Price revision from 50,000 to 5 lakhs	As per NMET upper Ceiling price
3	Ball Mill	1	20,00,000	As approved in EC
4	WD-XRF with accessories & CAMC	1	5 Cr. (2.20 Cr. + 2.80 Cr.)	As per NMET upper Ceiling price and NMET incentive fund scheme
5	Core splitter	6	12,00,000	As per NMET upper Ceiling price

D) The TCC-II agreed for release of the 2<sup>nd</sup> instalment of ₹2,82,12,000/- for the procurement project.

#### **Recommendation TCC-II;**

***The committee agreed for release of the 2<sup>nd</sup> instalment of ₹2,82,12,000/-.***

**Agenda 12.2.2 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.**

#### **[Implementing Agency: DGM Mizoram]**

- DGM Mizoram informed that 3 projects for procurement was approved by NMET as given below:
- Project -1: Approval of ₹309.32 Lakh in the 27th EC of NMET held on 10th January 2023 for 12 months period. In 29th EC, the cost of WD- XRF (₹40Lakhs) approved was removed from Project 1 and approved as new item in Project 2. Time extension up to 31st March 2025 was approved in 37th EC held on 23rd September 2024.
- Project 2: Approval of ₹195.99 Lakh in the 29th EC of NMET held on 31st March 2023 for 12 months period. Additionally, ₹2 Lakhs were approved for purchase of bomb calorimeter in the 35th EC of NMET held on 16th May 2025. Time extension up to 31st March 2025 was approved in 37th EC held on 23rd September 2024.

- d) Project 3: 39th EC accorded approval of ₹29,50,000/- with a timeline of 12 months for procurement of 01 DGPS. Additional cost of ₹4,39,200/- for procurement of 10 handheld GPS was approved in 39th EC of NMET (Project 1) to DGM, Mizoram.
- e) As informed by the implementing agency, ₹36.00 Lakh in project-1, ₹41.99 Lakh in Project-2, have been utilised so far. The agency further requested for timeline extension for these projects. Also, cost enhancement for some items were proposed by the agency as per the details given below

Sl. No.	Name of item	No. of items	Tentative amount (in ₹)	Justification
1.	Handheld GPS	10	51,920.0 to 55,000.0	As per NMET upper Ceiling price
2.	Fusion Bead Machine	1	2,000,000 to 5,981,125	As per discovered prize by NCCBM

- f) The TCC-II expressed its concern about the slow progress of this procurement project. The committee asked the agency for submission of utilization certificate to NMET along with the detailed justification for delay of procurement process.

#### **Recommendation TCC-II;**

***The committee recommended proposal for approval of EC for cost enhancement.***

#### **Agenda 12.3 Review of Ongoing Projects/ Completed Project & Timeline Extension**

##### **Agenda 12.3.1 Preliminary exploration (G3) for Vanadium and Titanium in Dandi-Onjal-Surwada Block in Navsari and Valsad District, Gujarat.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The project was recommended in 61<sup>st</sup> TCC meeting held on 30<sup>th</sup> and 31<sup>st</sup> January 2024 and approved in the 33<sup>rd</sup> EC Meeting held on 19<sup>th</sup> February 2024. The sanction order was issued on 12<sup>th</sup> March 2024 with timeline of 12 months (up to 11.03.2025) and approved cost was ₹86.28 Lakh. On recommendation by 2<sup>nd</sup> TCC-II meeting held on 22<sup>nd</sup> & 23<sup>rd</sup> October 2024, a revised cost of ₹89.78 Lakh was approved in the 38<sup>th</sup> EC meeting held on 29<sup>th</sup> November 2024. Timeline extension of 3 months up to 11.06.2025 was approved in 5<sup>th</sup> TCC-II meeting held on 27<sup>th</sup>, 28<sup>th</sup> & 29<sup>th</sup> January 2025. Further, timeline extension of 1 month up to 11.07.2025 was recommended in 9<sup>th</sup> TCC-II meeting held on 29<sup>th</sup> & 30<sup>th</sup> May, 2025, and approved in 43<sup>rd</sup> EC meeting held on 14<sup>th</sup> August, 2025.
- b) The implementing agency informed that, peer review of final geological report has been done and all suggestion of peer reviewer were attended. The agency requested for further timeline extension of 1.5 months up to 31<sup>st</sup> August 2025 for submission of final geological report.
- c) The TCC-II agreed to recommend the proposal to EC for approval of timeline extension up to 31<sup>st</sup> August 2025.

**Recommendation of TCC-II:**

**The committee recommends the proposal for approval of EC for timeline extension of 1.5 months up to 31<sup>st</sup> August 2025 for final GR submission.**

**Agenda 12.3.2 Preliminary Exploration (G3) for Magnetite and associated minerals in Pipradih Block, Giridih District, Jharkhand.**

**[Implementing Agency: Central Mine Planning & Design Institute Limited (CMPDI)]**

- a) The project was recommended in 52<sup>nd</sup> TCC meeting held on 27<sup>th</sup> and 28<sup>th</sup> April 2023 and approved in the 38<sup>th</sup> EC Meeting held on 29<sup>th</sup> November 2024. The sanction order was issued on 13<sup>th</sup> December 2024 with timeline of 8 months up to 12.08.2025 and approved cost was ₹147.25 Lakh.
- b) The implementing agency informed that geological mapping on 1:4000 scale of 7sq km along with topographical survey with 2m contour interval and magnetic survey in 27.2 LKM (against approved 30 LKM) have been completed so far. Pitting and trenching is underway. Further, it was briefed by the agency that the work delayed due to local issues in the block and requested for timeline extension of 4.5 months up to 31<sup>st</sup> December 2025.
- c) The TCC-II advised collection of groove samples with continued trenching work. The committee agreed to recommend the proposal to EC for approval of timeline extension of 4.5 months up to 31<sup>st</sup> December 2025.

**Recommendation of TCC-II:**

**The committee recommends the proposal for approval of EC for timeline extension of 4.5 months up to 31<sup>st</sup> December 2025 for final GR submission.**

**Agenda 12.3.3 Reconnaissance Survey (G4) for copper and associated minerals in Kochipur Area, District Siddhi, Madhya Pradesh.**

**[Implementing Agency: Central Mine Planning & Design Institute Limited (CMPDI)]**

- a) The project was recommended in 68<sup>th</sup> TCC meeting held on 28<sup>th</sup>, 29<sup>th</sup> & 30<sup>th</sup> August 2024 and approved in the 37<sup>th</sup> EC Meeting held on 23<sup>rd</sup> September 2024. The sanction order was issued on 22<sup>nd</sup> October 2024 with timeline of 10 months up to 21.08.2025 and approved cost was ₹125.13 Lakh. The project was reviewed in 9<sup>th</sup> TCC-II meeting held on 29<sup>th</sup> & 30<sup>th</sup> May 2025.
- b) The implementing agency informed that geological mapping on 1:12,500 scale of 90sq km along with trenching of 80 cu m has been done. The agency attributed the slow progress of work to the area's inaccessibility caused by adverse weather conditions & delay in analysis results, and requested for timeline extension of 4.5 months up to 31<sup>st</sup> December 2025.
- c) The TCC-II agreed to recommend the proposal to EC for approval of timeline extension of 4.5 months up to 31<sup>st</sup> December 2025.

**Recommendation of TCC-II:**

**The committee recommends the proposal for approval of EC for timeline extension of 4.5 months up to 31<sup>st</sup> December 2025 for final GR submission.**

**Agenda 12.3.4 Reconnaissance Survey (G4) for REE Exploration in Bhuj Clay in Bhuj Area, Kachchh District, Gujarat.**

**[Implementing Agency: M/s Geovale Services Private Limited]**

- a) Geovale Services Private Limited informed that the project was recommended in 56<sup>th</sup> TCC meeting held on 31<sup>st</sup> August & 1<sup>st</sup> September 2023 approved in the 31<sup>st</sup> EC Meeting held on 12<sup>th</sup> September 2023. The sanction order was issued on 5<sup>th</sup> October 2023 with timeline of 12 months up to 04.10.2024 and approved cost was ₹122.28 Lakh. The project was reviewed in 3<sup>rd</sup> TCC-II held on 5<sup>th</sup> & 6<sup>th</sup> December 2024 and the revised cost of ₹265.84 Lakh was recommended, which was approved by the 39<sup>th</sup> EC of NMET held on 24<sup>th</sup> January 2024. Timeline extension of 9 months up to 30.06.2025 was recommended in 6<sup>th</sup> TCC-II meeting held on 27<sup>th</sup>, 28<sup>th</sup> February and 6<sup>th</sup> March 2025 and approved in 41<sup>st</sup> EC meeting held on 11<sup>th</sup> march 2025. Further timeline extension of 4 months up to 31.10.2025 was recommended in 10<sup>th</sup> TCC-II meeting held on 23<sup>rd</sup>, 24<sup>th</sup> & 25<sup>th</sup> June 2025 and approved in 43<sup>rd</sup> EC meeting held on 14<sup>th</sup> August 2025.
- b) The implementing agency further briefed about 8 boreholes totalling 603.5m of drilling has been completed. Petrology and chemical analysis of the drill core samples are underway. Also, preparation of geological report is under progress. The agency requested approval for submission of geological report for peer review.
- c) The TCC-II opined that samples may also be analysed for gold. The committee agreed for peer review of the geological report.

***Recommendation of TCC-II:***

***The committee agreed for peer review of the geological report.***

**Agenda 12.3.5 Reconnaissance Survey (G4) for Mailar Basemetal in Mailar Area, Lalitpur District, Uttar Pradesh.**

**[Implementing Agency: M/s Geovale Services Private Limited]**

- a) Geovale Services Private Limited informed that the project was recommended in 62<sup>nd</sup> TCC meeting held on 28<sup>th</sup> & 29<sup>th</sup> February and 01<sup>st</sup> March, 2024 and approved in the 34<sup>th</sup> EC Meeting held on 13<sup>th</sup> March 2024. The sanction order was issued on 12<sup>th</sup> March 2024 with timeline of 12 months up to 11.03.2025 and approved cost was ₹240.95 Lakh. Timeline extension of 3 months up to 11.06.2025 was approved in 7<sup>th</sup> TCC-II meeting held on 24<sup>th</sup> & 25<sup>th</sup> March, 2025. Further timeline extension of 4.5 months up to 31.10.2025 was recommended in 10<sup>th</sup> TCC-II meeting held on 23<sup>rd</sup>, 24<sup>th</sup> & 25<sup>th</sup> June 2025 and approved in 43<sup>rd</sup> EC meeting held on 14<sup>th</sup> August 2025.
- b) The implementing agency further briefed that geological mapping on 1:12,500 scale of 206 sq km area, geophysical survey, Geochemical studies & microscopy studies of BRS have been done. Total 962.5m have been drilled so far in 4 boreholes. Much of the area for High-sulphidization 'Early Halo Type (EHT)' mineralization is under forest jurisdiction and so could not be tested by drilling. Total 26 Mineral Potential Targets Identified out of which 4 targets were tested by drilling.
- c) The TCC-II agreed for peer review of the geological report and asked to submit the Geological Report (GR) of Mailar Area. The committee suggested that the Gulenga area (northern part) can be proposed as separate item after receiving Forest permission.

***Recommendation of TCC-II:***

***The committee agreed for peer review of the geological report.***

**Agenda 12.3.6 Preliminary Exploration (G3) for Iron and Associated Minerals in Chitrangi Block, Singrauli District, Madhya Pradesh.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) MECL informed that the project was recommended in 66th TCC meeting held on 24th, 25th & 26th June 2024 and 36th EC Meeting held on 29th July 2024. The sanction order was issued on 29th August 2024 with timeline of 12 months up to 28.08.2025 and approved cost was ₹196.12 Lakh. The project was reviewed in 9th TCC-II meeting held on 29th & 30th May 2025 and pre- closure of the project due to low Iron values in the block was recommended. Pre- closure of the project was approved in 43<sup>rd</sup> EC meeting held on 14<sup>th</sup> August 2025.
- b) The implementing agency requested approval for submission of final geological report.
- c) The TCC-II agreed for submission of final geological report.

***Recommendation of TCC-II:***

***The committee agreed for submission of the final geological report.***

**Agenda 12.3.7 Preliminary Exploration (G3) for copper and associated minerals in Jaridih-Pipradih Block, Giridih District, Jharkhand.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 2<sup>nd</sup> TCC-II meeting held on 22<sup>nd</sup> & 23<sup>rd</sup> October 2024 and approved in the 38<sup>th</sup> EC Meeting held on 29<sup>th</sup> November 2024. The sanction order was issued on 13<sup>th</sup> December, 2024 with timeline of 15 months up to 12<sup>th</sup> March, 2026 and approved cost was ₹400.21 Lakh.
- b) MECL informed that geological mapping on 1:2000 scale of 3.05 sq. km area along with geophysical survey (SP & resistivity) & 32 Bed Rock Sample (BRS) collection has been done. Out of approved 10 boreholes, 5 boreholes of 500m each are planned to test the geophysical anomalies in the block. Analytical results of 10 BRS indicated Cu value from 0.1% to 2.99%.
- c) The TCC-II agreed for commencement of drilling in 5 boreholes to test the geophysical anomalies. The committee opined that the proposed boreholes may be taken up in three identified Zones-I, II and III respectively.

***Recommendation of TCC-II:***

***The committee agreed for commencement of drilling in 5 boreholes.***

**Agenda 12.3.8 Reconnaissance Survey (G4) for Glauconite, Phosphorite and REE in Ambara Maru Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 3<sup>rd</sup> TCC-II meeting held on 5<sup>th</sup> & 6<sup>th</sup> December 2024 and approved in the 39<sup>th</sup> EC Meeting held on 24<sup>th</sup> January 2025. The sanction order was issued on 24.02.2025 with timeline of 10 months up to 23.12.2025 and approved cost was ₹229.81 Lakh.
- b) MECL informed that geological mapping on 1:12,500 scale of 94.25 sq. km area has been done. Collection of samples is underway.
- c) The TCC-II advised continuation of project work as per the approved quantum of work and suggested to look for tuffaceous horizons if any within Kartol formation for REE potentiality.

***Recommendation of TCC-II:***

***The committee advised continuation of project work as per the approved quantum of work.***

**Agenda 12.3.9 Reconnaissance Survey (G4) for Glauconite in Ambara West Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 1<sup>st</sup> TCC-II meeting held on 26<sup>th</sup> & 27<sup>th</sup> September 2024 and approved in the 38<sup>th</sup> EC Meeting held on 29<sup>th</sup> November 2024. The sanction order was issued on 13.12.2024 with timeline of 12 months up to 12.12.2025 and approved cost was ₹107.78 Lakh.
- b) MECL informed that pitting, chemical analysis, and drilling are to be conducted on a 1600m x 1600m grid.
- c) The TCC-II advised continuation of project work as per the approved quantum of work and suggested for careful identification of tuffaceous horizons for REE analysis.

***Recommendation of TCC-II:***

***The committee advised continuation of project work as per the approved quantum of work.***

**Agenda 12.3.10 Reconnaissance Survey (G4) for REE & Phosphorite in Sumarsar Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 6<sup>th</sup> TCC-II meeting held on 27<sup>th</sup> & 28<sup>th</sup> February & 6<sup>th</sup> March 2024 and approved in the 41<sup>st</sup> EC Meeting held on 11<sup>th</sup> March 2025. The sanction order was issued on 19<sup>th</sup> March, 2025 with timeline of 10 months up to 18 January .2026 and approved cost was ₹177.60 Lakh.
- b) MECL informed that geological mapping on 1:12,500 scale of 107.46 sq. km area has been done.
- c) The TCC-II advised continuation of project work as per the approved quantum of work and suggested for careful identification of tuffaceous horizons, establish its density & strike extensions. Analyse for REE analysis.

***Recommendation of TCC-II:***

***The committee advised continuation of project work as per the approved quantum of work.***

**Agenda 12.3.11 Reconnaissance Survey (G4) for REE & Associated minerals in Nokhaniya Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 6<sup>th</sup> TCC-II meeting held on 27<sup>th</sup> & 28<sup>th</sup> February & 6<sup>th</sup> March 2024 and approved in the 41<sup>st</sup> EC Meeting held on 11<sup>th</sup> March 2025. The sanction order was issued on 19<sup>th</sup> March 2025 with timeline of 10 months up to 18<sup>th</sup> January 2026 and approved cost was ₹239.22 Lakh.
- a) MECL informed that geological mapping on 1:12,500 scale of 101.65 sq. km area has been done. Out of 700, Auger drilling in 17 boreholes with geological logging have been done so far.
- d) The TCC-II advised continuation of project work as per the approved quantum of work suggested for careful identification of tuffaceous horizons, establish its density & strike extensions. Analyse for REE analysis.

***Recommendation of TCC-II:***

***The committee advised continuation of project work as per the approved quantum of work.***

**Agenda 12.3.12 Reconnaissance Survey (G-4) for REE, Glauconite & Associated minerals in Devpura Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- b) The project was recommended in 6th TCC-II meeting held on 27th & 28th February & 6th March 2024 and approved in the 41st EC Meeting held on 11th March 2025. The sanction order was issued on 19th March 2025 with timeline of 10 months up to 18th January 2026 and approved cost was ₹265.61 Lakh.
- c) MECL informed that geological mapping on 1:12,500 scale of 138.52 sq. km area has been done. Values of Fe as shown by Hand Held XRF range from 35 to 40%. Auger drilling has not been started.
- d) The TCC-II advised continuation of project work as per the approved quantum of work and suggested for careful identification of tuffaceous horizons, establish its density & strike extensions. Samples to be analysed for REE.

***Recommendation of TCC-II:***

***The committee advised continuation of project work as per the approved quantum of work.***

**Agenda 12.3.13 Reconnaissance Survey (G4) for REE, RM, Glauconite & Phosphorite in Devisar Area, Kachchh District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- e) The project was recommended in 6th TCC-II meeting held on 27th & 28th February & 6th March 2024 and approved in the 41st EC Meeting held on 11th March 2025. The sanction order was issued on 19th March 2025 with timeline of 10 months up to 18th January 2026 and approved cost was ₹251.38 Lakh.
- f) MECL informed that geological mapping on 1:12,500 scale of 149.86 sq. km area has been done. The agency requested for collection of 25 nos. Bed Rock Sample.
- g) The TCC-II advised to establish the tuffaceous layer in the area through petrographic study & to mark its density & strike continuity. The committee agreed for collection of 25 nos. of Bed Rock Samples. Samples to be analysed for REE.
- h) Revised cost sheet to be examined in next TCC-II meeting.

***Recommendation of TCC-II:***

***The committee advised to establish the tuffaceous layer in the area through petrographic study & to mark its strike continuity.***

**Agenda 12.3.14 Reconnaissance Survey (G4) for Wollastonite in Bhadli Area, Banaskantha District, Gujarat.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) The project was recommended in 5th TCC-II meeting held on 27th, 28th & 29th January 2025 and approved in the 40th EC Meeting held on 21st February 2025. The sanction order was issued on 05 March 2025 with timeline of 10 months up to 04 January 2026 and approved cost was ₹160.76 Lakh.
- b) MECL informed that geological mapping on 1:12,500 scale of 107.89 sq. km area has been done & interpreted map is under preparation. Petrographic study of 14 samples from calc silicate/marble revealed presence of wollastonite. Two potential area has been identified for further work. The agency requested approval for detailed mapping on 1:5000 scale and trenching in the identified potential area.

- c) The TCC-II agreed for detailed mapping on 1:5000 scale in 5 sq. km area. Trench length to be adjusted as per requirement. The committee agreed for XRD analysis of 20 samples and suggested to consult IMMT Bhubaneshwar for beneficiation of low-grade Wollastonite. The committee wanted to know the process of grade analysis.
- d) Revised cost sheet to be examined in next TCC-II meeting.

**Recommendation of TCC-II:**

**The committee agreed for detailed mapping on 1:5000 scale in 5 sq. km area along with trenching.**

**Agenda 12.3.15 Preliminary Exploration (G3) for diamond in adjacent Area of Angira-A and Angira B Block, Chhatarpur District, Madhya Pradesh.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) MECL informed that geophysical survey has been completed and its interpretation is under progress.
- b) The TCC-II opined that the item will be reviewed after interpretation of geophysical survey work.

**Recommendation of TCC-II:**

**The item will be reviewed after interpretation of geophysical survey work.**

**Agenda 12.3.16 Reconnaissance Survey (G4) for Gold, Copper, Graphite and Associated Minerals in Jamtola Khandapar Area, Balaghat District, Madhya Pradesh.**

**[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]**

- a) MECL informed that the project was recommended in 57<sup>th</sup> TCC meeting held on 26<sup>th</sup> & 27<sup>th</sup> September 2023 and approved in the 32<sup>nd</sup> EC Meeting held on 6<sup>th</sup> December 2023. The sanction order was issued on 12<sup>th</sup> December 2023 with timeline of 12 months up to 11.12.2024 and approved cost was ₹216.30 Lakh. Timeline extension of 6.5 months up to 30.06.2025 was recommended in 3<sup>rd</sup> TCC-II meeting held on 5<sup>th</sup> & 6<sup>th</sup> December 2024 and approved in the 39<sup>th</sup> EC Meeting held on 24<sup>th</sup> January 2025. The project was reviewed in 5<sup>th</sup> TCC-II meeting held on 27<sup>th</sup>, 28<sup>th</sup> & 29<sup>th</sup> January 2025 and additional drilling was recommended with revised cost of ₹231.91 Lakh, and approved in the 40<sup>th</sup> EC Meeting held on 21<sup>st</sup> February 2025.
- b) MECL further briefed that geophysical survey (IP cum Resistivity, SP & Magnetic) have been completed. Two potential areas have been identified namely Khandapar for gold and Karwahi for graphite. Drilling is in progress, while forest permission in Karwahi area is underway. The agency proposed additional drilling and sampling and requested timeline extension of 8 months up to 11<sup>th</sup> February 2026.
- c) The TCC-II noted the shifting of borehole locations due to topography. The committee agreed for additional drilling and sampling. Revised cost sheet to be examined in next TCC-II meeting. The committee also agreed to recommend timeline extension of 7 months up to 11<sup>th</sup> February 2026.

**Recommendation of TCC-II:**

**The committee recommended the proposal for approval of EC for “timeline extension of 7 months up to 11<sup>th</sup> February 2026”. The committee agreed for additional drilling and sampling. Revised cost sheet to be examined in next TCC-II meeting.**

**Agenda 12.3.17 Reconnaissance Survey (G4) for Limestone and Dolomite in and around Menga Area, Upper Subansiri District, Arunachal Pradesh.**  
**[Implementing Agency: DGM Arunachal Pradesh]**

- a) DGM Arunachal Pradesh informed that a project titled “Reconnaissance Survey (G4) for Limestone and Dolomite in and around Menga Area (26 sq. km) of Upper Subansiri District of Arunachal Pradesh” was recommended in 52<sup>nd</sup> TCC held on 27<sup>th</sup> & 28<sup>th</sup> April 2023 and approved in the 34<sup>th</sup> EC Meeting held on 13<sup>rd</sup> March 2024. The sanction order was issued on 15<sup>th</sup> January 2024 with timeline of 12 months up to 15<sup>th</sup> January 2025 and approved cost was ₹176.02 Lakh. This project was reviewed in 11<sup>th</sup> TCC-II meeting held on 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> & 30<sup>th</sup> July 2025 and the committee recommended closure of the current project as the proposed area was falling within the reservoir of the Upper Subansiri Hydro Project by NHPC. The committee suggested DGM Arunachal Pradesh to submit a fresh proposal with identification of a new area.
- b) DGM Arunachal Pradesh further briefed that new block has been identified with the help of GSI and also consent from NHPC has been obtained.
- c) The TCC-II agreed for continuation of the project in new block in the adjacent area.

***Recommendation of TCC-II:***

***The committee agreed for continuation of the project in new block in the adjacent area.***

**Agenda 12.3.18 Reconnaissance Survey (G4) for Graphite in Ranibandh Area, Bankura, West Bengal.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The project was recommended in 52<sup>nd</sup> TCC meeting held on 27<sup>th</sup> & 28<sup>th</sup> April 2023 and approved in the 34<sup>th</sup> EC Meeting held on 13<sup>rd</sup> March 2024. The sanction order was issued on 12<sup>th</sup> March 2024 with timeline of 10 months up to 11.01.2025 and approved cost was ₹143.36 Lakh. Timeline extension was given for 3 months up to 1.04.2025 in 4<sup>th</sup> TCC meeting-II held on 26<sup>th</sup> and 27<sup>th</sup> December 2024. It was further extended to 10.07.2025 (3 months) in 42<sup>nd</sup> EC meeting held on 2<sup>nd</sup> June 2025.
- b) MMPL informed that peer review of the final geological report has been done and comments are attended. The agency requested approval for submission of final geological report and timeline extension of 2 months up to 15<sup>th</sup> September 2025.
- c) The TCC-II agreed for submission of final geological report and timeline extension of 2 months up to 15<sup>th</sup> September 2025.

***Recommendation of TCC-II:***

***The committee agreed for submission of final geological report and recommended the proposal for approval of EC for “timeline extension of 2 months up to 15<sup>th</sup> September 2025”.***

**Agenda 12.4 Project Evaluation for In-Principle Approval**

**Agenda 12.4.1 Reconnaissance Survey (G4) for Graphite and associated Minerals in Kalipahari-Mukandpura (Area-A) and Jatwara-Khoh (Area-B), Alwar District, Rajasthan.**

**[Implementing Agency: M/s APC Drilling & Construction Private Limited]**

- a) The proposed area for reconnaissance survey comprises of 8.1 sq. km. of Area-A and 24.60 sq. km of Area-B, which falls in Survey of India Toposheet numbers 54A/15 & 54A/16 in parts of Alwar district, Rajasthan.

- b) As per the comment received from GSI, the proposed area completely overlaps with GSI's proposed STM area for FS 2026-27. Comments from DMG Rajasthan were pending during the meeting.
- c) APC Drilling & Construction Private Limited informed that during the Field Season (FS) 2019-20, the GSI conducted a reconnaissance survey (G4) for graphite in parts of the Rajgarh–Saloli area, located in Alwar District, Rajasthan. The objective was to delineate zones of graphite mineralization within the region. Surface evidence of graphite mineralization was recorded in the Rajgarh–Saloli block, primarily observed as a dark, smooth, hand-soiling powder derived from the carbon phyllite unit. This carbon phyllite is a dark black, bedded rock exposed at two key locations - Jamdoli and Saloli. At Jamdoli, the carbon phyllite exhibits intense iron encrustation, giving it a reddish to brownish appearance in some areas. In contrast, the exposure at Saloli is characterized by highly fractured and thinly laminated phyllite. In addition to graphite, occurrences of base metal mineralization were also noted. A total of 80 samples were analysed, with fixed carbon (FC) content ranging from 0.3% to 77.35%. The graphite-bearing carbon phyllite unit extends over a strike length of approximately 10 km, although exposures are limited to Jamdoli and Saloli, with other parts lying beneath soil cover. The unit continues further north of Saloli village under soil cover. Based on these findings, GSI recommended detailed exploration, including drilling of scout boreholes in the area. The proposed investigation targets the north-eastern extension of the carbon phyllite unit identified during the GSI's 2019-20 reconnaissance survey.
- d) The TCC-II accorded in-principle-approval to the proposed areas. The committee suggested for integration of NGCM, NGPM & Aero-geophysical data from NGDR, and to indicate mineral occurrence evidences during presentation of DPR.

***Recommendations of TCC-II***

***The committee agreed for in-principle-approval of the proposal.***

**Agenda 12.4.2 Reconnaissance Survey (G4) for Graphite and associated Minerals around Kochita, Bodraha, Malkham Area, Sidhi District, Madhya Pradesh.**

**[Implementing Agency: M/s APC Drilling & Construction Private Limited]**

- a) The proposed area for reconnaissance survey of 24.60 sq. km. falls in Survey of India Toposheet number 63L/3 in parts of Sidhi district, Madhya Pradesh.
- b) As per the comment received from GSI, the proposed area completely overlaps with GSI's proposed exploration area for FS 2026-27. DGM, Madhya Pradesh informed that, an exploration block of CMPDIL for Cu and associated minerals has a complete overlap with proposed area.
- c) The TCC-II opined that in-principle-approval cannot be accorded for this proposal.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.3 Reconnaissance survey (G4) for polymetallic minerals in the Girar-Karitoran Area, Lalitpur District, Uttar Pradesh.**

**[Implementing Agency: M/s Critical Mineral Trackers (CMT)]**

- a) The proposed area for reconnaissance survey of 134.00 sq. km. falls in Survey of India Toposheet number 54L/15 in parts of Lalitpur district, Uttar Pradesh.
- b) As per the comment received DGM Uttar Pradesh the proposed area has 60% overlap with DGM, UP's exploration block for PGE & associated minerals.

- c) The TCC-II advised NMET, to seek more information from DGM, Uttar Pradesh about i) when the project was initiated by DGM, UP & ii) details of the quantum of work which have already been done by the DGM, UP and their future plan of action.
- d) The TCC-II opined that the proposal from CMT to be kept on hold till the receipt of details of DGM, UP's exploration block.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.4 Reconnaissance Survey (G4) for Bauxite and associated Minerals, Dokapat Area, Gumla District, Jharkhand.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) NMET secretariat informed the committee that no comments have been received from GSI/MECL/AMD/State DGM for this proposal.
- b) The TCC-II deferred the proposal for next TCC-II meeting.

***Recommendations of TCC-II***

***The committee deferred the proposal for next TCC-II meeting.***

**Agenda 12.4.5 Reconnaissance Survey (G4) for Graphite and associated Minerals for Mankota Area, West Siang District, Arunachal Pradesh.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) The proposed area for reconnaissance survey of 90.00 sq. km. falls in Survey of India Toposheet number 82P/1 in parts of West Siang district, Arunachal Pradesh.
- b) As per the comment received from GSI, there is no overlap with GSI's exploration work. However, overlap with an exploration block of M/s Geo Marine Solutions Private Limited to be verified.
- c) M/s Earthenviro Lab Private Limited informed that Graphite Schist associated with Garnet, Quartzite and Biotite may contain Graphite deposit. Contact of Biotite Augen Gneiss & Calc / Granite Gneiss of Paleoproterozoic Age and Garnet, Staur, Biotite, Graphite Schist with Quartzite of Cretaceous Age may be the host rock for associated Minerals (REE). Two samples were collected by the agency which showed 5% to 15% of fixed carbon.
- d) The TCC-II opined that proposed area for reconnaissance survey in G4 stage is quite large for north eastern region. The committee advised reduction of total proposed area and suggested the agency to include and integrate all available data (NGCM, NGPM, Previous work etc.) and indicate mineral occurrence evidences during the presentation of DPR.

***Recommendations of TCC-II***

***The committee agreed for in-principle-approval of the proposal.***

**Agenda 12.4.6 Reconnaissance Survey (G4) for REE and associated Minerals in Mawphanrang Area, West Khasi District, Meghalaya.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) The proposed area for reconnaissance survey of 75.00 sq. km. falls in Survey of India Toposheet number 78O/7 in parts of West Khasi district, Meghalaya.
- b) As per the comment received from GSI, the proposed area completely overlaps with GSI's exploration area Nongbyrki Block for FS 2017-18.
- c) The TCC-II opined that in-principle-approval cannot be accorded for this proposal.

**Recommendations of TCC-II**

**The committee did not agree for in-principle-approval of the proposal.**

**Agenda 12.5 Cost Evaluation of New Project Proposals**

Cost evaluation has been done and comments are included in the respective agenda.

**Agenda 12.4 Project Evaluation for In-Principle Approval (Continued)**

**Agenda 12.4.7 Reconnaissance Survey (G4) for REE and associated Minerals in Namlang Area, West Khasi District, Meghalaya.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) The proposed area for reconnaissance survey of 50.00 sq. km. area falls in Survey of India Toposheet number 78O/7 in parts of West Khasi district, Meghalaya.
- b) As per the comment received from GSI, there is no overlap with GSI's exploration areas. Also, as per AMD's comment, there is no ongoing exploration project in the proposed area by AMD.
- c) M/s Earthenviro Lab Private Limited informed that report on "Reconnaissance survey for REE and associated elements in laterite in Nongjyllieh block, West Khasi Hills District, Meghalaya (G4) (GSI, FS: 2017-18)" had been referred. As per the recommendation of GSI in above mentioned report, the analytical results for REE of the soil samples show mild enrichment compared to bedrock samples in the Nongjyllieh block. The enrichment of REE occurs mostly in the C horizon and subordinately in the B and A-horizon which indicates that REE were contained in residual, secondary minerals and were adsorbed onto the surface of weathering products. The regolith cover developed over porphyritic granite has anomalous results ( $\Sigma$ REE in B horizon ranging from 219.11 ppm to 2064.69 ppm and 79.72 ppm to 2206.64 ppm in the C horizon and average 640.10 ppm).
- d) The TCC-II opined that based on the outcomes from GSI's work the proposed project cannot be approved as the values of REE are not so encouraging.

**Recommendations of TCC-II**

**The committee did not agree for in-principle-approval of the proposal.**

**Agenda 12.4.8 Reconnaissance Survey (G4) for Graphite and associated Minerals in Payum Area, West Siang District, Arunachal Pradesh.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) The proposed area for reconnaissance survey of 115.00 sq. km. falls in Survey of India Toposheet number 82L/10 in parts of West Siang district, Arunachal Pradesh.
- b) As per the comment received from GSI, there is no overlap with GSI's exploration areas.
- c) M/s Earthenviro Lab Private Limited informed that Graphite Schist associated with Garnet, Quartzite and Biotite may contain Graphite deposit. Biotite Augen Gneiss & Calc / Granite Gneiss of Paleoproterozoic Age has been intruded by Garnet, Staurolite, Biotite, Graphite Schist with Quartzite of Cretaceous Age may cause presence of REE.
- d) The TCC-II advised some limited field work and sampling by the implementing agency itself to be done to have lithological control in the proposed area.

**Recommendations of TCC-II**

**The committee did not agree for in-principle-approval of the proposal.**

**Agenda 12.4.9 Reconnaissance Survey (G4) for REE and associated Minerals in Puriang Area, East Khasi Hill District, Meghalaya.**

**[Implementing Agency: M/s Earthenviro Lab Private Limited]**

- a) The proposed area for reconnaissance survey of 40.00 sq. km. falls in Survey of India Toposheet number 83C/2 in parts of East Khasi Hill district, Meghalaya.
- b) As per the comment received from GSI, there is an overlap of 70% proposed area with GSI's exploration area of FS 2017-18.
- c) The TCC-II advised submission of a modified area for in-principle-approval.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.10 Reconnaissance survey (G4) for REE, Zirconium, and Associated Mineralization, Kohaniya-Dhawar Area, Mahoba District, Uttar Pradesh.**

**[Implementing Agency: M/s Enkay Enviro Services Private Limited]**

- a) The proposed area for reconnaissance survey of 22.10 sq. km. falls in Survey of India Toposheet number 54O/7 in parts of Mahoba district, Uttar Pradesh.
- b) As per the comment received from GSI, based on GSI's G4 stage exploration in FS 2016-17, an EL block was prepared and submitted which has an overlap with the proposed area.
- c) The TCC-II advised NMET to seek details of GSI's G4 stage exploration in FS 2016-17 and EL block. The proposal of Enkay Enviro Services Private Limited to be kept on hold till receipt of details from GSI.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.11 Reconnaissance Survey (G4) for Basemetal in Jahajpur-Chainpura Area, Bhilwara District, Rajasthan.**

**[Implementing Agency: M/s Hindmetal Exploration Services Private Limited]**

- a) The proposed area for reconnaissance survey of 101.00 sq. km. falls in Survey of India Toposheet number 45O/3 in parts of Bhilwara district, Rajasthan.
- b) As per the comment received from GSI, a G4 stage exploration work has been done in north of the proposed area. As per comments from MECL, there is no overlap of MECL exploration areas with the proposed area.
- c) DMG, Rajasthan informed that the proposed area falls under Aravali.
- d) The TCC-II opined that in-principle-approval cannot be accorded for this proposal.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.12 Reconnaissance survey (G4) for REE, RM and associated elements in the area between Siwana Ring Complex on the east and Luni river on the west in Tapra-Jagsa-Bhukan-Champa Bhakri Area, Sindari Tehsil, Balotra District, Rajasthan.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed area for reconnaissance survey of 100.00 sq. km. falls in Survey of India Toposheet number 45C/2 & 40O/14 in parts of Balotra district, Rajasthan.

- b) As per the comment received from GSI, there is a complete overlap of the proposed area with GSI's G4 stage exploration area of FS 2023-24 for REE.
- c) The TCC-II opined that in-principle-approval cannot be accorded for this proposal since G4 stage exploration has already been done by GSI in this area.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.13 Reconnaissance survey (G4) for REE, RM and associated elements in the area between Siwana Ring Complex on the north and Jawai River on the south in Bishangarh, Dhangara, Chhipi Area, Balotra and Jalor Districts, Rajasthan.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed area for reconnaissance survey of 100.00 sq. km. falls in Survey of India Toposheet number 45C/7 & 45C/11 in parts of Balotra and Jalor districts, Rajasthan.
- b) As per the comment received from GSI, regional mineral targeting (RMT) has been done by GSI in this area during FS 2022-2023, 2023-24, 2024-25. Two sub-block Bishangarh-I & Bishangarh-II from RMT block are falling within proposed area. From RMT project, one borehole RMTSB-05 falls in the proposed area for which analytical results are pending.
- c) The TCC-II opined that, the proposal of Geo Marine Solutions Private Limited to be kept on hold till receipt of analytical results for borehole RMTSB-05.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.14 Reconnaissance survey (G4) for REE, RM and associated elements in the area between Siwana Ring Complex on the north and Jawai river on the south in Pariharon Ki Dhani, Kuaber, Ummedabad Area, Balotra and Jalor Districts, Rajasthan.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

The proposal was not presented by the implementing agency. The agency informed that during field visit no exposed litho units were found in the area.

**Agenda 12.4.15 Preliminary Exploration (G3) for Nickel and other associated minerals in the Area west of Phokungri block, Phek District, Nagaland.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed block of 15.00 sq. km. area falls in Survey of India Toposheet numbers 83K/10 & 83K/14 in parts of Phek district, Nagaland.
- b) As per the comment received from GSI, a G4 stage exploration has been done in the proposed area in FS 2020-21. A GM block was also prepared by GSI which has an overlap of 50% with the proposed block.
- c) The TCC-II advised NMEDT to seek information about status of GM block prepared by GSI in this area, till then, the proposal of Geo Marine Solutions Private Limited to be kept on hold.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.16 Preliminary Exploration (G3) for Nickel and other associated minerals around Zipu block, Phek District, Nagaland.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 15.00 sq. km. area falls in Survey of India Toposheet number 83K/10 in parts of Phek district, Nagaland.
- b) As per the comment received from GSI, a G4 stage exploration has been done in the proposed area in FS 2020-21 and a GM block was prepared by GSI.
- c) The TCC-II advised NMEDT secretariat to seek information about status of GM block prepared by GSI in this area.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.17 Preliminary Exploration (G3) for REE and associated minerals in Khera Khindawara block, Barmer District, Rajasthan.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 7.00 sq. km. area falls in Survey of India Toposheet number 45C/6 in parts of Barmer district, Rajasthan.
- b) As per the comment received from GSI, a G4 stage exploration has been done by GSI in FS 2021-22 in this area.
- c) Geo Marine Solutions Private Limited informed that GSI (Das et al, 2015) carried out G-4 stage investigation for REE-RM in central and eastern parts of SRC and indicated highly anomalous values of REE and RM with felsic dyke channel samples analysed  $\Sigma$  REE+Y 0.17% to 3.49%, averaging 1.38%. The G4 investigation (Rastogi & Mukherjee, 2015) carried out by GSI also shows anomalous values of REE ranging from 1334 to 2696 ppm and 1075 to 3319 ppm. GSI (Kumar & Sharma, 2020 (G4)) reported REE+Y ranges in various lithounits like Plagioclase rich granite, K-Feldspar rich granite, younger intrusives, and felsic volcanics (0.017%-2.66%). Apart from REE, RM and some Trace elements show encouraging values. It includes Zr (0.1%-1.1%), Nb (2.5ppm-1039ppm), Ba (25ppm-3948ppm), Zn (120ppm-1258ppm) etc.
- d) The TCC-II opined that more supporting data is needed for taking up a G3 stage of exploration in this area. Based on present background information the proposal cannot be recommended for G3 stage of exploration.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.18 Preliminary Exploration (G3) for Nickel and associated minerals around Reguri block, Phek District, Nagaland.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 10.18 sq. km. area falls in Survey of India Toposheet number 83K/10 & 83K/11 in parts of Phek district, Nagaland.
- b) As per the comment received from GSI, a G4 stage exploration has been done in the proposed area in FS 2020-21 and a GM block was prepared by GSI.
- c) The TCC-II advised NMEDT secretariat to seek information about status of GM block prepared by GSI in this area.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.19 Preliminary Exploration (G3) for Nickel and other associated minerals around Thewati block, Phek District, Nagaland.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 5.86 sq. km. area falls in Survey of India Toposheet number 83K/14 & 83K/15 in parts of Phek district, Nagaland.
- b) As per the comment received from GSI, a G4 stage exploration has been done in the proposed area in FS 2020-21 and a GM block was prepared by GSI.
- c) The TCC-II advised NMEDT secretariat to seek information about status of GM block prepared by GSI in this area.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.20 Preliminary Exploration (G3) for Graphite, Basemetals and Associated minerals in Areas between Bande and Biji Hama Block, Baramulla District, Jammu and Kashmir.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 9.97 sq. km. area falls in Survey of India Toposheet number 43J/4 in parts of Baramulla district, Jammu and Kashmir.
- b) As per the comment received from GSI, the proposed block has an overlap with wildlife sanctuary and its buffer zone.
- c) The TCC-II opined that the proposal cannot be recommended for G3 stage exploration.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.21 Preliminary Exploration (G3) for Graphite, Basemetals and Associated minerals in Areas between Limber and Pahlipora Area, Baramulla District, Jammu and Kashmir.**

**[Implementing Agency: M/s Geo Marine Solutions Private Limited]**

- a) The proposed exploration block of 8.81 sq. km. area falls in Survey of India Toposheet number 43J/4 in parts of Baramulla district, Jammu and Kashmir.
- b) As per the comment received from GSI, the proposed block has an overlap with wildlife sanctuary and its buffer zone.
- c) Geo Marine Solutions Private Limited informed that Bhat M.L. (1957–1961) investigated graphite deposits between Khadyanyar (43J/8) and Islamabad (43J/4), identifying lenticular bodies (10–100+ ft thick) trending N75°E-S75°W with 50°–60° northward dips. Fixed carbon percentages varied across sectors: Khadyanyar-Zainpur: 7.52%, Naga Nari-Bambyar: 8.70%–12.45%, Bambyar-Limbar: 9.79%–15.11%, Limbar-Islamabad: 4.44%–10.78%. Graphite reserves estimated between Islamabad and Dhani Saiyidan total 2.45 million tonnes (avg. 6.35% fixed carbon, range 0.45%–14.8%). In the Ijara–Islamabad area (43J/4), gypsum reserves were estimated at 25.51 million tonnes (15.31 million tonnes workable) with 91.75% purity. Further investigation between Islamabad and Dhani Saiyidan indicated possible reserves of 42.1 million tonnes. A reconnaissance survey in Darakanjan–Uri area revealed mineralization of galena, sphalerite, chalcopyrite, and pyrite by GSI (G4) showed: Pb: 20–3400 ppm, Zn: up to 5000 ppm, Ag: mostly <5 ppm (two samples: 945 & 287 ppm), Mn: 1–5555 ppm, Vanadium: up to 990 mg/kg, Graphite schist: 9.98–13.18% fixed carbon, Gypsum: 87% purity. Boniyar Survey by GSI, 2020–21 revealed Graphite in bedrock samples had 0–25% fixed carbon (mostly 0–5%); trench samples showed 0–22.22% (mostly 0–5%). Notable elemental values included: Pb: up to 25,490 ppm, Cu: 1368

ppm, Zn: 690 ppm, Ni: 234 ppm, Cr: 109 ppm, Mn: 2449 ppm, CaO: 30.78–31.51%, SO<sub>3</sub>: 42.6–45.99%.

d) The TCC-II agreed for in-principle approval of the project.

***Recommendations of TCC-II***

***The committee agreed for in-principle-approval of the proposal.***

**Agenda 12.4.22 Preliminary Exploration (G3) for Graphite in Sikat-Sondag Block, Garhwa District, Jharkhand.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block of 3.22 sq. km. area falls in Survey of India Toposheet number 63M/13 in parts of Garhwa district, Jharkhand.
- b) As per the comment received from GSI, the proposed block is completely overlapping with GSI's G3 block of FS 2024-25.
- c) The TCC-II opined that the proposal cannot be recommended.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.23 Reconnaissance Survey (G4) for Graphite in Tongari Area, Latehar District, Jharkhand.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed area for reconnaissance survey of 37.65 sq. km. falls in Survey of India Toposheet number 73A/2 in parts of Latehar district, Jharkhand.
- b) As per the comment received from GSI, the proposed area falls in Betla National Park (Tiger Reserve).
- c) The TCC-II opined that the proposal cannot be recommended.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.24 Reconnaissance Survey (G4) for Graphite in Ranibandh East Area, Bankura District, West Bengal.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed area for reconnaissance survey of 17.40 sq. km. falls in Survey of India Toposheet number 73J/9 in parts of Bankura district, West Bengal.
- b) As per the comment received from GSI, the proposed block is completely overlapping with the GSI's proposed G4 block for FS 2026-27.
- c) The TCC-II advised submission of fresh/new area for in-principle-approval. The committee opined that the proposal cannot be recommended.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.25 Preliminary Exploration (G3) for Limestone in Kebang Area, East Siang District, Arunachal Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block of 14.84 sq. km. area falls in Survey of India Toposheet number 82P/4 in parts of East Siang district, Arunachal Pradesh.

- b) The TCC-II opined that consent from DGM, Arunachal Pradesh is needed for approval of this project.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal. Consent from DGM, Arunachal Pradesh is needed.***

**Agenda 12.4.26 Preliminary Exploration (G3) for Limestone in Babuk Area, East Siang District, Arunachal Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block of 16.45 sq. km. area falls in Survey of India Toposheet number 82P/4 in parts of East Siang district, Arunachal Pradesh.
- b) The TCC-II opined that consent from DGM, Arunachal Pradesh is needed for approval of this project.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal. Consent from DGM, Arunachal Pradesh is needed.***

**Agenda 12.4.27 Preliminary Exploration (G3) for Graphite in Sewadih-Uchari-Hudag block, Garhwa District, Jharkhand.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed exploration block of 3.22 sq. km. area falls in Survey of India Toposheet number 64M/9 & 63M/13 in parts of Garhwa district, Jharkhand.
- b) As per the comment received from GSI, the proposed block is completely overlapping with GSI's G3 block of FS 2024-25.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.28 Reconnaissance Survey (G4) for Tin, Tungsten, REE and associated mineral of Amargarh-Moth Area, Jhansi District, Uttar Pradesh.**

**[Implementing Agency: M/s Maheshwari Mining Private Limited (MMPL)]**

- a) The proposed area for reconnaissance survey of 224.00 sq. km. falls in Survey of India Toposheet number 54K/14 in parts of Jhansi district, Uttar Pradesh.
- b) As per the comment received from GSI, the proposed block is completely overlapping with GSI's block of FS 2025-26.

***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

**Agenda 12.4.29 Reconnaissance Survey (G4) for Sulphide Potentiality in and around Tukra-Phoponga Area, Goalpara District, Assam.**

**[Implementing Agency: M/s Novomine India Private Limited]**

- a) The proposed area for reconnaissance survey of 25.02 sq. km. falls in Survey of India Toposheet number 78J/12 in parts of Goalpara district, Assam.
- b) As per the comment received from GSI, there is an overlap of 0.49 sq. km area of the proposed block with GSI's G3 block of FS 2015-16.
- c) Novomine India Private Limited informed that detailed investigations by Singha., et al. (2016) in the Phoponga and Satbaini-Kokira areas have delineated significant Pb-Zn

mineralization associated with shear zones within the Meghalaya Gneissic Complex. Channel samples and PCS samples yielded Zn values up to 28.93% and Pb up to 9.5%, along with associated Ag (230 ppm), Cd (650 ppm), and Au (0.1 ppm), indicating a polymetallic assemblage. Petrographic studies confirmed sphalerite as the dominant sulfide phase, with galena and chalcopyrite occurring as inclusions or fracture-fill minerals. Test drilling intersected mineralized zones with Zn and Pb values up to 5116 ppm and 3170 ppm respectively, and the mineralization appears to extend eastwards. There is broad high magnetic anomaly with broad SP low below the granite gneiss that may indicate magnetite bearing sulphide mineralization in the subsurface below the granite exposure (Singha et al., 2016).

- d) The TCC-II opined that the agency should visit the field and collect some samples by itself for more mineral evidences. All available data including NGCM, NGPM to be consulted. The committee opined that the agency may submit DPR with more details incorporating available/existing data on NGCM, NGPM, outcome of STM reports and few analytical results from proposed area. With the present background the proposal cannot be given in-principle-approval.

#### ***Recommendations of TCC-II***

***The committee did not agree for in-principle-approval of the proposal.***

#### **Agenda 12.4.30 Preliminary exploration (G3) for Vanadium, Graphite and Barium in Chaura- Maunkanda block, Champawat District, Uttarakhand.**

**[Implementing Agency: M/s Ocean Drilling & Exploration Private Limited]**

- a) The proposed exploration block of 3.59 sq. km. area falls in Survey of India Toposheet number 53O/15 & 62C/3 in parts of Champawat district, Uttarakhand.
- b) As per the comment received from GSI, there is no overlap of the proposed block with GSI's exploration blocks.
- c) Ocean Drilling & Exploration Private Limited informed that During the Field Season 2022–23 of GSI, reconnaissance survey has been carried out. The survey involved the systematic collection and analysis of various sample types, including 100 bedrock samples (BRS) and 50 channel samples, 15 pitting and trenching samples. Chemical analysis of these samples revealed anomalously high values of Ba, V, and fixed carbon. In BRS V value ranges from 148ppm to 3627ppm, Ba 3873ppm to 30093ppm. In channel samples values range from V 114ppm to 2807ppm and Ba 4132ppm to 9535ppm.
- d) The TCC-II agreed for in-principle-approval of the proposal. The committee suggested to include integrated map of block incorporating existing data on NGCM, NGPM, Aero-geophysics etc.

#### ***Recommendations of TCC-II***

***The committee agreed for in-principle-approval of the proposal.***

#### **Agenda 12.4.31 Reconnaissance survey (G4) for copper, zinc and associated base metal mineralization in Haripur Area, Chamba District, Himachal Pradesh.**

**[Implementing Agency: M/s Ocean Drilling & Exploration Private Limited]**

- a) The proposed area for reconnaissance survey of 47.4 sq. km. falls in Survey of India Toposheet number 52D/2 in parts of Chamba district, Himachal Pradesh.
- b) As per the comment received from GSI, the proposed area is completely overlapping with GSI's proposed area of FS 2026-27.

- c) The TCC-II opined that in-principle-approval cannot be given for the proposal.

**Recommendations of TCC-II**

**The committee did not agree for in-principle-approval of the proposal.**

**Agenda 12.4.32 Preliminary exploration (G3) for Vanadium, Graphite and Barium in Sundungra block, Champawat District, Uttarakhand.**

**[Implementing Agency: M/s Ocean Drilling & Exploration Private Limited]**

- a) The proposed exploration block of 2.82 sq. km. area falls in Survey of India Toposheet number 53O/15 in parts of Champawat district, Uttarakhand.
- b) The TCC-II opined that since the agency's one proposal for same commodity has been approved in adjacent area, outcomes of that project will be reviewed first for taking up further blocks in this area.

**Recommendations of TCC-II**

**The committee did not agree for in-principle-approval of the proposal.**

**Agenda 12.4.33 Preliminary Exploration (G3) for Graphite and associated minerals, Mahadevbera block, Ranchi District, Jharkhand.**

**[Implementing Agency: M/s Natural Resource Division Tata Steel Limited]**

- a) The proposed exploration block of 3.00 sq. km. area falls in Survey of India Toposheet number 73F/13 in parts of Ranchi district, Jharkhand.
- b) As per the comment received from GSI, a G4 level exploration work has been done by GSI in this area.
- c) Natural Resource Division Tata Steel Limited informed that the proposed block falls within Ghagri Asangibera Gold Block (G4) which was explored in detail by GSI during 2016-17 for 100 Sq. Km. area with 1:12,500 scale mapping. The proposed block shares common boundary in the north with Sindauri-Urmal Gold Block (G4) which was explored by GSI in 2007-2009. The GSI report indicates graphite mineralization in the Papirda-Jopno-Kubasai Graphite Block (G4), characterized by two bands of carbon phyllite. An area of 100 square kilometers was systematically mapped at a scale of 1:12,500. The general trend of the carbonaceous phyllite varies from E-W to N80°W-S80°E. Analytical results revealed fixed carbon values exceeding 2% in 40 borehole samples, with the highest recorded value at 6.1% and the lowest at 0.1%. A total of 48 samples were collected from various lithological types in the area. The analytical results from 42 of these samples revealed an average fixed carbon (FC) content of approximately 2%, which is right around the threshold value. Of the analyzed samples, 19 (about 45%) demonstrated FC values exceeding 2%, with an average FC of 3.19%, a maximum of 7.43%, and a minimum of 2.12%. However, the overall results indicate that most samples yield FC values below 5%, clustering near the threshold of 2%. Based on fieldwork conducted at Vijayagiri Dam, two carbon phyllite bands were identified, one in the northern region and another in the southern region. The focus of research in the Vijayagiri area primarily targeted the southern band. Recently, geologists from the Natural Resources Division of Tata Steel Limited have undertaken a field traverse in and around the northern portion of the Vijayagiri Dam. It was observed that most part of the area is covered with carbonaceous phyllite, cherty quartzite and talc tremolite schists. Four major graphite mineralized zones were observed based on the samples collected. The average fixed carbon (FC) in the samples has been 4.3% at 2% FC cut-off where the highest value reaching 6.99%.

- d) The TCC-II advised collection of two (2) channel sample. Values to be presented in DPR.

***Recommendations of TCC-II***

***The committee agreed for in-principle-approval of the proposal.***



**Annexure -1**

**List of participants attended 12<sup>th</sup> meeting of Technical-cum-cost Committee (TCC-II) of NMEDT held on 22<sup>nd</sup>, 25<sup>th</sup>, 26<sup>th</sup> August and additional session on 27<sup>th</sup> August, 2025 through video conferencing mode**

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68	Dr. Joy Gopal Ghosh	Principal (Geology & Exploration)	joygopal.ghosh@geovale.com	9999681366	Geovale Service Pvt. Ltd., Kolkata
69	Dr. Taraknath Pal	Associate Principal (Exploration)	tarakpal22@gmail.com	6300985508	Geovale Service Pvt. Ltd., Kolkata
70	Dr. Suparna Goswami	Sr. Project Manager (Exploration)	suparna.goswami@geovale.com	9874320018	Geovale Service Pvt. Ltd., Kolkata
71	Shri Mallikarjun BL	Chief General Manager (Exploration)	apcdrilling@gmail.com	9422801575	APC Drilling & Construction Pvt. Limited
72	Shri C.S.Ramesh	General Manager (Exploration)	apcdrilling@gmail.com	9980544027	APC Drilling & Construction Pvt. Limited
73	Shri Atul Rathore	Deputy General Manager (Exploration)	apcdrilling@gmail.com	7011884417	APC Drilling & Construction Pvt. Limited
74	Shri Prava Ranjan Mishra	MD	exploracionnabet@gmail.com	7400066685	ELPL, Bhubaneswar
75	Smt. Manorama Mohapatra	PC	exploracionnabet@gmail.com	9668511831	ELPL, Bhubaneswar
76	Mr. Kireet Acharya	VP (Mines & Geology)	kireet.acharya@enkayenviro.com	9414163035	EESPL, Jaipur
77	Mr. Anand Dubey	Manager Geologist	anand.dubey@enkayenviro.com	9981663155	EESPL, Jaipur
78	Mr. Mohit Sharma	Geologist	mohit.sharma@enkayenviro.com	6350049393	EESPL, Jaipur
79	Mr. Nitesh Mishra	Sr. Geologist	nitesh.mishra@enkayenviro.com		EESPL, Jaipur
80	Dr. Kavita Bhardwaj	Project Coordinator	kavita.bhardwaj@vedanta.co.in	8003091392	Hindmetals Exploration Services Pvt. Ltd
81	Dr. Prakshal Mehta	Geologist	Prakshal.mehta@vedanta.co.in	8003499133	Hindmetals Exploration Services Pvt. Ltd
82	Mr. Russell Evans	Geologist	russell.evans@vedanta.co.in	9001994324	Hindmetals Exploration Services Pvt. Ltd
83	Mr. Santosh Lohar	Geologist	santosh.lohar@vedanta.co.in	9001898975	Hindmetals Exploration Services Pvt. Ltd

84	Mr. Rajil Chaudhary	Geophysicist	rajil.chaudhary@vedanta.co.in	9001994324	Hindmetals Exploration Services Pvt. Ltd
85	Shri Rajib Deb	Chief Geologist (Ferrous Minerals)	rajib.deb@tatasteel.com	6203507651	Natural Resources Division, Tata Steel Limited
86	Representative				CMPDI
87	Representative				DGM Assam
88	Representative				DGM Arunachal Pradesh
89	Representative				Novomine India Private Limited
90	Representative				Critical Mineral Trackers
91	Shri Sudeep Manish Toppo	Director	sudeep.toppo@gsi.gov.in	9065146048	GSI
92	Smt. Anju C. S	Superintending Geologist	nmet.mines@gov.in	8588836933	NMET
93	Ms. Bishakha	Sr. Geologist	nmet.mines@gov.in	8126541605	NMET
94	Smt. Palak Kapoor	Sr. Geologist	nmet.mines@gov.in	8851742488	NMET
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**Estimated Cost for Reconnaissance Survey (G4) for copper and associated mineralization in Salwari-Narsinghpuri-Pachlagi Area, Sikar District, Rajasthan**

**Area: 28.48 Sq. Km, No. of BH: 6 (Avg. depth: 250 m each = 1500m), Timeline- 10 Months, Review: After 4 Months**

**Implementing Agency: Vardan Environet Llp**

Sl.No.	Item of Work	SoC Sr. No.	Units	Qty	Cost per unit/ per day/ man days (In Rs.)	Total Amount (In Rs.)	Remarks
<b>1</b>	<b>Geological Mapping (Scale 1:12,500)</b>						
a.	Charges of Geologist (field)	1.2b	Mandays	120	11,000	1,320,000	Geological Mapping on 1:12,500 Scale, core logging, sampling (BRS & Core), supervision of trenching and pitting
b.	Labour Charges (2 Helper for each geo)	5.7	Mandays	240	541	129,840	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
c.	Geologists (HQ) days (1 No)	1.2a	Mandays	60	9,000	540,000	
	<b>Sub Total :- 1</b>					<b>1,989,840</b>	
<b>2</b>	<b>Survey work</b>						
a.	Charges of Surveyor	1.6.1b	Per day	15	8,300	124,500	For Topographic Survey, BH fixation and Boundary Point Marking

b.	Labours Charges for survey work	5.7	Per day	60	541	32,460	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
c.	Demarcation of block boundary & boreholes	1.6.2	Per point	10	19,200	192,000	6 BHs and 4 boundary coordinates
	<b>Sub Total :- 2</b>					<b>348,960</b>	
<b>3</b>	<b>Trenching/Pitting</b>						
a.	Trenching	2.1.1	cu. m	60	3,330	199,800	No of sample = 170
b.	Pitting	2.1.2	cu. m	50	3,800	190,000	
	<b>Sub Total :- 3</b>					<b>389,800</b>	
<b>4</b>	<b>Sample Preparation</b>						
a.	Sampler charges for Sample processing work	1.5.2	Mandays	39	5,100	198,900	
b.	Labour (Field days) (2workers per sampler)	5.7	Mandays	156	541	84,396	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	<b>Sub Total :- 4</b>					<b>283,296</b>	

5	<b>Core Drilling (1500 m/ 6 BH)-Outsource</b>						<b>In the phase-I 2 boreholes with depth of 250 m each shall be drilled. Subsequent drilling after review.</b>
a.	Drilling (HQ Size Core) (6 BH) (Hard Rock), 240m	2.2.4a	Per m	240	13,800	3,312,000	
b.	Drilling (NQ Size Core) (6 BH) (Hard Rock of <300m), 1260 m	2.2.1.4a	Per m	1260	11,500	14,490,000	
c.	Drill Core Preservation	5.3	Per m	750	1,590	1,192,500	This amount will be reimbursed after successful delivery of the cores to concerned libraries/authorities
d.	Borehole Geophysical logging	3.12	m	1500	1,088,941	1,088,941	
e.	Borehole deviation survey by Multi shot camera	2.2.6	Per m	1500	330	495,000	
	<b>Sub Total :- 5</b>					<b>20,578,441</b>	
6	<b>Laboratory Study-Outsource</b>						
6.1	<b>Bed Rock Samples</b>						
a.	Bed Rock samples by XRF for whole rock analysis	4.1.15a	Nos	10	4,200	42,000	
	External Check 10%	4.1.15a	Nos	1	4,200	4,200	
b.	Bed Rock samples by ICPMS	4.1.13	Nos	5	5,380	26,900	
	External Check 10%	4.1.13	Nos	1	5,380	5,380	

c.	Bed Rock samples by AAS (Cu, Pb, Zn, Ni, Co, V, U, Au, Ag)	4.1.7a & b	Nos	25	3,846	96,150	
	External Check 10%	4.1.7a	Nos	3	2,506	7,518	
<b>6.2</b>	<b>Drill Core Samples- Outsource</b>						
a.	Drill core samples by ICPMS	4.1.13	Nos	30	5,380	161,400	
	External Check 10%	4.1.13	Nos	3	5,380	16,140	
b.	Drill core samples by AAS (Cu, Pb, Zn, Ni, Co, V, U, Au, Ag)	4.1.7a	Nos	100	3,846	384,600	
	External Check 10%	4.1.7a	Nos	10	2,506	25,060	
g	Density	4.8.3	Nos	10	1,568	15,680	
<b>6.3</b>	<b>Trench/Pit Samples- Outsource</b>						
a.	Trench samples by ICPMS	4.1.13	Nos	10	5,380	53,800	
	External Check 10%	4.1.13	Nos	1	5,380	5,380	
b.	Trench samples by XRF (Whole rock analysis)	4.1.15a	Nos	100	4,200	420,000	
	External Check 10%	4.1.15a	Nos	10	4,200	42,000	
	<b>Sub Total:- 6</b>					<b>1,306,208</b>	
<b>7</b>	<b>Petrological studies</b>						
a.	Preparation of thin section	4.3.1	Nos	10	2,353	23,530	

b.	Study of thin section for petrography	4.3.4	Nos	10	4,232	42,320	
c.	Preparation of polished section	4.3.2	Nos	10	1,549	15,490	
d.	Study of polished section for mineragraphy	4.3.4	Nos	10	4,232	42,320	
e.	Digital photomicrograph of thin polished	4.3.7	Nos	20	280	5,600	
	<b>Sub Total:-7</b>					<b>129,260</b>	
	<b>Total (Sno.1 to 7)</b>					<b>25,025,805</b>	
<b>8</b>	<b>Preparation of Exploration Proposal</b>	<b>5.1</b>				<b>₹500,000</b>	
a.	<b>Geological Report Preparation</b>	<b>5.2(iii)</b>		Total project cost ₹150 lakh but less than 300 lakhs: A Minimum of ₹7.5 lakh or 3% of the work whichever is more and ₹3000/- per each additional copy.		<b>750,774</b>	
b.	<b>Tender Processing Cost</b>	<b>2.3</b>		2% of the approved project cost or 5 lakh whichever is lower will be paid one time to Exploration Agency		<b>387,719</b>	

c.	Operation Charges	6(iii)		In case of total outsourced cost more than ₹1 crore: Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, ₹8.75 lakh plus 5 percent on the balance amount of outsourced cost in excess of ₹1 crore will be paid to Exploration Agency towards operational charges. The maximum ceiling of operational charges is ₹15 lakh.		1,344,297	(19385941-10000000)*5% +8750000
9	Peer Review charge	As per EC				30,000	
	<b>Grand Total</b>					<b>28,038,595</b>	
	Add GST @ 18%				18%	5,046,947	
	<b>Grand Total Including GST</b>					<b>33,085,542</b>	
	<b>Rs in Lakh</b>					<b>331</b>	
<b>Note:</b>							
1	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.						
2	In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement						
3	If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.						
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.						
5	Any item of work not mentioned above shall be added as per SoC.						
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency						

**Time Schedule/ Action Plan for Reconnaissance Survey (G4) for copper and associated mineralization in Salwari-Narsinghpuri-Pachlagi Area, Sikar District, Rajasthan**

S.N.	Activities	Unit	Months											
			1	2	3	4	Review	5	6	7	8	9	10	
1.	Geologist Party days (HQ)	day	■					Review				■	■	■
2.	Geologist Party days (Field)	day		■	■	■	■		■					
3.	Sampling Party clays	day			■	■	■		■					
4.	Drilling	day			■	■	■		■					
5.	Petrographic Studies	Nos.								■	■	■		
6.	Geochemical Studies	Nos.			■	■	■		■	■	■			
7.	Geological Work (pitting, trenching)	m3		■	■									
8.	Report Writing	day										■	■	
9.	Peer Review	day												■

**Estimated Cost for Reconnaissance Survey (G4) for Vanadium-Titanium in Risewada- Lodhiwada Area, Balaghat District, Madhya Pradesh.  
Total area- 60 sq. km; Timeline - 8 months, Review after 4 months  
Implementing Agency: Gemcokati Pvt. Ltd.**

SI no.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal	Total Amount (Rs)	Remarks
			SoC-Item	Rates as per SoC			
			Sl. No.		Qty.		
<b>1</b>	<b>Large scale (LSM,1:12500) Geological mapping/Trenching.</b>	60 sq. km					
1.1	Geologist man days (1 No) for Large Scale (LSM) Geological mapping / Pitting/Sampling	days	1.2b	11,000	120	1,320,000	
1.2	Labour (field) for (Total 4 Nos i. e. 2 workers per one geologist)	per worker	5.7	541	240	129,840	
1.3	Pitting	cum	2.1.2	3800	120	456,000	1m x 1m x 2m(Depth) cu. m each
1.4	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	23	117,300	to be added
1.5	e. Labours (4 Nos)	day	5.7	541	92	49,772	
	<b>Subtotal (1.1 to 1.5)</b>						

1.4	Geologist man days (1 No) for Geological mapping & Report (HQ)	days	1.2a	9,000	45	405,000	
	<b>Total (1)</b>					<b>2,477,912</b>	
<b>2</b>	<b>Laboratory Studies</b>						
2.1	Major Oxides by XRF	per sample	4.1.15a	4200	110	462,000	(20 BRS + 20 Channel Samples + 60 Pit Samples) (100 Primary + 10 Check samples)
2.3	Minor & trace elements by ICPMS (V, Ti, Ga, REE, Co,) 34 Elements	per sample	4.1.14	7731	66	510,246	(60 Pit samples + 6 check samples) Package of 34 elements including V, Ti, Ga, REE, Co
	<b>Total (2)</b>					<b>972,246</b>	
<b>3</b>	<b>XRD Studies for identification of minerals</b>	per sample	4.5.1	4,000	5	<b>20,000</b>	
<b>4</b>	<b>Petrological / Mineragraphic studies</b>						
4.1	Preparation of thin section	per sample	4.3.1	2353	5	11,765	
4.2	b) Study of thin sections for petrography	per sample	4.3.4	4232	5	21,160	
4.3	c)Preparation of polished section	per sample	4.3.2	1549	5	7,745	
4.4	d)Study of thin polished section for mineragraphy	per sample	4.3.4	4232	5	21,160	
4.5	Digital photomicrograph of thin polished section	per photo	4.3.7	280	5	1,400	
	<b>Total (4)</b>					<b>63,230</b>	

	<b>Total 1 to 4</b>					<b>3,533,388</b>	
<b>5</b>	<b>Geological Report Preparation</b>	Nos	5.2	For the projects having cost up to 50 lakhs - A minimum of Rs. 1.5 lakhs or 5 % of the value of work whichever is more and Rs. 1000/each additional copy	1	<b>176,669</b>	
<b>6</b>	<b>Preparation of Exploration Proposal</b>	Nos	5.1	2% of the Cost or Rs. 5.0 Lakhs whichever is less	1	<b>70,668</b>	
<b>7</b>	<b>Report Peer Review Charges</b>	lumpsum	As per EC decision	30000	1	<b>30,000</b>	
<b>8</b>	<b>Total Estimated Cost without GST</b>					<b>3,810,725</b>	
<b>9</b>	<b>Provision for GST (18%)</b>					<b>685,931</b>	
<b>10</b>	<b>Total Estimated Cost with GST</b>					<b>4,496,656</b>	
					<b>Say, in Lakhs</b>	<b>44.97</b>	
<b>Note:</b>							
<b>1</b>	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>						
<b>2</b>	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>						
<b>3</b>	<b>If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.</b>						
<b>4</b>	<b>Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.</b>						
<b>5</b>	<b>Any item of work not mentioned above shall be added as per SoC.</b>						
<b>6</b>	<b>All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency</b>						

**Time Schedule/Action plan For Reconnaissance Survey (G4) for Vanadium-Titanium in Risewada- Lodhiwada Area, Balaghat District, Madhya Pradesh**

S. No.			1	2	3	4		5	6	7	8
1	Camp Setting	Months/Days					Review				
2	Geological Mapping & Sampling	days									
3	Pitting/Trenching	cu. m									
4	Laboratory Studies	Nos.									
5	Report Writing with Peer Review	months									

**Estimate Cost for Preliminary Exploration (G3) for Bauxite in Ran Block, Dev Bhumi Dwarka District, Gujarat.  
Area 7.87 sq. km, No. of BH:16, (30m each = 480 m);  
Phase I: 4 BH, Phase II: 12 BH, Timeline - 12 months, Review: After 5 Months  
Implementing Agency: Gemcokati**

Sl. No.	Item of Work *	Unit *	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks	PHASE I	PHASE II
			SoC-Item No. *	Rates as per SoC * (a)	Qty. (b)	Total Amount (Rs) (a*b)			
<b>A</b>	<b>Geological Mapping Other Geological Work &amp; Surveying</b>								
	Geological mapping, (1:2,000 scale) & Trenching, drilling work								
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.3	11000	120	1320000			
ii	b. Labours Charges; Base rate	day	5.7	541	240	129840	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.		
iii	c. Charges for Geologist per day (HQ)	day	1.3	9000	45	405000			
iv	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	23	117300			
v	Labours Charges	day	5.7	541	92	49772			
	<b>Sub Total- A</b>						<b>2,021,912</b>		

<b>B</b>	<b>Ground Geophysical Survey</b>								
	<b>Sub Total- B</b>								
<b>C</b>	<b>Survey work</b>								
a	DGPS Survey for BH fixation & RL determination	Per Point of observation	1.6.2	19,200	21	403200	6 Block Boundaries & 15 Boreholes		
b	Charges of Surveyor (1 party) for Geophysical survey layout work & Block boundary demarcation	one surveyor per day	1.6.1a	8,300	30	249000			
	<b>Sub-Total C</b>					<b>652,200</b>			
<b>D</b>	<b>Trenching/Pitting</b>								
	a) Excavation of Pit	per cu. m	2.1.2	3,800	40	152000	1m x 1m x 2m depth (With 800m grid spacing)		
	<b>Sub Total D</b>					<b>152000</b>			
<b>E</b>	<b>DRILLING (after review) (In-house)</b>								
1	Drilling up to 300m (Soft Rock) (as per MOC rate)	m	2.2.1.1b	7,168	480	3440640	Phase I: 4 BH * 30m = 120m Phase II: 12 BH * 30m = 360m	1,355,000	2,235,750
								200	330
2	Borehole deviation Survey by Multishot Camera	m							
3	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	16	320000	Borehole Points	80,000	220,000
								4	11

4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	16	32000			
5	Borehole plugging by cement	per borehole	2.2.7b	200	16	3200	Boreholes (HQ size)		
6	Transportation of Drill Rig & Truck associated per drill (2 rigs)	Km	2.2.8	36	3,000	108000	To and Fro (Chandrapur, Maharashtra to Dev bhumi, Dwarka, Gujarat)		
7	Monthly Accommodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	4	200000			
8	Drilling Camp Setting Cost	Nos	2.2.9a	250,000	2	500000			
9	Drilling Camp Winding up Cost	Nos	2.2.9b	250,000	2	500000			
10	Road Making (Flat Terrain)	Km	2.2.10a	22,020	2	44040	As per actuals		
11	Drill Core Preservation	per m	5.3	1,590	50	79500			
	<b>Sub Total E</b>					<b>5,227,380</b>			
<b>F</b>	<b>Borehole Geophysical Logging</b>								
<b>G</b>	<b>LABORATORY STUDIES</b>								
1	<b>Chemical Analysis</b>								
vii)	<b>Major Oxide Analysis</b>								
	a) Estimation of major oxides by XRF/whole rock analysis for primary samples (CaO, MgO, SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , LOI, Na <sub>2</sub> O, Fe <sub>2</sub> O <sub>3</sub> , MnO, K <sub>2</sub> O, TiO <sub>2</sub> , SO <sub>3</sub> , P <sub>2</sub> O <sub>5</sub> , Cr <sub>2</sub> O <sub>3</sub> , ZnO, V <sub>2</sub> O <sub>5</sub> )	per sample	4.1.15a	4200	110	462000	PHASE I: 100 No. + 10 No. Check Samples = 110 No. [10 BRS + 50 CS + 40 Pit Samples]	1,428,000	1,512,000
								340	360
	Density		4.8.3	1,568	8	12,544			

	ICPMS Study by 34 elements	per sample	4.1.14	7,731	50	386,550	PHASE I: 20 No. & PHASE II: 30 No.	154,620	231,930
								20	30
	Combined determination of Trihydrate Alumina (THA-140° C), Monohydrate Alumina (MHA-240° C) & Reactive Silica	per sample	4.1.17a	6,700	10	67,000			
2	<b>Physical &amp; Petrological Studies</b>								
i	Preparation of thin section	Nos	4.3.2	1,549	10	15,490			
ii	Study of thin section	Nos	4.3.4	4,232	10	42,320			
iii	Preparation of polish section	Nos	4.3.2	1549	10	15,490			
iv	study of polished section	Nos	4.3.4	4,232	10	42,320			
v	Digital Photographs	Nos	4.3.7	280	10	2,800			
viii	XRD Studies	per hour	4.5.1	4,000	10	40,000			
						<b>1,086,514</b>			
<b>H</b>	<b>Total A to G</b>					<b>9,140,006</b>			
<b>I</b>	<b>Geological Report Preparation</b>	<b>5 Hard copies with a soft copy</b>	<b>5.2</b>	<b>5.2 (i/ii/iii/iv)</b>		<b>457,000</b>	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.		
<b>J</b>	<b>Peer review Charges</b>		<b>As per EC decision</b>			<b>30,000</b>			

K	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	5 Hard copies with a soft copy	5.1	2% of the Cost or Rs. 5.0 Lakhs whichever is less	182,800	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
L	Total Estimated Cost without GST				9,809,806	
M	Provision for GST (18% of J)				1,765,765	GST will be reimbursed as per actual and as per notified prescribed rate
N	Total Estimated Cost with GST				11,575,572	
	Final Cost Rs. In Lakhs				115.76	
Note:						
1	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.					
2	In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement					
3	If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.					
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.					
5	Any item of work not mentioned above shall be added as per SoC.					
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency					

Time Schedule/Action plan for Preliminary Exploration (G3) for Bauxite in Ran Block, Dev Bhumi Dwarka District, Gujarat																
S. No.			1	2	3	4	5	Review	6	7	8	9	10	11	12	
1	Camp Setting	Months/Days	█													
2	Geological Mapping & Sampling	days	█	█	█											
3	Pitting/Trenching	cu.m			█	█				█						
4	Drilling	m				█				█	█					
5	Survey Party days	days		█	█						█					
6	Sampler Man days	days					█			█	█	█				
7	Laboratory Studies	Nos.				█	█			█	█	█	█	█		
8	Camp Winding	months												█		
9	Report Writing with Peer Review	months													█	█

**Estimated Cost for Preliminary exploration (G3) for Limestone in Choto Lakhindong block, Dima Hasao District, Assam  
Area: 3 sq. km, Drilling 4 Boreholes (3 Boreholes 60 m each and 1 Boreholes 100 m), Timeline: 12 months, Review after 5 months  
Implementing Agency: DGM, Assam**

SI No.	Work Activity	Item no as per SOC	Unit	Charges / Cost (in Rs)	Qty	Total (In Rs)	Remarks
<b>A. Geological Mapping</b>							
1	Charges for Geologist (Field)	1.30	Days	11,000.00	120	1,320,000.00	
2	Charges for Surveyour (Field)	1.6.1a		8,300.00	30	249,000.00	
3	Labour charges for geological mapping	5.7		541.00	120	64,920.00	
4	Charges for Sampler	1.5.2		5,100.00	19	95,625.00	
5	Labour charges for sample work	5.7		541.00	75	40,575.00	
6	Charges of one Geologist per day at HQ	1.3.a	day	9,000.00	45	405,000.00	
<b>Sub Total A</b>						<b>2,175,120.00</b>	
<b>B. Pitting &amp; Trenching</b>							
1	Pitting	2.1.2	per cu m	3,800.00	20	76,000.00	
<b>Sub Total B</b>						<b>76,000.00</b>	
<b>C. Core Drilling</b>							
1	Drilling – Soft rock	2.2.1.1b	Mtr	7,168.00	280	2,007,040.00	3 Boreholes 60 m each and 1 Boreholes 100 m

2	Land/Crop compensation in case BH falls in agricultural land	5.60	Per BH	20,000.00	4	80,000.00	
3	Construction of concrete pillar (12" x 12" x 30")	2.2.7a	Per BH	2,000.00	4	8,000.00	
4	Transportation of Drill rig & truck associated per drill	2.2.8	km	36.00	1100	39,600.00	Distance from DGM, Assam to Dakhin Gaon, Kahilipara, to & fro for Two Rigs
5	Monthly accommodation charges for drilling camp (upto 2 Rigs)	2.2.9	Month	50,000.00	6	300,000.00	
6	Drilling camp setting cost	2.2.9a	Nos.	250,000.00	2	500,000.00	
7	Drilling camp winding up cost	2.2.9b	Nos.	250,000.00	2	500,000.00	
8	Road making (Hilly terrain)	2.2.10b	Km	32,200.00	5	161,000.00	as per actual
9	Drill core preservation	5.30	Per m	1,590.00	100	159,000.00	
<b>Sub Total C</b>						<b>3,754,640.00</b>	
<b>Sub Total A+B+C (X3.35)</b>						<b>19,167,546.00</b>	As the area falls in remote and inaccessible terrain in NE states and Hilly terrain, the amount is 3.35 times higher than the normal SoC, hence the total amount = (3.35x (1770120+76,000.00 +3754640))+405000=1,91,67,546
<b>D. Laboratory Studies</b>							
a) Chemical Analysis							

1	Primary samples - 50 Surface samples plus 100 core samples (CaO, MgO, Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> & LOI)	4.1.15.a	Per Sample	4,200.00	150	630,000.00	
b) Physical Analysis							
1	Preparation of thin section	4.3.1	No.	2,353.00	10	23,530.00	
2	Density	4.8.3	No.	1,568.00	2	3,136.00	
3	Petrographic Studies	4.3.4	No.	4,232.00	10	42,320.00	
<b>Sub Total D</b>						<b>698,986.00</b>	
<b>Total of A+B+C+D</b>						<b>19,866,532.00</b>	
<b>E Miscellaneous Charges</b>							
1	Preparation of Exploration proposal	5.10	5 Hard Copies and Soft Copies	2% of the Total A+B+C+D		397,330.64	
2	Geological Report Preparation	5.20	5 Hard Copies and Soft Copies			750,000.00	
3	Peer review charges		As per EC decision			30,000.00	
<b>Sub Total of E</b>						<b>1,177,330.64</b>	
<b>Total of A+B+C+D+E</b>						<b>21,043,862.64</b>	
<b>Provision for GST (18%)</b>						<b>3,787,895.28</b>	
<b>Total estimated Cost (With GST 18%)</b>						<b>24,831,757.92</b>	
<b>Rs 248.32 Lakhs</b>							

<b>Note:</b>	
<b>1</b>	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>
<b>2</b>	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>
<b>3</b>	<b>If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.</b>
<b>4</b>	<b>Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.</b>
<b>5</b>	<b>Any item of work not mentioned above shall be added as per SoC.</b>
<b>6</b>	<b>All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency</b>
<b>7</b>	<b>The cost is tentative subject to revision of SoC</b>




## Time schedule/ Action Plan for Preliminary exploration (G3) for Limestone in Choto Lakhindong block, Dima Hasao District, Assam

S. No.	Activities	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Camp mobilisation												
2	Mapping (1:4000)												
3	Geologist days in field												
4	Sub Surface drilling (2 rig)												
5	Survey days												
6	Sampling days												
7	Laboratory Studies												
8	Camp winding												
9	Geologist days in HQ												
10	Geological Report Writing												

Review




**Estimated Cost for Preliminary exploration (G3) for Limestone in north of Krungming block, Dima Hasao District, Assam  
AREA:5.80 Sqm, Drilling 12 Boreholes (11 Boreholes 60m each and 1 Boreholes 100m), Timeline: 12 months, Review after 5 months  
Implementing Agency: DGM, Assam**

SI No.	Work Activity	Item no as per SOC	Unit	Charges / Cost (in Rs)	Qty	Total (In Rs)	Remarks
<b>A. Geological Mapping</b>							
1	Charges for Geologist (Field)	1.30	Days	11,000.00	120	1,320,000.00	
2	Charges for Surveyor (Field)	1.6.1a		8,300.00	30	249,000.00	
3	Labour charges for geological mapping	5.7		541.00	240	129,840.00	
4	Charges for Sampler	1.5.2		5,100.00	31	159,375.00	
5	Labour charges for sample work	5.7		541.00	124	67,084.00	
6	Charges of one Geologist per day at HQ	1.3.a	day	9,000.00	45	405,000.00	
<b>Sub Total A</b>						<b>2,330,299.00</b>	
<b>B. Pitting &amp; Trenching</b>							
1	Pitting	2.1.2	per cu m	3,800.00	40	152,000.00	
<b>Sub Total B</b>						<b>152,000.00</b>	
<b>C. Core Drilling</b>							
1	Drilling – Soft rock	2.2.1.1b	Mtr	7,168.00	760	5,447,680.00	
2	Land/Crop compensation in case BH falls in agricultural land	5.60	Per BH	20,000.00	12	240,000.00	
3	Construction of concrete pillar (12" x 12" x 30")	2.2.7a	Per BH	2,000.00	12	24,000.00	

4	Transportation of Drill rig & truck associated per drill	2.2.8	km	36.00	1100	39,600.00	
5	Monthly accommodation charges for drilling camp (up to 2 Rigs)	2.2.9	Month	50,000.00	6	300,000.00	
6	Drilling camp setting cost	2.2.9.a	Nos.	250,000.00	2	500,000.00	
7	Drilling camp winding up cost	2.2.9.b	Nos.	250,000.00	2	500,000.00	
8	Road making (Hilly terrain)	2.2.10b	Km	32,200.00	5	161,000.00	as per actual
9	Drill core preservation	5.30	Per m	1,590.00	100	159,000.00	
<b>Sub Total C</b>						<b>7,371,280.00</b>	
<p style="text-align: center;"><b>As the area falls in remote and inaccessible terrain in NE states and Hilly terrain, the amount is 3.35 times higher than the normal SoC, hence the total amount</b></p> <p style="text-align: center;"><b>Sub Total = (3.35x (1925299.00+152,000.00 +7371280.00))+405000.00</b></p>						<b>32,057,739.65</b>	
<b>D. Laboratory Studies</b>							
a) Chemical Analysis							
1	Primary samples - 50 Surface samples plus 200 core samples (CaO, MgO, Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> & LOI)	4.1.15.a	Per Sample	4,200.00	250	1,050,000.00	
b) Physical Analysis							
1	Preparation of thin section	4.3.1	No.	2,353.00	10	23,530.00	
2	density	4.8.3	No.	1,568.00	2	3,136.00	
3	Petrographic Studies	4.3.4	No.	4,232.00	10	42,320.00	
<b>Sub Total D</b>						<b>1,118,986.00</b>	
<b>Total of A+B+C+D</b>						<b>33,176,725.65</b>	

<b>E Miscellaneous Charges</b>							
1	Preparation of Exploration proposal	5.1	5 Hard Copies and Soft Copies	2% of the Total A+B+C+D		500,000.00	2% of approved project cost or 5 lakh whichever is lower
2	Geological Report Preparation	5.2	5 Hard Copies and Soft Copies	Detailed exploration with cost of work exceeding ₹ 300 lakh: A minimum of ₹ 9 lakh or 3% of the value of work whichever is more subject to a maximum amount of ₹ 20 lakh and ₹ 10,000/- per each additional copy		1,022,558.00	
3	Peer review charges		As per EC decision			30,000.00	
<b>Sub Total of E</b>						1,552,558.00	
<b>Total of A+B+C+D+E</b>						<b>34,729,283.65</b>	
<b>Provision for GST (18%)</b>						<b>6,251,271.06</b>	
<b>Total estimated Cost (With GST 18%)</b>						<b>40,980,554.71</b>	
					Say in Lakhs (Rs.)	<b>409.81</b>	
<b>Note:</b>							
1	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>						
2	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>						
3	<b>If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.</b>						

4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.
5	Any item of work not mentioned above shall be added as per SoC.
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency
7	The cost is tentative subject to revision of SoC



Time schedule/ Action Plan for Preliminary exploration (G3) for Limestone in north of Krungming block, Dima Hasao District, Assam.

S. No.	Activities	Months														
		1	2	3	4	5	Review	6	7	8	9	10	11	12		
1	Camp mobilisation	█	█													
2	Mapping (1:4000)		█	█	█	█										
3	Geologist days in field		█	█	█	█			█	█	█					
4	Sub Surface drilling (2 rig)								█	█	█	█				
5	Survey days															
6	Sampling days				█	█			█	█	█					
7	Laboratory Studies					█			█	█	█	█				
8	Camp winding											█	█			
9	Geologist days in HQ													█	█	
10	Geological Report Writing													█	█	

**Estimated Cost for Reconnaissance survey (G4) for REE and associated mineralization in Gol-Bagindi-tilwara Area, Siwana Ring Complex,  
Balotra District, Rajasthan**

**Total area - 82.50 sq. km; Completion Time- 10 Months, Core drilling: 500m, Review: after 05 months**

**Implementing Agency: MECL**

Sl. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item- S. No.	Rates as per SoC	Qty.	Total Amount (Rs)	
<b>A</b>	<b>GEOLOGICAL WORK</b>						
<b>1</b>	<b>Geological Mapping (1:12500)</b>						
	Geologist man days (1 No.) for Geological map & Report (HQ)	days	1.1b	9,000	60	540,000	
	a) Geologist man days (1 No) for large scale mapping (LSM) Geological mapping/ Trenching/ Drilling	days	1.2	11,000	120	1,320,000	
	b) Labour (field)	per worker	5.7	541	240	129,840	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	c) Sampler for Surface Samples/ Trench Samples / Core Samples Labour charge not included (1 sampler)	day	1.5.2	5100	31	159,375	

	d) 4 labours/ party (As per rates of Central Labour Commissioner)	day	5.7	541	124	67,084	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	<b>Sub-Total A</b>					<b>2,216,299</b>	
<b>B</b>	<b>GEOPHYSICAL SURVEY</b>						
i	Gravity-Magnetic method-Regional/Detailed	per station	3.1b	4500	2500	11,250,000	50m station interval with 200m line interval (7km*3.5km; 25 sq. km geophysical block)
iii	Charges for one Geophysicist - HQ	day	3.18	9000	30	270,000	
	<b>Sub Total- B</b>					<b>11,520,000</b>	
<b>C</b>	<b>DRILLING</b>						
i	Core Drilling up to 300m (hard Rock) (1 rigs)	m	2.2.1.4a	11,500	500	5,750,000	
ii	Land / Crop Compensation	per BH	5.6	20,000	5	100,000	
iii	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	5	10,000	
iv	Transportation of Drill Rig & Truck associated per drill (1 rig)	Km	2.2.8	36	2,312	83,232	
v	Monthly Accommodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	2	100,000	
vi	Drilling Camp Setting Cost	Nos	2.2.9a	250,000	1	250,000	
vii	Drilling Camp Winding up Cost	Nos	2.2.9b	250,000	1	250,000	

viii	Approach Road Making	Km	2.2.10a	22,020	2	44,040	as per actual
ix	Drill core preservation: One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	250	397,500	
	<b>Sub Total- C</b>					<b>6,984,772</b>	
<b>D</b>	<b>LABORATORY STUDIES</b>						
<b>1</b>	<b>Chemical Analysis</b>						
	ii) Primary sampling for REE (Bed Rock Samples/Stream Sediment/ Pit Samples/ Auger Drilling Samples) For 34 elemental analysis includes Nb, Sr, Ta, W, Mo, Sn, Rb, Be, Cs, Li & REE analysis by ICP-AES / ICPMS (sequential technique)	per sample	4.1.14	7,731	200	1,546,200	BRS-30, Channel-20, BHS- 150
	ii) External Check samples for REE (Bed Rock Samples/Stream Sediment/ Pit Samples/ Auger Drilling Samples) For 34 elemental analysis includes Nb, Sr, Ta, W, Mo, Sn, Rb, Be, Cs, Li & REE analysis by ICP-AES / ICPMS (sequential technique)	per sample	4.1.14	7,731	20	154,620	10% of primary samples
	iii) Whole Rock Analysis for Major Oxides by XRF technique	Nos	4.1.15a	4,200	10	42,000	
<b>2</b>	<b>Petrological / Mineralogical studies</b>						

	a) Preparation of thin section	per sample	4.3.1	2,353	10	23,530		
	b) Study of thin section for petrography	per sample	4.3.4	4,232	10	42,320		
	c) Preparation of polished section	per sample	4.3.2	1,549	10	15,490		
	d) Study of polished section for mineragraphy	per sample	4.3.4	4,232	10	42,320		
	e) Digital photomicrograph of thin polished section	per sample	4.3.7	280	10	2,800		
<b>3</b>	XRD Mineral Phase Analysis	per sample	4.5.1	4,000	20	80,000		
<b>4</b>	EPMA Studies	per hour	4.4.1	8,540	10	85,400		
	<b>Sub-Total D</b>						<b>2,034,680</b>	
	<b>Total (A TO D)</b>						<b>22,755,751</b>	
<b>E</b>	<b>Geological Report Preparation</b>	<b>Nos</b>	<b>5.2</b>	For the projects having cost exceeding Rs. 150 Lakhs but less than Rs. 300 Lakhs: A minimum of Rs. 7.5 lakhs or 3% of the work whichever is more and Rs. 3000/- per each additional copy.	<b>1</b>	<b>750,000</b>		

F	Preparation of Exploration Proposal	Nos	5.1	2% or Rs. 500000 whichever is less	1	455,115	EA has to submit the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC- NMET in its meeting while clearing the proposal.
G	Report Peer Review Charges	lumpsum	As per EC decision	30000.00	1	30,000	
H	Total Estimated Cost without GST					23,990,866	
I	Provision for GST (18%)					4,318,356	GST will be reimburse as per actual and as per notified prescribed rate
J	Total Estimated Cost with GST					28,309,222	
					Say, in Lakhs	283.09	
Note:							
1	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.						
2	In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement						
3	If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.						
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.						
5	Any item of work not mentioned above shall be added as per SoC.						
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency						

**Time Schedule/ Action Plan for Reconnaissance survey (G4) for REE and associated mineralization in Gol-Bagindi-tilwara Area, Siwana Ring Complex, Balotra District, Rajasthan**

S. No.	Particulars	Months/ Days	1	2	3	4	5	Review	6	7	8	9	10	
1	Camp Setting	months												
2	Geological Mapping & sampling	months												
3	Geophysical Survey	months												
4	Scout Drilling	m												
5	Geologist days	days												
6	Geophysicist Days	days												
8	Sampling days	days												
9	Camp winding	months												
10	Laboratory Studies	months												
11	Geologist days, HQ	days												
12	Geophysicist days, HQ	days												
13	Report Writing with Peer Review	months												

**Estimated Cost for Preliminary Exploration (G3) for Bauxite, Vanadium, Titanium and Associated minerals in Rudni Pat block, Lohardaga District, Jharkhand**  
**Total Area - 1.10 sq. km; Nos. of Boreholes - 24 (Phase I -09 Bhs & Phase II-15 Bhs); Timeline - 15 Months; Review - 07 Months**  
**Implementing Agency: MECL**

Sl.No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item - SI No.	Rates as per SoC	Qty.	Total Amount (Rs)	
<b>A</b>	<b>GEOLOGICAL WORK</b>						
<b>1</b>	<b>Geological mapping (1:4000 scale), Borehole logging &amp; Sampling &amp; Report writing</b>						
a	Charges for one Geologist per day at HQ	day	1.3	9,000	45	405,000	
b	Charges for Geologist party per day at field	day	1.3	11,000	240	2,640,000	
c	1 party Labour (2 Nos each party)	day	5.7	541	480	259,680	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
d	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	79	402,900	
e	Labours (4 Nos)	day	5.7	541	316	170,956	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
<b>2</b>	<b>Survey (on 1:4000 Scale)</b>						
a	Topographical survey & surface contouring at 2m interval	day	1.6.1a	8,300	30	249,000	

b	Bore Hole Fixation and determination of co-ordinates & Reduced Level (RL) of the boreholes and demarcation of lease hold boundary points by DGPS	Per Point of observation	1.6.2	19,200	43	825,600	24 BH points & 19 Boundary points
c	Labours (4 Nos)	day	5.7	541	120	64,920	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	<b>SUB-TOTAL A</b>					<b>5,018,056</b>	
<b>B</b>	<b>MINERAL INVESTIGATION</b>						
<b>1</b>	<b>Pitting &amp; Trenching</b>						
a	Pitting for determination of bulk density (1mx1mx1m)- 2 nos.	per cu. m	2.1.2	3800	2	7,600	
<b>2</b>	<b>DRILLING (in house)</b>						In the first phase 9 drill hole in grid of 400x400m, 8 boreholes of 30 m depth up to lithomarge and one borehole of 50 m depth up to basement (whichever is earlier) will be drilled. Subsequent drilling after review.
a	Dry Core Drilling up to 30-50 m (24 BHs, NQ size)	m	2.2.1.1b	7,168	760	5,447,680	
b	Land / Crop Compensation (in case the BH falls in agricultural Land)	per borehole	5.6	20,000	24	480,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities.

c	Construction of concrete Pillar (12"x12"x30")	per point	2.2.7a	2,000	43	86,000	24 BH points & 19 Boundary points
d	Transportation of Drill Rig & Truck associated per drill (to and fro)	Km	2.2.8	36	1,700	61,200	1 Rig, Nagpur to Lohardaga District camp site.
e	Monthly Accommodation Charges for Drilling Camp	month	2.2.9	50,000	10	500,000	
f	Drilling Camp Setting Cost	Nos	2.2.9a	250,000	1	250,000	
g	Drilling Camp Winding up Cost	Nos	2.2.9b	250,000	1	250,000	
h	Road Making (Rugged/Hilly Terrain)	per km	2.2.10b	32,200	10	322,000	This will involve the making of accessible road to the block and road making from one BH point to other. Road Making will be considered as per the requirement and Road Making Charges will be reimbursed accordingly.
i	Drill Core Preservation	per m	5.3	1,590	300	477,000	
	<b>SUB-TOTAL B</b>					<b>7,881,480</b>	
<b>C</b>	<b>LABORATORY STUDIES</b>						
<b>1</b>	<b><u>Chemical Analysis</u></b>						
<b>i)</b>	<b>Primary samples</b>						
a	Analysis for 5 radicals i. e. Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> , TiO <sub>2</sub> & LOI and Elements Vanadium (V), Gallium (Ga)	Nos	4.1.15a&b	5,042	500	2,521,000	
<b>ii)</b>	<b>Check samples External (10%)</b>						
a.	Analysis for 5 radicals i. e. Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> , TiO <sub>2</sub> & LOI and Elements Vanadium (V), Gallium (Ga)	Nos	4.1.15a&b	5,042	50	252,100	
<b>iii)</b>	<b>Analysis for Bauxite</b>						

a.	Combined determination of Tri hydrate Alumina (THA-40°C) and Mono hydrate Alumina (MHA-240°C) & Reactive Silica	Nos.	4.1.17a	6,700	10	67,000	
	<b>Sub-Total -1</b>					<b>2,840,100</b>	
<b>2</b>	<b><u>Physical &amp; Petrological Studies</u></b>						
i)	XRD studies for identification of minerals (Random)	Nos.	4.5.1	4,000	24	96,000	
ii)	ICPMS (sequential technique) for 34 elements i. e. 17 other elements viz. Li, Ga, V, In, Be, Ge, Mo, Cr, Ta, W, Ba, Co, Rb, Sr, Zr, Nb, Ni ;17 REE viz. La, Ce, Pr, Nd, Sm, Pm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Sc, Y	Nos.	4.1.14	7,731	48	371,088	
iii)	Preparation of thin section	Nos.	4.3.1	2,353	10	23,530	
iv)	Study of thin section	Nos.	4.3.4	4,232	10	42,320	
	<b>Sub-Total -2</b>					<b>532,938</b>	
<b>3</b>	<b><u>Geotechnical Laboratory</u></b>						
i.	Density	No.	4.8.3	1,568	2	3,136	
	<b>Sub Total- 3</b>					<b>3,136</b>	
	<b>SUB-TOTAL C</b>					<b>3,376,174</b>	
<b>D</b>	<b>Total - A to C</b>					<b>16,275,710</b>	
<b>E</b>	<b>MISCELLANEOUS CHARGES</b>						
<b>1</b>	<b>Preparation of Exploration Proposal (5 Hard copies with a soft copy)</b>	5 Hard copies with a soft copy	5.1	2% of the approved project cost or Rs. 5.0 Lakhs whichever is lower		<b>325,514</b>	EA has to submit the Hard Copies and the soft copy of the final proposal along with Maps and plan as suggested by the TCC-NMET in its meeting while clearing the proposal

2	Geological Report Preparation		5.2	For the projects having cost exceeding ₹150 lakh but less than 300 lakhs: A Minimum of ₹7.5 lakh or 3% of the work whichever is more.		750,000	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET	
3	Peer review Charges		As per EC decision			30,000		
	<b>Total Estimated Cost without GST</b>					<b>17,381,224</b>		
	<b>Provision for GST (18%)</b>					<b>3,128,620</b>	GST will be reimbursed as per actual and as per notified prescribed rate	
	<b>Total Estimated Cost with GST</b>					<b>20,509,845</b>		
	<b>Say in Lakhs (Rs.)</b>						<b>205.10</b>	
<p><b>Note - If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non-outsourcing of any component/ project is required.</b></p>								
Note:								
1	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>							
2	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>							
3	<b>If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.</b>							
4	<b>Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.</b>							
5	<b>Any item of work not mentioned above shall be added as per SoC.</b>							
6	<b>All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency</b>							

**Time Schedule/ Action Plan for Preliminary Exploration (G3) for Bauxite, Vanadium, Titanium and Associated minerals in Rudni Pat block,  
Lohardaga District, Jharkhand**

Sl. No.	Activities	Unit	MONTHS														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Camp Setting	day															
2	Geologist Party days in Field (1 Party)	day															
3	Survey Party days (1 Party)	day															
4	Core Drilling (1 rig)	m.															
5	Sampling Party days, Core Sampling	day															
6	Camp Winding	day															
7	Laboratory Studies	Nos.															
8	Geologist Party days in HQ (1 Party)	day															
9	Report Writing & Peer review	day															

REVIEW

**Estimated Cost for Reconnaissance Survey (G4) for Phosphorite and Siliceous Earth in Mandai Village, District Jaisalmer, Rajasthan  
Area - 36 Sq. Km; Nos. of Borehole - 5; Depth of each borehole- 30m (BGL); Completion Time - 10 Months, Review: After 5 months  
Implementing Agency: Envirogreen Consultants (India) Pvt. Ltd**

S. No.	Item of Work	Unit	Rates as per NMET SoC Dt. 31.03.2020 & amendment thereof		Estimated Cost of the		Remarks
			SoC-Item -S. No.	Rates as per SoC	Qty.	Total Amount (Rs)	
<b>A</b>	<b>GEOLOGICAL WORK</b>						
<b>1</b>	<b>Mapping (1:12,500)</b>					<b>2,200,496</b>	
i)	Charges for one Geologist per day at HQ	day	1.2a	9,000	60	540,000	
ii)	Charges for one Geologist per day at field	day	1.2b	11,000	120	1,320,000	
iii)	Labour for Geologist (2 Nos)	day	5.7	541	240	129,840	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
vi)	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	29	147,900	
v)	Labours for sampling work (3 Nos)	day	5.7	541	116	62,756	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
<b>2</b>	<b>Survey (on 1:12,500 Scale)</b>					<b>633,000</b>	
i)	Demarcation of block boundary, fixation of borehole & determination of coordinates and Reduced Level (RL) of the borehole by DGPS (including	Per Point of observation	1..6.2	19200	20	384,000	Block boundary points- 14, Borehole-5 base station- 1

	charges for labours deployed for the work)						
ii)	Charges of one Surveyor (1 Party)	one surveyor	1.6.1a	8,300	30	249,000	For point observation and related work
iii)					0	0	
	<b>Sub-Total A</b>					<b>2,833,496</b>	
<b>B</b>	<b>PITTING /TRENCHING</b>						
	<b>PITTING</b> (1m x1m x 2m Depth)	Per cum	2.1.2	3800	120	456,000	60 pits
	<b>Sub-Total B</b>					<b>456,000</b>	
<b>C</b>	<b>EXPLORATORY DRILLING</b>						
i)	Drilling in medium to Hard rock	m	2.2.1.3a	10,100	150	1,515,000	5 Nos of BH up to 30 m depth each BH
ii)	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	2	40,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from Local authorities.
iii)	Construction of concrete Pillar	per borehole	2.2.7a	2,000	5	10,000	
vi)	Transportation of Drill Rig & Truck associated per drill (To & from Headquarter/Previous drill site)	Km	2.2.8	36	1500	54,000	To & fro (Delhi to Jaisalmer)
v)	Monthly Accommodation Charges for drilling Camp	month	2.2.9	50,000	4	200,000	Drill camp is required looking to remote area & distance from Mandai village
vi)	Drilling Camp Setting Cost	Nos	2.2.9a	250,000	1	250,000	Drill camp is required looking to remote area & distance from Mandai village
vii)	Drilling Camp Winding up Cost	Nos	2.2.9b	250,000	1	250,000	Drill camp is required looking to remote area & distance from Mandai village

viii)	Approach Road Making (Flat Terrain)	Km	2.2.10a	22,020	1	22,020	Drill camp is required looking to remote area & distance from Mandai village
ix)	Drill Core Preservation	per m	5.3	1,590	60	95,400	Assuming 70% Recovery
	<b>Sub Total C</b>					<b>2,436,420</b>	
<b>D</b>	<b>LABORATORY STUDIES</b>						
1	<b>Chemical Analysis</b>						
	<b>Primary Sample: Surface Samples (Bed Rock/Channel/Soil/ Stream Sediment/ Pit/Trench Samples)</b>						
i)	a. For quantitative chemical analysis of rock	Nos	4.1.1	8157	80	652,560	(20 BRS, 60 Pit Samples)
ii)	b. For P2O5%, SiO2%, Al2O3%, Fe2O3% & LOI%	Nos	4.1.3	9,805	50	490,250	20 BRS, 30 Core samples
	<b>Check samples (5% internal and 10% external)</b>						
i)	a. For quantitative chemical analysis of rock	Nos	4.1.1	8157	8	65,256	
ii)	b. For P2O5%, SiO2%, Al2O3%, Fe2O3% & LOI%	Nos	4.1.3	9,805	5	49,025	
2	<b>Chemical Analysis: Core samples</b>						
	<b>Primary samples</b>						
i)	a. For quantitative chemical analysis of rock	Nos	4.1.1	8157	0	0	
ii)	b. For P2O5%, SiO2%, Al2O3%, Fe2O3% & LOI%	Nos	4.1.3	9,805	75	735,375	Core drill samples at 2 m interval of core log
	<b>Check samples (5% internal and 10% external)</b>						
i)	a. For quantitative chemical analysis of rock	Nos	4.1.1	8157	0	0	

ii)	b. For P2O5%, SiO2%, Al2O3%, Fe2O3% & LOI%	Nos	4.1.3	9,805	8	78,440	
<b>2</b>	<b>Composite Samples (By XRF)</b>						
	a) Whole rock analysis (for associated minerals)	Nos	4.1.15a	4,200	5	21,000	
<b>3</b>	<b>Petrological Studies (BH Core)</b>						
i)	Preparation of thin section	Nos	4.3.1	2,353	5	11,765	
ii)	Study of Thin Section	Nos	4.3.4	4,232	5	21,160	
iii)	Digital Photomicrographs of thin section	Nos	4.3.7	280	5	1,400	
	<b>Sub Total D</b>					<b>2,126,231</b>	
	<b>Total (A to D)</b>					<b>7,852,147</b>	
<b>E</b>	<b>Preparation of Exploration Proposal (5 Hard copies with a soft copy)</b>	5 Hard copies with a soft copy	5.1	2% of the Cost or Rs. 3.8 Lakhs whichever is lower		<b>157,043</b>	
<b>F</b>	<b>Geological Report Preparation</b>		5.2	ii) Reconnaissance Survey/ Preliminary exploration/General exploration/Detailed exploration exceeding ₹50 lakh but less than 150 lakhs: A Minimum of ₹2.5 lakh or 5% of the work whichever is more and ₹ 3000/- per each additional copy.	1	<b>392,607</b>	Detailed Exploration Report for block will be submitted
<b>G</b>	<b>Total Estimated Cost without GST</b>					<b>8,401,797</b>	
<b>H</b>	<b>Provision for GST (18% of G)</b>	%				<b>1,512,324</b>	GST will be reimburse as per actual and as per notified prescribed rate
<b>I</b>	<b>Total Estimated Cost with GST</b>					<b>9,914,121</b>	
				<b>or Say Rs. In Lakhs</b>		<b>99.14</b>	
<b>Note:</b>							

1	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.
2	In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement
3	If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.
5	Any item of work not mentioned above shall be added as per SoC.
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency



## Time Schedule/ Action plan for Reconnaissance Survey (G4) for Phosphorite and Siliceous Earth in Mandai Village, District Jaisalmer, Rajasthan

S. No.	Activities	Unit	Month												
			1	2	3	4	5	Review	6	7	8	9	10		
1	Camp Mobilization & Setting	Month													
2	Geologist Party days in HQ (1 Party)	Month													
3	Geological mapping & sampling	day /Month													
4	Topographical Survey days	day /Month													
5	Pitting	m.													
6	Drilling, Core Logging	day													
7	Geologist Party days in field (1 Party)	day													
8	Sampling Party days, Core Sampling (1 party)	day													
9	Laboratory Studies (Sample preparation & Analysis)	Nos.													
10	Camp Winding	Month													
11	Geological Report Writing	Month													

**Estimated Cost For Reconnaissance survey (G4) for Copper, Nickel, Cobalt and associated mineralization in Nare-Devipura Area of Sikar and Jaipur Districts of Rajasthan,**  
**Area: 112 sq.km, Drilling: 4 BH (100m each = 400m), Timeline: 10 months, Review: After 5 Months**  
**Implementing Agency: Ocean Drilling & Exploration Private Limited**

S. No.	Item of Work *	Unit *	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item No. *	Rates as per SoC * (a)	Qty. (b)	Total Amount (Rs) (a*b)	
<b>A</b>	<b>Geological Mapping, Other Geological Work &amp; Surveying</b>						
1	a. Charges for Geologist per day (Field) Geological mapping (1:12,500 scale), drilling work, core logging, etc.	day	1.3, 1.5.1a	11000	150	1,650,000	
2	Charges for Geologist per day (HQ)	day	1.2	9000	60	540,000	
3	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	27	137,700	
4	Labour Charges; Base rate for mapping, logging, sampling	day	5.7	541	108	58,428	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
5	a. DGPS Survey for block boundary and BH fixation & RL determination	Per Point of observation	1.6.2	19200	8	153,600	
	<b>Sub Total- A</b>					<b>2,539,728</b>	
<b>B</b>	<b>MINERAL INVESTIGATION AND DRILLING</b>						
1	Excavation of Trenches (Upto 2 m depth)	Per cu m	2.1.1	3330	30	99,900	
2	Drilling up to 300m Hard Rock), HQ	m	2.2.4a	13800	400	5,520,000	Drilling after review
3	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20000	4	80,000	

4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2000	4	8000	
5	Borehole plugging by cement	m	2.2.7b	200	400	80,000	
6	Transportation of Drill Rig & Truck associated per drill (1 rig)	Km	2.2.8	36	500	18,000	to and far Siwana Balotra Distance to Nare Devipura Distance
7	Monthly Accommodation Charges for drilling Camp (For 1 Rigs 50000)	month	2.2.9	50000	3	150,000	
8	Drilling Camp Setting Cost	Nos.	2.2.9a	250000	1	250,000	
9	Drilling Camp Winding up Cost	Nos.	2.2.9b	250000	1	250,000	
10	Road Making (Rugged-hilly Terrain)	Km	2.2.10b	32200	5	161,000	
11	Drill Core Preservation	per m	5.3	1590	100	159,000	
<b>Sub Total B</b>						<b>6,775,900</b>	
<b>C</b>	<b>Geophysical Survey</b>						
2	IP cum resistivity, SP, magnetic	8-10 line Km	3.4b	1448639	1	1,448,639	10 line km, This will be decided based on mineralization signatures picked up in the field during LSM
<b>Sub Total C</b>						<b>1,448,639</b>	
<b>D</b>	<b>LABORATORY STUDIES</b>						
1	<b>Chemical Analysis</b>						
i)	<b>BRS + Channel + Trench + Core sampling+ PCS</b>						
a)	ICPMS (34 elements package)	Nos	4.1.14	7731	180	1391580	BRS -70, Channel sample -30, Trench sample-30, Core Sample -50,
b)	Check samples for ICPMS (34 elements package)	Nos	4.1.14	7731	18	139158	
c)	XRF (Major oxide)	Nos	4.1.15a	4200	10	42000	
<b>2</b>	<b>Mineral Physics Study</b>						
i)	XRD analysis for identification of minerals (Random)	Nos	4.5.1	4000	10	40000	

<b>3</b>	<b>Physical &amp; Petrological Studies</b>						
i	Preparation of thin section	Nos	4.3.1	2353	10	23530	
ii	Study of thin section	Nos	4.3.4	4232	10	42320	
iii	Digital photomicrograph of thin polished section	Nos	4.3.7	280	10	2800	
iv	EPMA studies	per hour	4.4.1	8540	10	85400	
	<b>Sub Total D</b>					<b>1,766,788</b>	
<b>E</b>	<b>Total A to D</b>					<b>12,531,055</b>	
<b>F</b>	<b>Geological Report Preparation</b>	<b>5 Hard copies with a soft copy</b>	<b>5.2</b>	For the projects having cost more than Rs. 50 lakhs but less than Rs.150 lakhs - A minimum of Rs. 2.5 lakhs or 5 % of the value of work whichever is more		<b>626,553</b>	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
<b>G</b>	<b>Peer review Charges</b>		<b>As per EC decision</b>			<b>30,000</b>	
<b>H</b>	<b>Preparation of Exploration Proposal (5 Hard copies with a soft copy)</b>	<b>5 Hard copies with a soft copy</b>	<b>5.1</b>	2% of the Cost or Rs. 5.0 Lakhs whichever is less		<b>250,621</b>	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
<b>I</b>	<b>Total Estimated Cost without GST</b>					<b>13,438,229</b>	
<b>J</b>	<b>Provision for GST (18% of J)</b>					2,418,881	GST will be reimburse as per actual and as per notified prescribed rate
<b>K</b>	<b>Total Estimated Cost with GST</b>					<b>15,857,110</b>	

				<b>Total Cost Rs. In Lakhs</b>	<b>158.57</b>	
Note:						
<b>1</b>	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>					
<b>2</b>	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>					
<b>3</b>	<b>If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.</b>					
<b>4</b>	<b>Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.</b>					
<b>5</b>	<b>Any item of work not mentioned above shall be added as per SoC.</b>					
<b>6</b>	<b>All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency</b>					




**Time Schedule/ Action Plan for Reconnaissance survey (G4) for Copper, Nickel, Cobalt and associated mineralization in Nare-Devipura Area of Sikar and Jaipur Districts of Rajasthan**

S.no.	Activity	Month												
		1	2	3	4	5	Review	6	7	8	9	10		
1	Camp setting													
2	Geological mapping and survey (1:12500)													
3	Detailed Geophysics													
4	Trenching/Channel sampling													
5	Scout drilling (1 rig)													
6	Camp winding													
7	Laboratory studies													
8	Geological party days (HQ)													
9	Geological party days (field)													
10	Sampling party days/core sampling													
11	Report writing and peer review (HQ)													

**Estimated Cost for Preliminary Exploration (G3) for Potash mineralization in Kalu Block, Bikaner District, Rajasthan**  
**Total Area - 53 Sq. Km; Nos. of BH-4, BH Depth-650m each (total 2600m), Completion Time - 10 Months, Review – 5 months**  
**Implementing Agency - FAGMIL**

S. N	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal for		Remarks
			SoC-Item -SI No.	Rates as per SoC	Qty.	Total Amount (Rs)	
<b>A</b>	<b>GEOLOGICAL WORK</b>						
<b>1</b>	<b>Geological Mapping (1:12,500), Borehole logging, sampling &amp; Report writing</b>						
a	Charges for one Geologist per day at HQ for monitoring, data processing etc.	day	1.3	<b>9,000</b>	60	540,000	
b	Charges for one Geologist per day at field for core logging.	day/geologist	1.3	<b>11,000</b>	120	1,320,000	
c	Labour Charges (2nos) for two Geologist	day	5.7	<b>541</b>	240	129,840	
d	Charges for Sampler (1 party)	one sampler per day	1.5.2	<b>5,100</b>	78	397,800	For Core Sampling
e	Labour Charges (2 Nos) for Sampling Work	day	5.7	<b>541</b>	312	168,792	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
<b>2</b>	<b>Survey</b>						
a	Topographical Survey	day	1.6.1a	<b>8300</b>	30	249000	Topographical Survey on 1:12,500 (5 m contour interval)

					<b>Total A</b>	<b>2,805,432</b>	
<b>B</b>	<b>Drilling</b>						
a	Non coring Drilling up to 300m	Meter	2.2.5	<b>3,932</b>	1200	4718400	
b	Drilling up to 301-600m (Hard rock)	Meter	2.2.1.4b	<b>12,420</b>	1200	14904000	
c	Drilling between depth of 601-900m (Hard rock)	Meter	2.2.1.4c	<b>13,225</b>	200	2645000	
b	Land /Crop Compensation (in case the BH falls in agricultural land)	per BH	5.6	<b>20,000</b>	4	80000	<b>As per actuals</b>
c	Construction of Concrete pillar (12"x12"x30")	per hole	2.2.7 a	<b>2,000</b>	4	8000	
d	Transportation of Drill rig & Truck Associated per drill (1 rig)	km	2.2.8	<b>36</b>	700	25200	<b>From Jaisalmer to Kalu, Bikaner for 1 rig</b>
e	Monthly Accommodation Charges for drilling Camp (for 1 rig)	Month	2.2.9	<b>50,000</b>	8	400000	
f	Drilling Setting Cost camp	Nos	2.2.9a	<b>250,000</b>	1	250000	
g	Drilling Camp Winding up cost	Nos	2.2.9b	<b>250,000</b>	1	250000	
h	Road making (Flat terrain)	km	2.2.10a	<b>22,020</b>	2	44040	<b>As per actuals</b>
i	Drill Core Preservation	per m	5.3	<b>1,590</b>	1200	1908000	<b>300m of core from each 4BHs</b>
					<b>Total B</b>	<b>25,232,640</b>	
<b>C</b>	<b>Borehole Geophysical Survey/Well logging</b>						
a	Dual Density	m	3.11d	<b>102</b>	1600	163,200	650m in each BH in the Hanseran Evaporite Formation
b	Spectral gamma	m	3.11o	<b>164</b>	1600	262,400	
c	Resistivity	m	3.11c	<b>39</b>	1600	62,400	

d	Calliper	m	3.11g	<b>19</b>	1600	30,400	
e	Neutron	m	3.11f	<b>74</b>	1600	118,400	
f	Expert charges for Geophysicist in HQ	day	3.18	<b>9000</b>	15	135,000	
g	Expert charges for Geophysicist in Field	day	3.18	<b>11000</b>	15	165,000	
<b>Total - C</b>						<b>936,800</b>	
<b>D</b>	<b>LABORATORY STUDIES</b>						
<b>1</b>	<b>Chemical Analysis</b>						
<b>a</b>	<b>Primary &amp; Check samples for Potash mineralization</b>						
i	i. Primary samples for 11 radicals, i.e., K, Na, Mg, Cl, Br, I, Li, CaSO4 & Water insoluble (300 samples from each 4 boreholes).	Nos	4.1.1	<b>8,157</b>	500	4078500	based on the actual thickness & number of Potash horizon, the sample thickness may vary.
ii	iii) External Check sample (10 % of Primary samples) for 9 radicals i. e. K, Na, Mg, Cl, Br, I, Li, CaSO4 & Water insoluble	Nos	4.1.1	<b>8,157</b>	50	407850	
<b>2</b>	<b>Physical, Petrographic and Mineralogic Study</b>						
i	Polished section preparation (8*5cm) (6 from each BH)	Nos	4.3.3	<b>1,185</b>	20	23,700	
ii	Mineralographic study	Nos	4.3.4	<b>4,232</b>	20	84,640	
iv	XRD study (6samples from each BH)	Nos	4.5.1	<b>4,000</b>	20	80,000	
vi	Density	Nos	4.8.3	<b>1,568</b>	10	15,680	
vii	Whole Rock Analysis (SiO2, Fe2O3, MnO2, Al2O3, MgO, CaO, BaO, K2O, P2O5, TiO2, V2O5, LOI, S, V)	Nos	4.1.15a & b	<b>4,621</b>	25	115,525	

	<b>TOTAL -D</b>					<b>4,805,895</b>	
	<b>TOTAL(A+B+C+D)</b>					<b>33,780,767</b>	
<b>F</b>	<b>Preparation of Exploration Proposal (5 Hard copies with a soft copy)</b>	<b>5 Hard copies with a soft copy</b>	<b>5.1</b>	<b>2% of the Cost or Rs. 5.0 Lakhs whichever is lower</b>	<b>1</b>	<b>500,000</b>	
<b>G</b>	<b>Geological Report Preparation</b>	<b>5 Hard copies with a soft copy</b>	<b>5.2</b>	<b>For the projects having cost more than Rs. 300 lakhs - A minimum of Rs. 9 lakhs or 3% of the value of work whichever is more subject to a max. amount of Rs. 20 lakhs</b>		<b>1,013,423</b>	
<b>H</b>	<b>Peer review Charges</b>		<b>As per EC decision</b>			<b>30,000</b>	
<b>I</b>	<b>Total Estimated Cost without GST</b>					<b><u>35,324,190</u></b>	
<b>J</b>	<b>Provision for GST (18% of GST)</b>	<b>%</b>				<b>6,358,354</b>	<b>GST will be reimbursed as per actual and as per notified prescribed rate</b>
<b>K</b>	<b>Total Estimated Cost with GST</b>					<b>41,682,544</b>	
				<b>or Say Rs. In Lakhs</b>		<b>416.83</b>	
Note:							
<b>1</b>	<b>Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.</b>						
<b>2</b>	<b>In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement</b>						

3	If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.
5	Any item of work not mentioned above shall be added as per SoC.
6	All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency



## Time Schedule/ Action Plan for Preliminary Exploration (G3) for Potash mineralization in Kalu Block, Tehsil-Lunkaransar, Bikaner District, Rajasthan

Sr. No	Activities	Months												
		1	2	3	4	5	6	7	8	9	10			
1	Camp Mobilization													
2	Geologist Days Field													
3	Drilling													
4	Wire line logging													
5	Sampling Party													
6	Laboratory Studies													
7	Camp Demobilization													
8	Geologist Party in HQ													
9	Geologist Report Writing with Peer Review													