Ministry of Mines
National Mineral Exploration Trust
Minutes of the 57th Technical-cum-Cost Committee (TCC) meeting held on 26th& 27th September, 2023 through hybrid mode at New Delhi

The 57thmeeting of Technical-cum-Cost Committee [TCC] of National Mineral Exploration Trust [NMET] was held through hybrid mode under the chairmanship of Dr. S. Ravi, Dy. Director General, Geological Survey of India (DDG, GSI) and Chairman, TCC, NMET on 26th& 27thSeptember, 2023 at Aluminium Hall, Shastri Bhawan, New Delhi.

Dr. S Ravi, DDG & Chairman TCC, Shri I. R. Kirmani, ADG (Retd.),GSI; Shri Hemraj Suryavanshi, ADG (Retd.),GSI; Shri K. Koteshwar Rao, DDG (Retd.), GSI; Shri S.K. Adhikari, Chief Mining Geologist, Indian Bureau of Mines, Nagpur; Shri S.K.Kulshrestha, DDG, GSI, Shillong; Dr. E.V.S.S.K. Babu, Scientist (G), NGRI, Shri Vivek Kumar Sharma, Director &HoD NMET, SmtVandana, Cost Accounts Officer, RSAS, Bangalore,GSI and Shri C. Parthasarathi, Director, SU: Karnataka & Goa, GSI, Bangalore attended the meeting in-person at Aluminium Hall**,**ShastriBhawan, New Delhi and Shri K.L.Mundra, Head of RMRE, AMD, Hyderabad, Shri Ravi Kumar Gupta, GM (Finance) HCL and representatives from MECL; DMR Meghalaya; MPSMC Ltd., CMPDI, OMC and TSMDC have attended the meeting through VC from their respective places.

The list of participants is included in Annexure-1.

Shri C. Parthasarathi,, Director, GSI and Member Secretary, TCC-NMET, welcomed Dr. S. Ravi, DDG, GSI and Chairman, TCC, NMET, Members of the TCC and participants representing various Notified Exploration Agencies [NEAs]. He conveyed that 17 nos. of mineral exploration proposals were submitted by MECL, MPSMC Ltd., DMR Meghalaya and OMC ltd. and 12 nos. of projects submitted for review by CMPDI, MECL and TSMDC.

Shri Vivek Kumar Sharma, Director & HoD, NMET asked the members to introduce themselves as the meeting has been convened for the first time after reconstitution. After formal introduction, he informed the committee members to review the proposals from NEAs and NPEAs keeping the country's requirement on top priority. He also informed that the minutes of TCC will also concurred by IFD Division of Ministry of Mines.

Dr. S. Ravi, DDG, GSI and Chairman, TCC welcomed the members and other participants from various NEAs and advised the agencies to come forward with proposals prepared in the line of commodities which are in high demand and critical in nature.

Subsequently, the proceeding of meeting was initiated as per agenda of the meeting.

17/10/2023

17/10/2023

Agenda wise discussions are summarized as follows:

Agenda 57.1: Technical evaluation of new project proposals:

Agenda 57.1.1: Reconnaissance Survey (G-4 Stage) for Iron and associated minerals in Karmai-Chuwahi Block (33.40 Sq. Km) District- Sidhi, Madhya Pradesh. [Implementing Agency: MECL]

a) Geologically the area belongs to Paleoproterozoic to Archaean aged Mahakoshal Group of rocks comprising Quartz veins, Mafic and Ultramaficintrusive, Phyllite with bands of quartzite, Conglomerate Dolomite, Limestone with bands of BIF, quartzite and metabasalts, pyroclasts.

b) MECL mentioned in the proposal that MECL has carried out field visit in the proposed block and identified BHQ, ferruginous quartzite trending ENE moderately (55°) dipping towards south. They collected 9 samples from several places inside the block and it was analysed in MECL Chemical Lab. Analytical results showing **Fe** values ranging from **40.62%** to **57.00%.**

c) The project proposal was send to GSI for comments. In response to this GSI has informed that the area is overlapping with GSI explored block.

d) The committee asked the detail of the block from GSI and in response to this GSI sent a report of on reconnaissance survey for base metal and gold & PGE mineralization in Parsili-Tal-Karmahi area, Shahdol and Sidhi district, Madhya Pradesh (final report for field season 2021-22).

e) After the detailed deliberation committee opined that the proposed area is overlapping with the exploration of base metal and gold & PGE mineralization therefore suggested MECL only to upgrade the geological map.

f) Further the committee agreed to take up G4 stage exploration for Iron and Associated Minerals in Karmahi-Chuwahi Block (33.40 sq.km Area), Sidhi District, Madhya Pradesh. The committee suggested MECL to update the existing LSM map and systematic trenching. After the outcome of first phase of work, the agency may carry out drilling if found promising.

g) The committee suggested to review the project after 4 months with map updation and surface sampling.

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Reconnaissance Survey (G-4 stage) for Iron and Associated Minerals in Karmahi-Chuwahi Block (33.40 sq.km Area), Sidhi District, Madhya Pradesh" with an estimated cost of 139.81 lakh (including GST)within time schedule of 9 months for carrying out the proposed work and submission of report as per annexure-2A & 2B.

17/10/2023

17/10/2023

Agenda 57.1.2: Preliminary Exploration (G-3) for Potash in Dhankowali Dhani (North) Block, Satipura Sub Basin, Northwestern part of Rajasthan (9.63 Sq.Km area) District-Hanumangarh, Rajasthan.

[Implementing Agency: MECL]

a) The present proposal falls within the Satipura sub-basin, NagaurGanganagar Basin, Northwestern Part of Rajasthan.

b) Geologically the block covers the Hanseran Evaporite Group **(**HEG) which is sandwiched between the underlying Jodhpur Group and the overlying Nagaur Group of rocks. HEG comprises cyclic deposits of halite (NaCl) with anhydrite, clay, dolomite and magnesite. Halite is the most dominant constituent of the Group with minor polyhalite, occasional sylvite, rare langbeinite and traces of carnallite. Thickness of HEG ranges from 103.20m to 652.15m. So far seven halite cycles has been identified namely H1 to H7 from bottom to top.

c) Post 2015 MMRD Amendment Act, GSI initiated detailed Exploration in Satipura Sub Basin and MECL initiated Exploration in Lakhasar, Bharusari and Jaitpura Sub Basins. GSI has established 202.30 mt. probable and 1429.95 mt. possible resources with an average grade of 4.80% K in 245.61 sq. km. area.

d) In February 2023, the Secretary (Mines) reviewed and instructed the MECL to take up potash exploration in Northwestern part of Rajasthan. In this scenario, MECL submitted the proposal in the western continuation of exploration blocks of GSI in Satipura sub-Basin in Hanumangarh District, Rajasthan.

e) The project was firstly submitted in 55th TCC meeting. GSI has informed that the proposed block is overlapping with the ensuing GSI block for FSP 2024-25 titled as "Preliminary exploration for potash in Pakkasarna block, Satipura sub-basin, Nagaur-Ganganagar Evaporate Basin, Hanumangarh District, Rajasthan".

f) The project proposal was again send to GSI for comments. In response to this GSI has informed that there is no overlapping with the explored blocks of GSI. However one proposed block (Pakkasarna block) is overlapping with the proposed MECL block but in view of the MECL proposal, the proposed block kept on hold and MECL can carry out the potash exploration in Dhankowali Dhani (North) Block.

g) It has been conveyed that the distribution of potash bearing zones are continuous in North East and South West direction which can be observed from the explored GSI blocks.

h) The committee advised to modify the borehole proposals by considering the borehole influence of adjoining blocks of GSI.

i) In view of above, committee agreed to take up G3 stage exploration for Potash in Dhankwali Dhani (North) Block. The committee also opined to complete the work within time schedule of 12 months therefore suggested to deploy 4 rigs simultaneously in the area. The committee also suggested to review the project after 4 months

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Preliminary Exploration (G-3 stage) for Potash in Dhankwali Dhani (North) Block (9.63

17/10/2023

17/10/2023

sq.km Area), Satipura-Sub Basin, District- Hanumangarh, Rajasthan" with an estimated cost of ₹2406.16 lakhs (including GST)within time schedule of 12 months for carrying out the proposed work and submission of report as per annexure-3A & 3B.

Agenda 57.1.3: "Reconnaissance Survey (G-4 Stage) for Gold and associated Minerals in Jamtola-Khandapar Block, Balaghat District, Madhya Pradesh (96.62 sq.km Area)" [Implementing Agency: MECL]

a) The project was firstly submitted in 56th TCC meeting. The committee recommended that MECL may visit the area, analyse some samples, demarcate the quartz veins in the area and modified proposal may be brought in the next TCC meeting.

b) The proposed area belongs to granite gneiss of Amagaon Gneissic Complex, Gniesses and Migmatites of Tirodi Gniessic Complex, Intrusive Granites of Malanjkhand Granite, Muscovite Schist, Schistose Grit of Sausar Group, Phyllites, Quartzite and Conglomerates of Chilpi Group and Basalts of Deccan Trap and Laterites.

c) MECL conveyed that Khan et.al., (1995) collected 14 bedrock samples and analysed for gold (by AAS). Out of them, four samples from Khandapar quartz vein has given encouraging values for Gold (0.2 gm/t, 0.4gm/t, 0.7gm/t, and 2.2gm/t Au). And Bhargava and Pal (2000) have also located old workings at Khandapar hill range.

d) Further MECL also conveyed that MECL conducted field visit in the proposed area and validated the presence of auriferous quartz reef hosted within phyllite having cumulative strike length of about 600 m and about 20m width in Khandapar area. One quartz reef is observed within phyllite in karwahi area while one quartz reef is observed within granite gneiss from Katangi area.

e) MECL informed that Malanjkhand copper deposit is located around 10 km in the NE direction from the proposed block. Intense Mining and exploration activities are going on in the close vicinity of the area.

f) In view of above, committee agreed to take up G-4 Level exploration in Jamtola-Khandapar Block, Balaghat District, Madhya Pradesh. The committee suggested to modify the title and include trenching of 200 cu.m (150 for gold &associated metals and 50 for graphite), geophysical survey of 25L.km, drilling of 500m in NQT.

g) The committee suggested to rename the title as "Reconnaissance Survey (G-4 Stage) for Gold, Copper, Graphite And Associated Minerals in Jamtola-Khandapar Block, Balaghat District, Madhya Pradesh"

h) The committee also suggested to carry out fixed carbon analysis for graphite.

i) The committee suggested to review the project after 6 months i.e. completion of mapping and trench work. Geophysical survey may be carried out after review. The committee would again review the project after 8 months i.e. completion of geophysical work and drilling work may be carried out after seeing the outcome of geophysical survey.

Recommendation of TCC:

17/10/2023

17/10/2023

The committee recommended the proposal for approval of EC for "Reconnaissance Survey for gold, copper, graphite and associated elements in Jamtola-Khandapar Block (96.62 sq.km Area), Balaghat District, Madhya Pradesh" with an estimated cost of ₹ 216.30 lakh (including GST) within time schedule of 12 months for carrying out the proposed work and submission of report as per Annexure -4A&4B.

Agenda 57.1.4: "Reconnaissance survey (G-4) for Copper and associated minerals in Sitapur Block (Adjoining to Shitalpani Block) of 5.0 Sq.Km Area, Malanjkhand Copper Belt, District: Balaghat, Madhya Pradesh"
[Implementing Agency: MECL]

a) Geologically the Sitapur block is part of the Malanjkhand granitoid intruded by quartz veins and meta-dolerite dykes along sheared zones, joints and fractures. To the west of Sitapur block, Amgaon schists and gneisses occurring as an enclaves within the granitic rocks.

b) MECL conveyed that copper mineralization mainly hosted in vein quartz and to some extent in granites. Vein quartz bodies confined to the sheared zones and fractures which form the main channels for the entry of mineralising solution and the intensity of mineralisation is controlled by the degree of fracturing. Encrustations with pyrite, chalcopyrite, bornite, and stains of limonite are the major surface indication of mineralization mainly manifested in the vein quartz. Gold occurs as very fine disseminations in negligible quantity with erratic distribution.

c) MECL informed that GSI (FS. 1991-94) carried out STM on 1:25000 scale over 1100 sq.km. (TS64B/12, 64B/16,64C/09 and 64C/13). Mineralized quartz vein/reef of over a strike length 450 m and width 15.20 m approx. located in and around the proposed Sitapur block. Total 7 bedrock samples indicated cu values between 850 ppm and 0.28% of Cu.

d) Further it has been informed that MECL (2001-03) carried out integrated exploration work in the Shitalpani Block (2 sq. Km.) which adjacent to proposed block. A shear zone trending ENE-WSW of 800 m strike length interpreted based on geological mapping and geophysical survey, continues beyond the block boundary i.e. extending in proposed Sitapur block. Structural manifestations such as shears and their intersections are possible loci for mineralization. Test drilling in Shitalpani area also corroborated well with geophysical anomaly.

e) It has been informed that total 0.36 m.t. of in-situ resources with 0.37 % Cu at 0.2 % Cu cut-off estimated in the Shitalpani area and placed under '334' category of UNFC and the adjoining Shitalpani Block successfully auctioned by State Govt. of M.P. for Copper ore under CL.

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f) The project proposal was send to GSI for comments. In response to this GSI has informed that the area is overlap with GSI explored block G4 block of Cu/basemetal.

g) In view of above, the committee opined to take up the project as G3 stage exploration to avoid duplication of work and change the title of the project from "Reconnaissance" to "Preliminary"

17/10/2023

17/10/2023

h) The committee advised to modify the block boundary and the block should be oriented in the extension of established mineralized zone by following NE-SW direction. After the modification the block covers an area of 3.5sq.km under G3 stage with major components of DM mapping is to be 1:2000 scale. The outcome of the project will be reviewed after 6 months. The committee suggested drilling will be carried out only after review of geophysical survey, mapping and trench.

i) The committee also suggested to review the project after 4 months.

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Preliminary Exploration (G-3) for Copper and associated minerals in Sitapur Block, Malanjkhand Copper Belt, Balaghat District, Madhya Pradesh" with an estimated cost of ₹ 270.88 lakh(including GST) within time schedule of 12 months for carrying out the proposed work and submission of report as per annexure -5A & 5B.

Agenda 57.1.5. Reconnaissance exploration for fertilizer mineral Phosphorite in proposed Bada Malhera Bizawar phosphorite block in and around Hirapur Phosphorite deposit at Chhatarpur District, Madhya Pradesh.

[Implementing Agency: MPSMC Ltd.]

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Agenda 57.1.11. Reconnaissance exploration for fertilizer mineral Phosphorite in proposed Chhatarpur Bizawar Phosphorite block in and around Hirapur Phosphorite deposit at Chhatarpur District, Madhya Pradesh
[Implementing Agency: MPSMC Ltd.]

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Agenda 57.1.13.Reconnaissance Survey (G-4 Stage) for Pather Phosphorite, District Chhatarpur, Madhya Pradesh
[Implementing Agency: MPSMC Ltd.]

a) The proposed blocks belong to the Hirapur Phosphorite formation in Chhatarpur district of Madhya Pradesh.

b) The Hirapur-Mardeora phosphorite deposits are found to occur in Bijawar group of Gangau iron formations over the basement of Bundelkhand granite complex in the Archean period. There are four distinct units of phosphorites which include shale-phosphorite, secondary-phosphorite, ironstone-phosphorite and quartz-breccia phosphorite.

c) Both GSI and MECL have confirmed presence of phosphorite around the area and have recommended for further detailed study for delineating the prospective zones for mineralization.

d) Based on these facts, MPSMCL proposed the items to demarcate the mineralized zone and to assess the mineralization potential of the area.

17/10/2023

17/10/2023

e) After the detail deliberation, the committee opined that all these 3 projects are adjacent to each other. Therefore committee suggested combining the entire project based on the Bijawar Group.

f) As per suggestion MPSMC Ltd. modified and submitted proposal based on Bijawar Group.

g) After detailed discussions, the committee agreed to take up G4 stage exploration of phosphorite in Bijawar –Imiliya block district:-Chhatarpur, Madhya Pradesh and also suggested to review the project after 4 months.

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Reconnaissance Survey (G-4 stage) for Phosphorite in Bijawar –Imiliya block (95.67 sq.km.) district:-Chhatarpur, Madhya Pradesh" with an estimated cost of ₹ 126.86 lakh (including GST)within time schedule of 12 months for carrying out the proposed work and submission of report as per annexure-6A & 6B.

Agenda 57.1.9. Reconnaissance Exploration for fertilizer mineral Phosphorite in proposed Rajnagar Chhatarpur phosphorite block in and around Hirapur Phosphorite deposit at Chhatarpur District, Madhya Pradesh
[Implementing Agency: MPSMC Ltd.]

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Agenda 57.1.12. Reconnaissance Survey For Bijawar Phosphorite, Fertilizer Mineral DistrictChhatarpur, Madhya Pradesh
[Implementing Agency: MPSMC Ltd.]

a) These block areas also fall in where Hirapur Phosphorite Formation and Bajno Dolomite Formation occurs. Bajno Dolomite is well developed on the western part of the Bijawar basin from the place about seven kilometres south of Malehra.GSI and MECL have also reported phosphorite mineralization around the area. Therefore, MPSMC Ltd selected the areas and proposed for G4 stage exploration in TCC meeting.

b) After detailed discussions, the committee suggested to wait for the outcome of the phosphorite project "Reconnaissance Survey (G-4 stage) for Phosphorite in Bijawar –Imiliya block (95.67 sq.km.) district:-Chhatarpur, Madhya Pradesh and thereafter, the projects mentioned at agenda, 57.1.9, & 57.1.12 may be submitted.

Recommendation of TCC

The committee suggested to submit the proposal after assessing the outcome of the phosphorite project "Reconnaissance Survey (G-4 stage) for Phosphorite in Bijawar –Imiliya block (95.67 sq.km.) District:-Chhatarpur, Madhya Pradesh" recommended in 57th TCC meeting.

17/10/2023

17/10/2023

Agenda 57.1.6. Proposal for Bijawar Hatta Limestone, District Chhatarpur & Damoh, Madhya Pradesh for Reconnaissance Survey (G-4 stage)
[Implementing Agency: MPSMC Ltd.]

a) The proposed block belongs to Semri Goup of Vindhyan.
b) Limestone of Semri Group of Vindhyan Super Group are worldwide known for limestone deposits.
c) The Semri Group of rocks are represented by a sequence of orthoquartzite-shale-limestone with Palkawan Shale Formation dominating the group. The sequence is exposed in the deeply dissected Barana valley and is capped by Kaimurs.
d) GSI has already carried out exploration activities around the area and the maps prepared by all earlier GSI exploration have already established the presence of limestone in the region. Moreover, there is one limestone mine west of the block.

Recommendation of TCC:

Committee suggested to a formulate a G4 item combining central and NE limestone in the map. Southwestern limestone may be removed. The modified proposal may be resubmitted in the next TCC.

Agenda 57.1.7. Preliminary Exploration for Iron and Bauxite Mineralization in and around Sihora-Gosalpur-Dhimarkheda iron ore deposit at Dhimarkheda Tehsil, Katni District, Madhya Pradesh.

[Implementing Agency: MPSMC Ltd.]

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Agenda 57.1.10. Preliminary Exploration for Iron and Bauxite Mineralization in and around Sihora-Gosalpur iron ore deposit at Sihora Tehsil, Jabalpur District, Madhya Pradesh.
[Implementing Agency: MPSMC Ltd.]

a) The area belongs to the Mahakoshal Group of rocks of Jabalpur District, Madhya Pradesh.

b) Exposed lithounits in the area belongs to Early Proterozoic to Archaean aged Mahakoshal Group of Rocks comprising Quartz veins, Quartz porphyre veins, Mafic and Ultramafic intrusive, Phyllite with bands of quartzite, Conglomerate Dolomite, Limestone with bands of BIF, Manganiferous chert, quartzite and metabasalts, pyroclasts.

c) According to the earlier workers, iron mineralization is associated with Banded Iron Formation (BIF) while Bauxite is associated with laterites. Both BIF and laterite high Al_2O_3 occur in vicinity to the proposed area.

d) GSI has already carried out a G-4 stage exploration adjacent to the block.

e) Moreover, several active Mines of Iron are there in the close vicinity of the block.

17/10/2023

17/10/2023

f) Based on the mineralization evidence of Iron and bauxite in and around the block, MPSMCL proposed to carry out Reconnaissance Survey in the proposed area.

g) MPSMCL proposed to carry out geological mapping, surface sampling and pitting/trenching followed by few scout boreholes to establish the disposition of the mineralized zones.

Recommendation of TCC:

The committee suggested modifying the area as per the geology of the respective proposed area and submitting the proposals in next TCC meeting.

Agenda 57.1.8. Preliminary Exploration for Limestone and Bauxite Mineralization in Mahakoshal group of rocks in and around Dhimarkheda Tehsil, Katni District, Madhya Pradesh for (G4 Stage)

[Implementing Agency: MPSMC Ltd.]

Recommendation of TCC:

The committee suggested modifying the area as per the geology of the respective proposed area and submitting the proposals in next TCC meeting.

Agenda57.1.14. Proposal for Baldeogarh Tikamgarh Ghuwara Basemetal Block, District Chhatarpur & Tikamgarh, Madhya Pradesh for Reconnaissance Survey (G-4 stage).
[Implementing Agency: MPSMC Ltd.]

a) The project is formulated on the basis of GSI's work in the area based on mapping of alteration / mineralized zone with the help of multispectral remote sensing techniques in parts of Bundelkhand Gneissic Complex, Tikamgarh and Chhatarpur.

b) It is observed that Al_2O_3, Fe_2O_3, K_2O, Ba, Ga, V, Rb, Sr, Cu, Zn and U elements are well correlating with alteration zones.

c) Stream sediment analysis data of Fe_2O_3 showing a very good correlation with the satellite-based ferric iron alteration zones and it is also coinciding with high Bouguer gravity anomaly zones in the area.

d) GSI has carried out, geological mapping, structural mapping and exploration activity also and recommended for further exploration around the area.

e) Hence, The MP State Mining Corporation Ltd (MPSMCL), Madhya Pradesh has proposed this G-4 stage exploration work which includes Geological Mapping (1: 12,500 Scale), surface sampling combined with Geophysical Survey (Gravity and Magnetic) followed by few scout boreholes involving 500m drilling to prove the strike and depth persistence of ore bearing formation mapped in the area.

f) Proposed area forms the SSE fringe of Bundelkhand Gneissic complex with indication of Basemetal.

17/10/2023

17/10/2023

g) The study area consists of rocks of older metamorphic Group, Bundelkhand granitoids and Bijawar Group

Recommendation of TCC:

The committee suggested modifying the area as per the geology of the respective proposed area and submitting the proposals in next TCC meeting.

Agenda 57.1.15. Preliminary Exploration (G-3 Stage) of Ion-Adsorption and Laterite Hosted Supergene Enriched REE Deposits in Sung Valley Block, East Khasi and West Jaintia Hills Districts, Meghalaya.
[Implementing Agency: Dept. of Mines & geology, The Directorate of Mineral Resources (DMR), Meghalaya]

a) The project was firstly submitted in 56th TCC meeting of NMET. The committee suggested DMR Meghalaya to modify the proposal to G3 stage and submit in the next TCC meeting.

b) The project has been proposed for searching of REE in laterite, bauxite, and weathering profiles to demarcate REEs enriched zone at subsurface level, on the basis of geochemical signatures for REEs enrichment in Ion-Adsorption and Laterite hosted REEs deposits.

c) The proposal is mainly based on GSI's survey around the area which shows promising results and lithologies potential to develop ion adsorption deposit.

d) DMR informed the house that an initial study has been carried out by The Directorate Mineral Resources (DMR), Meghalaya in collaboration with Panjab University in the Sung Valley region during August-September 2023 which reveals strong evidence of an ore deposit or enrichment zone of Rare Earth Elements (REEs) lying beneath the regolith cover. However, the precise depth and extent of this enrichment zone remain uncertain due to limited sampling.

e) DMR further conveyed that similar kind of deposits are already been explored and being utilized in South China, and Mount Weld's deposit, Australia.

f) The project proposal was send to GSI for comments. In response to this GSI has informed that following:

- G4 stage exploration has been taken up by GSI on REE in parts of Sung valleyComplex during FS: 2010-12. (About 45 to 50% overlapping of GSI's G4 explorationand proposed NMET block).
- G3 stage exploration has been taken up by GSI on PGE (FS: 1973-74), Preciousminerals (FS: 1978-79), Phosphorite (FS: 1981-82, 1984-85), Bauxite (FS: 1984-85)in the area.

17/10/2023

17/10/2023

- No G3 stage exploration project has been taken up in the proposed NMETblock during current FS: 2023-24 and / or proposed for FS: 2024-25.

g) After the detailed deliberation, the committee agreed to take up G3 stage exploration of Ion-Adsorption and Laterite Hosted Supergene Enriched REE Deposits in Sung Valley Block, East Khasi and West Jaintia Hills Districts, Meghalaya.

h) The committee advised DMR Meghalaya to conduct joint field visit with AMD & GSI before initiating the exploration work and also directed DMR Meghalaya to engage atleast 02 geologist from DMR Meghalaya for the project.

i) The committee opined to target the secondary REE enrichment first followed by REE concentration in bedrock.

j) The committee also suggested to review the project after 4 months.

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Preliminary Exploration (G-3 Stage) of Ion-Adsorption and Laterite Hosted Supergene Enriched REE Deposits in Sung Valley Block (7.1 sq.km.), East Khasi And West Jaintia Hills Districts, Meghalaya" with an estimated cost of ₹300.94 lakh(including GST) within time schedule of 15 months for carrying out the proposed work and submission of report as per annexure-7A & 7B.

Agenda 57.1.16. Preliminary Exploration (G-3 Stage) for Iron ore in Khandadhar Sub Block – E (Area: 8.797 Sq.km), District – Sundargarh, Odisha [Implementing Agency: OMC]

a) The area belongs to Bonai - Keonjhar belt of Sundargarh & Keonjhar Districts, Odisha.

b) This is spin off item of G4 item carried out by OMC. The Khandadhar block (40.46 Sq. Km) which includes the area of Khandadhar Sub Block – E (8.797 Sq. Km) has been explored by OMC in G4 stage in 2022-23.

c) Department of Steel & Mines, Government of Odisha, vide their notification No. 4505/SM, dtd. 05.06.2018, has allotted Khandadhar Sub Block - B to OMC (Erstwhile OMECL) for exploration as per UNFC classification.

d) The Khandadhar Block as a whole comprising of six sub-blocks (Khandadhar Sub Block – A, B, C, D, E& G) over an area of 40.46 Sq. Km has been explored in G4 stage under the funding of National Mineral Exploration trust (NMET) in 2022 – 23.

e) During G4 investigation, 02 boreholes have been drilled in Sub Block – E and intersected around 44.40 m iron ore

17/10/2023

17/10/2023

f) The adjacent blocks which are already explored blocks are (i) Jhumka Pathriposhi (East) (Auctioned block of M/s. Rungta) has an iron ore potential of 140.475 MT and was explored by MECL & GSI at G2 level and (ii) Jhumka Pathriposhi (West) has an iron ore potential 70.10 MT and was explored by GSI at G2 level.

g) In view of this, OMC has proposed the said block for Preliminary Exploration (G3 stage). This will help in planning of further upgrading the level of exploration in order to make the block auctionable.

h) The project proposal was send to GSI for comments. In response to this GSI has informed that The proposed Khandadhar Sub Block - E (G-3) of OMC (erstwhile OMECL) is not falling within the block boundary/coordinates of areas being explored during the current FSP, i.e. FS 2023-24 & proposed for the next Field Season , i.e. FS 2024-25. The proposed block has already been notified in favour of OMC vide letter no. 4505/SM dated 05.06.2018.

i) In view of above, the committee agreed to take up G3 Stage exploration for Iron ore in Khandadhar Sub Block – E. The committee suggested o review to project after 4 months.

j) The committee suggested to map the area at 1:4000 scale. Drilling will be carried out in outcrop part in first phase. Spacing of the drilling grid should be 400m X 400m.

k) Meanwhile samples may be collected from nala section in the soil covered area.

Recommendation of TCC:

The committee recommended the proposal for approval of EC for "Preliminary Exploration (G-3 Stage) for Iron ore in Khandadhar Sub Block – E (Area: 8.797 Sq.km), District – Sundargarh, Odisha" with an estimated cost of ₹799.39 lakhs (including GST). within time schedule of 12 months for carrying out the proposed work and submission of report as per annexure-8A &8B.

Agenda 57.1.17. Khandadhar Sub Block - B over an area of 4.328 Sq. Km in Sundargarh District, Odisha for Preliminary Exploration (G3 - Stage) under NMET. [Implementing Agency: Odisha Mining Corporation Limited]

a) The area belongs to Bonai - Keonjhar belt of Sundargarh & Keonjhar Districts, Odisha.

b) Department of Steel & Mines, Government of Odisha, vide their notification No. 4505/SM, dtd. 05.06.2018, has allotted Khandadhar Sub Block - B to OMC (Erstwhile OMECL) for exploration as per UNFC classification.

c) This block is also an outcome of G4 stage exploration in Khandadhar block (40.46 Sq. Km) which includes the area of Khandadhar Sub Block – E (8.797 Sq. Km) has been explored by OMC in G4 stage in 2022-23.

17/10/2023

17/10/2023

d) OMC informed that OMC has already carried out Preliminary Exploration (G3 stage) in the block by drilling 2147 m in 32 boreholes. The total resource estimated is of **81.99 MT** for Iron Ore with an average Fe of 57.54% and for Bauxite, the resource estimated is **2.23 MT** with an average Al2O3 of 40.85% and an average SiO2 of 1.12%. The resource estimated comes under the category "inferred Mineral Resource (333)" as per UNFC guidelines.

e) Since, OMC has already been completed at G3 stage in the block therefore requested as post facto approval from committee.

f) The committee opined that as the project is already completed therefore the funding is beyond the purview of NMET.

Recommendation of TCC:

The project is not considered for review as exploration for iron ore under G3 stage has already been completed by OMC and post-facto approval for NMET Fund is beyond the mandates of NMET.

Agenda 57.2: Review of completed/ongoing projects and time extension

Agenda 57.2.1. Reconnaissance survey (G4) for coal in North of Chulaha Bhulia block (8.77 sq km), Sohagpur Coalfield, District: Anuppur, Madhya Pradesh [Implementing Agency: CMPDI]

a) The project was approved in 24th Executive committee meeting with an estimated cost of ₹2.56 Cr. in 12 months.

b) It has been conveyed that sanction order was issued on 01.06.2022. Accordingly scheduled date of completion was 31.05.2023.

c) The project got time extension upto 30.11.2023 in 30th Executive Committee meeting held on 06th June, 2023.

d) The committee has been informed that the drilling and geophysical studies of 2550 m completed with the completion of band by band analysis of the 178 samples. The samples with advice of overall analysis have been sent to lab and results are awaited.

e) Further CMPDI conveyed that 4 bhs have been drilled in the block and the details of coal seams encountered in block are as follows:

Seam Name	Depth Min	Depth Max	Minimum Thickness	Maximum Thickness
VT	336.77	411.91	2.65	4.08

VB	341.50	416.58	2.30	3.54
INDEX	360.62	432.63	0.86	1.14
IVT	400.64	442.60	0.59	0.86
IVB	442.74	485.09	0.64	0.80
IIIT	463.08	528.58	3.55	5.11

Recommendation of TCC:

The committee noted the outcome of project and suggested to submit report within scheduled time i.e. 30.11.2023.

Agenda 57.2.2. Preliminary exploration (G3) for bauxite in the Garhpat block (1.63 sq. km), District:Lohardaga, Jharkhand
[Implementing Agency: CMPDI]

a) The project "Preliminary exploration (G3) for bauxite in the Garhpat block (1.63 sq. km), District: Lohardaga, Jharkhand" was approved in 26th Executive committee meeting with an estimated cost of ₹0.83 Cr. in 12 months.

b) CMPDI conveyed that the sanction order was issued on 20/09/2022. Therefore, the date of completion of the project was 19/09/2023.

c) It has been informed that CMPDI received the forest clearance on 13/12/2022. Further CMPDI has completed the drilling of 10 boreholes with 161.35 m and all the samples have been sent to lab. The result of analysis is awaited. CMPDI further informed that due to non-availability of forest clearance, execution of exploration work got delayed.

d) In view of above, CMPDI requested for six months timeextension for the completion of the project.

e) After reviewing the project, committee opined that the time extension upto 31.12.2023 is sufficient for completion of work and submission of geological report.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension upto 31st December,2023 for submission of geological report .

Agenda 57.2.3. Preliminary Exploration (G-3 Stage) for Iron Ore in Malangtoli E Block, District- Sundargarh and Keonjhar, Odisha.
[Implementing Agency: MECL]

a) The project was approved in 09th Executive committee meeting with an estimated cost of ₹ 199.21 lakh. The project got time extension upto 30.08.2023 in 30th meeting of Executive committee of NMET.

17/10/2023

17/10/2023

b) MECL conveyed that The block is totally in forest area and execution of exploration work got delayed due to non-availability of forest clearance.

c) MECL further informed that Malangtoli 'E" Sub Block and its surrounding area form an undulating topography occupying plateaus and intermittent valleys. Trend of the plateaus is NNE-SSW.The iron ore occurs as a tabular undulating bedded deposit. The general trend of the deposit is NNE-SSW to NS and dip varies from 10º to 40º at times even 70º due west or east. The direction of dip changes frequently due to folding. The iron ore developed up to 511.40 mRL (MNME-02). The depth of enrichment varies from place to place. In all boreholes, the ore has not been developed up to 511.40 mRL.Iron ore is mostly hematitic in nature. Goethite, limonite as a minor constituents replaced hematite. Magnetite occurs as a relict one. Physical nature of the ore varies from hard laminated ore to powdery ore based on the compactness of the mineral grains.

d) The committee has been informed that 10 boreholes drilled in the block and a total of 46.88 million tonnes of net resources has been estimated within the block with average 54.78 Fe%, 8.77 SiO2% and 6.382 Al2O3% at G3 (333) stage and total of 36.87 million tonnes of net resource has been estimated within the block with average 55.58 Fe%, 11.09 SiO2% and 3.39 Al2O3% at G4 (334) stage.

e) Further MECL requested for some time extension for submission of geological report.

f) After the detailed deliberation, the committee agreed for submission of geological report and also recommendation of time extension upto 30th September,2023.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension upto 30th September,2023 for submission of geological report.

Agenda 57.2.4. Preliminary Exploration (G-3 Stage) for Iron Ore in Malangtoli D Block, District- Sundargarh and Keonjhar, Odisha.
[Implementing Agency: MECL]

a) The project was approved in 09th Executive committee meeting with an estimated cost of ₹ 210.89 lakh. The project got time extension upto 30.08.2023 in 30th meeting of Executive committee of NMET.

b) MECL informed that A total of 31.19 million tonnes (mt) of net resources has been estimated within the block with average 53.32 Fe%, 14.07 SiO2% and 6.05 Al2O3% at G3 (333) stage and a total of 17.37 million tonnes of net resources has been estimated within the block with average 53.89 Fe%, 14.76 SiO2% and 5.16 Al2O3% at G4 (334) stage.

c) Further MECL requested for some time extension for submission of geological report.

17/10/2023

17/10/2023

d) The committee agreed for submission of geological report and also recommendation of time extension upto 30th September,2023.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension upto 30th September,2023 for submission of geological report.

Agenda 57.2.5. Reconnaissance Survey (G4) for Nickel, Copper & Associated Minerals in Salewara-Kumarwara-Murum Block, DistrictRajnandgaon, Chhattisgarh. [Implementing Agency: MECL]

a) The project was approved in 24th EC meeting of NMET. Accordingly the sanction order was issued on 02nd June, 2022.

b) MECL informed that the work involved large-scale geological mapping at a scale of 1:12,500 in an area of 52.0 square kilometres in and around Salewara-Murum-Kumarwara area. The whole area was prospected by Geological mapping, geochemical soil and bed rock sampling for nickel, copper and associated minerals.

c) It has been informed that during the course of geological mapping 340 nos. of geochemical samples were collected, which include 38 bed rock samples and 302 soil samples.**Ni concentration** ranges from minimum 50.00 ppm to maximum 600.00 ppm in bed rock and from minimum 50.00 ppm to 1413.00ppm in soil samples.The maximum value of Ni is 1413.00 ppm showing in soil samples.**Co concentration** ranges from minimum 52.00 ppm to maximum 144.00 ppm in bed rock and from minimum 50.00 ppm to 827.00ppm in soil samples. The concentrations of Co are showing more than 500 ppm in the 1 no of soil in sample**.Cu concentration** ranges from minimum 58.00 ppm to maximum 697.00 ppm in bed rock and from minimum 52.00 ppm to 412.00ppm in soil samples.The maximum value of Cu is 697.00 ppm showing in bed rock sample. Zn concentration ranges from minimum 52.00 ppm to maximum 424.00 ppm in bed rock and from minimum 50.00 ppm to 225.00ppm in soil samples.

d) Further, MECL informed that all the comments received from peer reviewer has been attended and they need time extension for submission of geological report.

e) In view of above, the committee noted the outcome of the project and recommended time extension upto 15th Oct, 2023 for submission of geological report.

Recommendation of TCC:

The committee agreed for the submission of geological report and recommended time extension upto 15th October,2023 for submission of geological report.

17/10/2023

17/10/2023

Agenda 57.2.6 Reconnaissance Survey (G-4) For Manganese Ore and Graphite In Larambha-Kanaital&Pudapadar-Bharatbahal Block, District-Balangir, Odisha [Implementing Agency: MECL]

a) MECL informed the committee that the peer reviewer comments are awaited for the block.

Recommendation of TCC:

The committee suggested to submit the project in next TCC after receiving the comments from peer reviewer.

Agenda 57.2.7. Preliminary Exploration (G-3 Stage) for Graphite and Manganese in Salepali Block, Bolangir Odisha [Implementing Agency: MECL]

a) The block was recommended in 42nd meeting of TCC held on 23rd and 24th June 2022 and approved in 26th meeting of EC.

b) The project was reviewed in 52nd TCC held on 27th and 28th April 2023 after the completion of geological mapping, trenching and drilling of 2 boreholes. The committee suggested to drill 3 more boreholes in the block.

c) MECL further informed that resource of graphite in the block is 0.179 m.t. (approx.) with 2.29% FC at 2% FC cut-off and report will sent to peer reviewer after nomination and therefore requested for time extension upto 31st October, 2023.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension upto 31st October,2023 for submission of geological report.

Agenda 57.2.8. Reconnaissance survey (G-4) for Tungsten, Tin and Base metal in Datia-Bijapur block (152.33 sq.km) Dist Datia-Shivpuri, Madhya Pradesh [Implementing Agency: MECL]

a) The project "Reconnaissance survey (G-4) for Tungsten, Tin and Base metal in Datia-Bijapur block (152.33 sq.km) Dist Datia-Shivpuri, Madhya Pradesh" was approved in 23rdEC supplementary meeting of NMET and was reviewed in 53rd TCC meeting.

b) MECL conveyed that a total of 200 samples were analyzed W, Sn, Cu, Pb, Zn &Ta.Total 10 samples were studied for minerographic petrological studies.In four samples MDMG-03, 04, 07 & 09 Wolframite, Scheelite and Magnetite are identified major ore mineral composition whereas cassiterite is present as fine prismatic grains in association with wolframite and scheelite and showing zoned structure

c) MECL further conveyed that occurrence of copper mineralisation is sporadic, discontinuous and present as specks/disseminations in place where quartz vein

17/10/2023

17/10/2023

intrusion bearing traces of sulphides and malachite encrustations are observed within granites at village Pitsura and Baronikhurd. Due to sporadic nature extent of mineralization could not be established.The occurrence of Tungsten and Tin mineralisation is also sporadic, discontinuous and Tungsten, Tin is identified in minerogrpahic studies conducted, however in the bedrock samples the W analysis range varies from 0.71ppm (min) to 59.80 ppm (max) with average 4.332 ppm and for Tin range varies from 0.83 ppm (min) to 14.02 ppm (max) with average 3.824 ppm.

d) It has been conveyed that geological report is prepared and submitted for peer review comments. Further, time line for completion of exploration is on 24th Sep 2023. Hence approval for extension of one month for attending the peer reviewer comments and submission of final GR is sought.

e) After the detailed deliberation, the committee opined that the values are not encouraging in the block. However, to submit the final geological report one month time extension is needed.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension of 01 month i.e. upto 24th Oct,2023 for submission of geological report.

Agenda 57.2.9. Reconnaissance survey (G-4) for Tungsten, Tin and Rare metals in Govindpur block (82.45 sq.km) Dist Datia, Madhya Pradesh.
[Implementing Agency: MECL]

a) The project "Reconnaissance survey (G-4) for Tungsten, Tin and Rare metals in Govindpur block (82.45 sq.km) Dist Datia, Madhya Pradesh" was approved in 26thEC meeting of NMET and was reviewed in 53rd TCC meeting.

b) It has been conveyed that In 53rd TCC, committee recommended closed space sampling at anomalous zones , i.e., >500 ppm of W.Samples were collected in 25-50m spacing over a strike length of 1km, analytical results have yielded a maximum value of 200 ppm of W and minimum 9 ppm.

c) MECL informed that occurrence of Tungsten and Tin mineralisation is also sporadic, discontinuous and Tungsten is identified in minerogrpahic studies, however in the bedrock samples the W analysis range varies from 0.71ppm (min) to 1214 ppm (max) and for Tin range varies from 0.83 ppm (min) to 18 ppm (max).

d) Further MECL informed that time line for completion of exploration completed on 19thsep 2023 and required one month timer extension for attending the peer reviewer comments and submission of GR

17/10/2023

17/10/2023

e) TCC recommended to follow the colour code in geological map and to insert a sketch map.

Recommendation of TCC:

The committee noted the outcome of project and recommended the project for time extension of 01 month i.e. upto 19th September,2023 for submission of geological report.

Agenda 57.2.10. Preliminary exploration (G3) for limestone in Malkhed block- 1 and 2 (18.01 sq. km), Bhima Basin, District: Gulbarga (Kalaburagi), Karnataka [Implementing Agency: MECL]

a) The project was approved in 27th EC meeting held on 10th January, 2023 and the project was reviewed in 55th TCC meeting.

b) MECL conveyed that 9 Boreholes drilled upto 50 m and closed in Limestone & 01 Stratigraphic borehole (KML-08) drilled upto150m. The stratigraphy borehole has the 130.00 m thick limestone continuously after the soil cover of 3.00 m from surface.

c) It has been conveyed that In 55th TCC Meeting, proposal of additional cost of sampling was reviewed and Committee recommended to submit the analytical results of some sample to take a decision on approval of additional samples in next TCC meeting.

d) In view of above, the committee agreed for analysis of additional samples.

Recommendation of TCC:

The committee noted the outcome of analysis and approved the analysis of additional samples of cost ₹ 10.19 lakh as per annexure-9.

Agenda 57.2.11. General exploration (G2) for manganese in Pimperkunta block, Bheempur Mandal, District: Adilabad, Telangana.
[Implementing Agency: TSMDC]

&

Agenda 57.2.12. Reconnaissance Survey for prospect evaluation of the sporadic meeting occurrences of Molybdenite, South of Karimnagar (56 N/4), District- Siddipet and Karimnagar, Telangana.
[Implementing Agency: TSMDC]

a) In the 22nd EC the time extension for both project was approved upto 27/06/2022.

b) The committee was informed the final review of both projects was completed in 54th TCC and the geological reports were received on 15/09/2023 at NMET Secretariat.

c) In view of above, the committee agreed for time extension for both projects upto 15/09/2023.

17/10/2023

17/10/2023

Recommendation of TCC:

The committee recommended the time extension upto 15th September, 2023 for both the projects.

Additional Discussion:

Agenda 57.2.13. Preliminary exploration (G3) for limestone in Kiranagi-1 and Kiranagi-2 block, Bhima Basin, District: Gulbarga, Karnataka
[Implementing Agency: MECL]

a) The project was approved in 28th EC of NMET.

b) MECL conveyed that all Boreholes drilled upto 45 m and closed in Limestone. Limestone occurrence from surface after soil cover from 2.75m and continued upto the bottom of the borehole at 45.00m. Due to Lesser OB and the continuous occurrence of limestone resulted more number of samples.

c) In view of above, the committee agreed for analysis of additional samples.

Recommendation of TCC:

The committee approved the additional samples and additional of cost ₹ 1.49 lakh as per annexure-10.

The meeting ended with vote of thanks by Member Secretary, TCC, NMET.

17/10/2023

17/10/2023

Minutes of the 57th Technical-cum-Cost Committee (TCC) meeting held on 26th and 27thSeptember 2023 through hybrid mode at New Delhi

S.NO	Name/ Designation	Status	Remarks
1	Dr. S. Ravi, Dy. Director General, SU: Karnataka & Goa, GSI Bangalore.	Chairman, TCC	Physical
2	Shri I.R. Kirmani, ADG (Retd.), GSI.	Member	Physical
3	Shri HemrajSuryavanshi, Addl. Director General (Retd.), GSI	Member	Physical
4	Shri K. Koteshwar Rao, Dy.D.G. (Retd.) GSI.	Member	Physical
5	Dr. S. K. Kulshrestha, DDG-RMH-III, NER, GSI, Shillong	Member	Physical
6	Shri S.K. Adhikari, Chief Mining Geologist, IBM, Nagpur.	Member	Physical
7	Dr. E.V.S. SK Babu, Scientist (G), NGRI.	Member	Physical
8	Shri K.L. Mundra, Head-RMRE, AMD, Hyderabad	Member	Through VC
9	Shri A.R. Sengupta, Director (IFD), Ministry of Mines.	Member	Not Attended
10	Shri Vivek Kumar Sharma,Director, NMET, Ministry of Mines	Member	Physical
11	Shri P.K. Maharana, AGM (Finance), NALCO, Bhubaneswar	Member	Through VC
12	Shri Ravi Kumar Gupta General Manager (Finance) HCL, Kolkata	Member	Through VC
13	Smt. Vandana, Cost Accounts Officer, RSAS, Bangalore, GSI.	Member	Physical
14	Shri C. Parthsarathi, Director, GSI &Member Secretary, TCC- NMET, GSI, Bengaluru	Member Secretary	Physical

17/10/2023

17/10/2023

Annexure-1

List of participants attended 57th Technical-cum-cost Committee (TCC) meeting of NMET held on 26th and 27th September 2023,throughhybrid mode at New Delhi

S.No.	Name/Designation	Email ID	Contact No	Organization
1	Dr. S. Ravi, Dy. Director General, SU: Karnataka & Goa, GSI Bangalore.	s.ravi1@gsi.gov.in	9441138834	Chairman, TCC
2	Shri I.R. Kirmani, ADG (Retd.), GSI.	irkirmani@yahoo.com	9414014723	Member TCC
3	Shri Hemraj Suryavanshi, Addl. Director General (Retd.), GSI	hemrajgsi@gmail.com	7477042176	Member TCC
4	Shri K. Koteshwar Rao, Dy.D.G. (Retd.) GSI.	kkrao1957@gmail.com	9000117969	Member TCC
5	Dr. S. K. Kulshrestha, DDG-RMH-III, NER, GSI, Shillong	s.kulshrestha@gsi.gov.in	9413330658	Member TCC
6	Shri S.K. Adhikari, Chief Mining Geologist, IBM, Nagpur.	skadhikari@ibm.gov.in	7588690545	Member TCC
7	Dr.E.V.S.S.K.Babu, Scientist (G), NGRI.	evsskbabu@ngri.res.in	9441535852	Member TCC
8	Shri K.L. Mundra, Head-RMRE, AMD, Hyderabad	headrmre.amd@gov.in	9414785663	Member TCC
9	Shri A.R. Sengupta, Director (IFD), Ministry of Mines.	ar.sengupta@nic.in	-	Member TCC
10	Shri Vivek Kumar Sharma,Director, NMET, Ministry of Mines	vksharma.ofb@gov.in	7024570055	Member Ex-office

17/10/2023

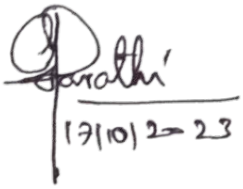
17/10/2023

11	Shri P.K. Maharana, AGM (Finance),NALCO, Bhubaneswar	pmaharana@rediffmail.com	8500669500	Member TCC
12	Shri Ravi Kumar Gupta General Manager (Finance) HCL, Kolkata	ravi_g@hindustancopper.com	9433274328	Member TCC
13	Smt. Vandana, Cost Accounts Officer, RSAS, Bangalore, GSI.	vandana@gsi.in	8660939235	Member TCC
14	Shri C. Parthsarathi, Director, GSI &Member Secretary, TCC- NMET, GSI, Bengaluru	c.parthasarathi@gsi.gov.in	9483186932	Member Secretary
15	Shri Rajiv Kumar Section Officer	rajiv.kumar88@nic.in	-	Represent of IFD, Ministry of Mines
16	Shri P. Ravindran GM (Exploration)	ravindran.mecl@gmail.com	9407607309	MECL
17	Shri P.P. Kulkarni DGM (Exploration)	kulkarnip.mecl@gmail.com	8319364061	MECL
18	Shri Naveen Kumar Pala Senior Manager (Geology)	naveenpala.mecl@gmail.com	7738368657	MECL
19	Shri MD Dastageer Manager (Geology)	dastageermd@gmail.com	9560739350	MECL
20	Shri Vikash Kumar Manager (Geology)	vikgeo@gmail.com	9110065089	MECL
21	Shri SayandeepChakraborthyAsst Manager (Geology)	sayanchak2011@gmail.com	9038956935	MECL
22	Smt. Moumita Ghosh Sr. Geologist	moumitaghosh03091991@gmail.com	9001801591	MECL
23	Shri Atul Sharma, Chief General Manager	info.mpsmc@mp.gov.in	8889600028	MPSMC Ltd.
24	Shri Ashutosh Temle, General Manager	info.mpsmc@mp.gov.in	9425413807	MPSMC Ltd.
25	Shri Hemant Yerpude, Mines Forman	info.mpsmc@mp.gov.in	9893662100	MPSMC Ltd.
26	Shri Jeevan Singh Ahirwar, Junior Manager	info.mpsmc@mp.gov.in	9630868969	MPSMC Ltd.
27	Shri Niraj Kumar Chowdhary, Appointed Consultant	info.mpsmc@mp.gov.in	9179084301	MPSMC Ltd.
28	Shri Damepaia	damepaia@gmail.com;	9903359824	DMR, Meghalaya
29	Shri P.K. Nayak Manager Sr. Manager (Geo)	pknayak@odishamining.in	9438039323	OMECL, Odisha
30	Shri S.K. RajashekharaReddy, GM , TSMDC	tsmdcltd@gmail.com	8008558580	TSMDC
31	Smt.Sangeeta Gupta Superintending Geologist	nmet.mines@gov.in	8005763199	NMET
32	Smt.Anju C.S., Senior Geologist	nmet.mines@gov.in	8588836933	NMET

17/10/2023

17/10/2023

33	Smt.Ujjwala Sharma , Asst Manager (Geology)	nmet.mines@gov.in	8957806004	NMET





Annexure:2A

Estimated cost for Reconnaissance survey (G4) for Iron in Karmai-Chuwahi Block, Districts: Sidhi, State: Madhya Pradesh. [Block area- 33.4 sq. km; Schedule timeline- 9 months review: after 4 months]							
S. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Amount (Rs)	
A	GEOLOGICAL WORK (1:12,500 scale-upgradation)						
i	Charges for one Geologist- Field	day	1.2	11,000	90	9,90,000	
ii	Charges for one Geologist per- HQ	day	1.2	9,000	30	2,70,000	
iii	2 labours for field geologist	day	5.7	494	180	88,920	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
iv	1 Samplers	day	1.5.2	5,100	55	2,80,500	

17/10/2023

17/10/2023

v	4 labours for sampler	day	5.7	494	220	1,08,680	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
					Sub Total- A	17,38,100	
B	PITTING AND TRENCHING						
i	Trenching	Cu m	2.1.1	3330	100	3,33,000	
					Sub Total- B	3,33,000	
C	LABORATORY STUDIES						
1	Chemical Analysis						
i	Primary & Check samples for Iron-Manganese BRS/Chip/Channel/Trench/BH samples)						
	a. Primary Samples for Total Fe, Total Mn, Al_2O_3, P_2O_5, CaO, SiO_2 and Acid insolubles	Nos	4.1.15a	4,200	400	16,80,000	by XRF
	b.External (10%) Check samples for 4 Radicals Fe, Al_2O_3, P_2O_5 & SiO_2	Nos	4.1.15a	4,200	40	1,68,000	

17/10/2023

17/10/2023

2	Physical,Petrological, Mineralogical Studies						
i	Preparation of standard thin section	Nos	4.3.1	2,353	5	11,765	
ii	Complete petrographic study report	Nos	4.3.4	4,232	5	21,160	
iii	Preparation of polished section	Nos	4.3.2	1,549	5	7,745	
iv	Complete mineragraphic study report	Nos	4.3.4	4,232	5	21,160	
v	Digital Photographs	Nos	4.3.7	280	5	1,400	
					Sub Total- C	19,11,230	
D	DRILLING						
i	Drilling upto 300m (Hard Rock) (1 rigs)	m	2.2.1.4a	11,500	500	57,50,000	After Review
ii	Land / Crop Compansation	per BH	5.6	20,000	6	1,20,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities
iii	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	6	12,000	

17/10/2023

17/10/2023

iv	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	1,050	37,800	Certification in this regard is required to be provided
v	Monthly Accomodation Charges for drilling Camp	month	2.2.9	50,000	2	1,00,000	I rig for 2 months
vi	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
vii	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
viii	Approach Road Making (Flat Terrain)	Km	2.2.10a	22,020	5	1,10,100	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed
ix	Bore Hole Fixation and determination of co-ordinates & Reduced Level of the boreholes and by DGPS	Nos	1.6.2	19,200	6	1,15,200	6 Boreholes

17/10/2023

17/10/2023

x	One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	200	3,18,000	This amount will be reimbursed after successful delivery of the cores to concerned libraries/authorities
					Sub Total- D	70,63,100	
E					Total A to D	1,10,45,430	
F	Geological Report Preparation		5.2	For the projects having cost exceeding Rs. 50 lakhs but less than 150 lakhs - A minimum of Rs. 2.5 lakhs or 5% of the value of work whichever is more		5,52,272	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
G	Peer review Charges		As per EC decision			30,000	

17/10/2023

17/10/2023

H	Preparation of Exploration Proposal	5 Hard copies with a soft copy	5.1	2% of the Cost or Rs. 5 Lakhs whichever is lower		2,20,909	EA has to submit the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
I	Total Estimated Cost without GST					1,18,48,610	
J	Provision for GST (18% of I)					21,32,749.82	GST will be reimburse as per actual and as per notified prescribed rate
K	Total Estimated Cost with GST					1,39,81,359.92	
				Rs. In Lakhs		139.81	
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 Certifiate 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.						

17/10/2023

17/10/2023

Estimated time schedule for Reconnaissance survey (G4) for Iron in Karmai-Chuwahi Block, Districts: Sidhi State: Madhya Pradesh.

S. No.	Particulars	Months	1	2	3	4		5	6	7	8	9
1	Camp Setting	Months										
2	Geological Mapping	days										
3	Trenching	cu.m										
4	Drilling (1 rig)	m										
5	Sampling days, Core Sampling	days										
6	Camp winding	Months										
7	Laboratory Studies	days										
8	Report Writing with Peer Review	days										

Review

17/10/2023

17/10/2023

Annexure:3A

Estimated cost for Preliminary exploration (G-3) for potash in Dhankowali Dhani (North) Block, Satipura-Sub Basin, North Western Part Of Rajasthan, District- Hanumangarh, Rajasthan. Total Area - 9.63 sq km; Nos. of Borehole - 16 ; Borehole depth range - Avg 800 m ; Completion Time - 12 Months Review:4 months							
S.N	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	
A	GEOLOGICAL WORK						
1	Borehole logging & sampling & report writing						
a	Charges for one Geologist per day at HQ	day	1.3	9,000	60	5,40,000	
b	Charges for Geologist party per day at field	day	1.3	11,000	240	26,40,000	
c	1 party Labour (2 Nos each party)	day	5.7	494	-	-	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	330	16,83,000	
e	Labours (4 Nos) for Sampler	day	5.7	494	1,320	6,52,080	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
2	Survey (on 1:10000 Scale)						

17/10/2023

17/10/2023

a	Bore Hole Fixation and determination of co-ordinates & Reduced Level of the boreholes and Boundary points by DGPS	Per Point of observation	1.6.2	19,200	16	3,07,200	BH-16 nos
	Sub-Total A					58,22,280	
B	DRILLING						
1	Drilling up to 300m (Hard Rock)	m	2.2.1.4a	11,500	4,800	5,52,00,000	Soc-Page No-2, Clause No. II: Note on Potash Drilling
2	Drilling 301 to 600 m (Hard Rock)	m	2.2.1.4b	12,420	4,800	5,96,16,000	
	Drilling 600 to 900 m (Hard Rock)	m	2.2.1.4c	13,225	3,200	4,23,20,000	
3	Borehole deviation Survey by Multishot Camera	m	2.2.6	330	-	-	
4	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	16	3,20,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities
5	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	16	32,000	
6	Borehole plugging by cement	m	2.2.7b	150	-	-	
7	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	7,130	2,56,680	To: 3 rig (Rawatsar to Dhankowali)=95 *3 km., 1 rig (Nagpur to Dhankowali)=1369 Km Fro: 4 rig Dhankowali to Nagpur: 1369 * 4 km

17/10/2023

17/10/2023

8	Monthly Accommodation Charges for drilling Camp (4rigs)	month	2.2.9	1,00,000	12	12,00,000	(Rs 50000/- per Month upto 2 rigs, 50% Additional Charge for additional rigs)
9	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	4	10,00,000	
10	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	4	10,00,000	
11	Road Making (Flat Terrain)	Km	2.2.10a	22,020	5	1,10,100	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed accordingly.
12	Drill Core Preservation	per m	5.3	1,590	2,600	41,34,000	
	Sub Total B					16,51,88,780	
C	BOREHOLE GEOPHYSICAL LOGGING						
1	Dual Density	m	3.11d	102	12,800	13,05,600	
2	Neutron	m	3.11f	74	12,800	9,47,200	
3	Spectral Gamma	m	3.11o	164	12,800	20,99,200	
4	Resitivity	m	3.11c	39	12,800	4,99,200	
5	Caliper	m	3.11g	19	12,800	2,43,200	
6	Geophysicist in HQ	day	3.18	9,000	20	1,80,000	
7	Geophysicist in Field	day	3.18	11,000	30	3,30,000	

17/10/2023

17/10/2023

	Sub Total C					56,04,400	
D	LABORATORY STUDIES						
1	Chemical Analysis						
i)	Primary samples						
	a. Analysis of 11 radicals i.e. K, Na, Water insolubles, Mg, Cl, Br, I, Li & CaSO4, F & B	Nos	4.1.1	8,157	2,400	1,95,76,800	
ii)	Check samples External(10%)						
	a. Analysis of 11 radicals i.e. K, Na, Water insolubles, Mg, Cl, Br, I, Li & CaSO4, F & B	Nos	4.1.1	8,157	240	19,57,680	
iii)	XRD analysis for identification of minerals (Random)	Nos	4.5.1	4,000	800	32,00,000	
	Sub-Total -1					2,47,34,480	
2	Physical Laboratory						
i.	Specific Gravity Determination	No.	4.8.1	1,605	20	32,100	
	Sub Total- D					2,47,66,580	
E	Total - A to D					20,13,82,040	

17/10/2023

17/10/2023

G	Geological Report Preparation		5.2	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		20,00,000	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET
H	Peer review Charges		As per EC decision			30,000	
	Preparation of Exploration Proposal (5 Hard copies with a soft copy),	5 Hard copies with a soft copy	5.1	2% of project cost subject to maximum of Rs. 5 Lakh		5,00,000	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
J	Total Estimated Cost without GST					20,39,12,040	
K	Provision for GST (18% of G)	%				3,67,04,167	GST will be reimbursed as per actual and as per notified prescribed rate
L	Total Estimated Cost with GST					24,06,16,207	
				In Lakhs (Rs.)		2,406.16	
Note:							

17/10/2023

17/10/2023

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 Certifiate 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.

Annexure:3B

TIME SCHEDULE/ACTION PLAN FOR PRILIMINARY EXPLORATION (G-3) FOR POTASH IN DHANKOWALI DHANI (NORTH) BLOCK,SATIPURA-SUB BASIN, NORTH WESTERN PART OF RAJASTHAN, DISTRICT- HANUMANGARH, RAJASTHAN.

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

17/10/2023

17/10/2023

Annexure:4A

Estimated cost for Reconnaissance survey (G4) for Gold,Copper, Graphite and associated minerals in Jamtola-Khandapar Block, District: Balaghat , State: Madhya Pradesh. [Block area- 96.62 sq. km; Schedule timeline- 12 months]

S. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Amount (Rs)	
A	GEOLOGICAL WORK (1:12,500 scale)						
i	Charges for one Geologist- Field	day	1.2	11,000	120	13,20,000	
ii	Charges for one Geologist per- HQ	day	1.2	9,000	60	5,40,000	
iii	2 labours/ party (Rs 443/day/labour) (As per rates of Central Labour Commissioner)	day	5.7	494	240	1,18,560	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
iv	Core Sampling -1 Samplers Labour charge not included	day	1.5.2	5,100	66	3,36,600	
v	4 labours/ party (Rs 443/day/labour) (As per rates of Central Labour Commissioner)	day	5.7	494	264	1,30,416	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
vi	Surveyor Work	days	1.6.1a	8,300	10	83,000	
vii	4 labours for surveyor	day	5.7	494	40	19,760	

17/10/2023

17/10/2023

					Sub Total- A	25,48,336	
B	GEOPHYSICAL SURVEY						
i	I.P. cum Resistivity, S.P., Magnetic	Line Km	3.4b	14,48,693.0	2.5	36,21,733	25 Line Km is advised by TCC
ii	Charges for one Geophysicist per day at field	day	3.18	11,000	0	-	
iii	Charges for one Geophysicist per day at HQ	day	3.18	9,000	15	1,35,000	
					Sub Total- B	37,56,733	
C	PITTING AND TRENCHING						
i	Trenching	Cu m	2.1.1	3330	200	6,66,000	(150 + 50) = (Gold+Graphite)
					Sub Total- C	6,66,000	
D	DRILLING						
i	Drilling upto 300m (Hard Rock) (1 rigs)	m	2.2.1.4a	11,500	500	57,50,000	
ii	Borehole deviation Survey	m	2.2.6	330	500	1,65,000	
iii	Land / Crop Compensation	per BH	5.6	20,000	5	1,00,000	Amount will be reimburse as per actuals or max. Rs. 20000 per BH with certification from local authorities
iv	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	5	10,000	

17/10/2023

17/10/2023

v	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	500	18,000	Certification in this regard is required to be provided
vi	Monthly Accommodation Charges for drilling Camp	month	2.2.9	50,000	2	1,00,000	2 months
vii	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
viii	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
ix	Approach Road Making (Flat Terrain)	Km	2.2.10a	22,020	4	88,080	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed for max. 4 km.
x	Bore Hole Fixation and determination of co-ordinates & Reduced Level of the boreholes and by DGPS	Nos	1.6.2	19,200	5	96,000	*5 Boreholes
xi	One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	250	3,97,500	This amount will be reimbursed after successful delivery of the cores to concerned libraries/authorities
					Sub Total- D	72,24,580	
E	LABORATORY STUDIES						
1	Chemical Analysis						
i	Bedrock/Channel/Stream/Trench/BH etc Samples) for Au and Ag						

17/10/2023

17/10/2023

	a) Primary samples for Au by fire assay & Ag by AAS	Nos	4.1.5a & 4.1.7a	4,886	400	19,54,400	200+100+100=400 (Surface+Trench+BH)
	b) Internal Check samples (5% of Primary samples)	Nos	4.1.5a	4,760	-	-	
	c) External Check sample (10% of Primary samples)	Nos	4.1.5a & 4.1.7a	4,886	40	1,95,440	
ii	Bedrock/Channel/Stream/Trench/BH etc Samples) for 34 elements by ICP-MS						
	d) 34 element Package analysis by ICP-MS	Nos	4.1.14	7,731	50	3,86,550	Surface+Trench+BH
iii	Bedrock/Channel/Stream/Trench/BH etc Samples) for Graphite (Proximate Analysis)						
	g) Primary samples for Graphite (Proximate Analysis)	Nos	4.1.16	3000	80	2,40,000	(Surface+Trench+BH)
	h) Internal Check samples (5% of Primary samples)	Nos	4.1.16	3000		-	
	i) External Check sample (10% of Primary samples)	Nos	4.1.16	3000	8	24,000	
iv	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
v	Complete petrographic study report	Nos	4.3.4	4,232	10	42,320	
vi	Preparation of polished section	Nos	4.3.2	1,549	10	15,490	
vii	Complete mineragraphic study report	Nos	4.3.4	4,232	10	42,320	

17/10/2023

17/10/2023

viii	Digital Photographs	Nos	4.3.7	280	10	2,800	
Ix	Whole Rock Analysis (Major oxide and 8 additional trace elements)	Nos	4.1.15a & b	7,568	10	75,680	Must include V_2O_3 due the presence of Graphite
x	Specific Gravity Determination	Nos	4.8.1	1,605	5	8,025	
					Sub Total- E	30,10,555	
F					Total A to E	1,72,06,204	
G	Geological Report Preparation		5.2	For the projects having cost exceeding Rs. 150 lakhs and less than Rs. 300 lakhs - A minimum of Rs. 7.5 lakhs or 3% of the value of work whichever is more		7,50,000	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
H	Peer review Charges		As per EC decision			30,000	

17/10/2023

17/10/2023

I	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 lower		3,44,124	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.
J	Total Estimated Cost without GST					1,83,30,328	
K	Provision for GST (18% of I)					32,99,458.96	GST will be reimburse as per actual and as per notified prescribed rate
L	Total Estimated Cost with GST					2,16,29,786.53	
				Rs. In Lakhs		216.30	
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 Certifiate 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.						

17/10/2023

17/10/2023

Annexure:4B

Timeline for Reconnaissance survey (G4) for Gold, Graphite and associated minerals in Jamtola-Khandapar Block, District: Balaghat , State: Madhya Pradesh. [Block area- 96.62 sq. km; Schedule timeline- 12 months]																
S. No.		**Months/ Days**	**1**	**2**	**3**	**4**	**5**	**6**		**7**	**8**		**9**	**10**	**11**	**12**
1	Camp Setting	**months**														
2	Geological Mapping	**months**														
3	Survey days	**days**														
4	Geophysical Work	**months**														
5	Trenching	**cu.m**														
6	Drilling (1 rig)	**m**														
7	Geologist days	**days**														
8	Sampling days, Core Sampling	**days**														
9	Camp winding	**months**														
10	Laboratory Studies	**months**														
11	Geologist days, HQ	**days**														
12	Report Writing with Peer Review	**months**														

Review **Review**

17/10/2023

17/10/2023

Annexure:5A

Estimated cost for Preliminary Exploration (G-3) for Copper and associated minerals in Sitapur Block, Malanjkhand Copper Belt, Balaghat District, Madhya Pradesh Total Area - 3.5 sq km ; Completion Time -12 Months							
Sl. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item - Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	
A	Geological Mapping Other Geological Work & Surveying						
	Geological mapping, (1:2,000 scale) & Trenching , drilling work	3.5 sq.km					
	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.2	11,000	120	1320000	
	b. Labours Charges for Geologist	day	5.7	494	240	118560	Amount will be reimburse as per the notified rates for unskilled labor by the Central Labour Commissioner or respective State Govt. whichever is higher

17/10/2023

17/10/2023

	c. Charges for Geologist per day (HQ)	day	1.3	9,000	60	540000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	70	357000	
	e. Labours (4 Nos)	day	5.7	494	280	138320	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total A					24,73,880	
B	Ground Geophysical Survey						
1	IP. Induced Polarization (I.P) cum Resistivity S.P and Magnetic	Per Line Km	3.4b	14,48,693	3	43,46,079	(8 -10 line Km=14,48,693/-) (30LKm cummulative)
3	Geophysicist party days (Field)	per day	3.18	11,000	-	-	
4	c. Labours Charges	day	5.7	494	-	0	Amount will be reimburse as per the notified rates for unskilled labor by the Central Labour Commissioner or respective State Govt. whichever is higher
5	Geophysicist party days	per day	3.18	9,000	30	2,70,000	

17/10/2023

17/10/2023

	(HQ)						
	Sub-Total B					46,16,079	
C	Survey work for Block boundary demarcation, geophysical survey layout & Trenching work						
a	DGPS Survey of Block Boundary cardinal points by DGPS + BH fixation & RL determination	Per Point of observation	1.6.2	19,200	14	268800	6 Points for Block Boundary +8 Bhs
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	
c	Labours Charges for survey work;	day	5.7	494	120	59280	Amount will be reimburse as per the notified rates for unskilled labor by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total C					5,77,080	

17/10/2023

17/10/2023

D	Trenching/Pitting						
	a) Excavation of Trenches	per cu.m	2.1.1.	3,330	150	499500	
	Sub Total D					4,99,500	
E	SCOUT DRILLING						
1	Drilling up to 300m (Hard Rock)	m	2.2.1.4 a	11,500	800	92,00,000	Subject to Review Geophysical Survey, DM, Trech
2	Borehole deviation Survey by Multishot Camera	m	2.2.6	330	800	2,64,000	
3	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	8	1,60,000	Amount will be reimburse as per actuals or max. Rs. 20000 per BH with certification from local authorities
4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	8	16,000	
5	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	400	14,400	200 km to & fro from Nagpur/ Rig
6	Monthly Accomodation Charges for drilling Camp	month	2.2.9	50,000	4	2,00,000	

17/10/2023

17/10/2023

7	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
8	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
9	Road Making (Flat Terrain)	Km	2.2.10a	22,020	5	1,10,100	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed for max. 5 km.
10	Drill Core Preservation	per m	5.3	1,590	250	3,97,500	
	Sub Total E					1,08,62,000	
F	LABORATORY STUDIES						
1	Chemical Analysis						
i)	Geochemical Sampling (Bedrock/Soil/ trench Samples)						
	a. for Cu, Pb, Zn, Ni, Co, Te, Mo and Se	Nos	4.1.7a & b	3,511	200	7,02,200	AAS Method
	b. Au by Fire Assay	Nos	4.1.5a	2,380	20	47,600	
ii)	Surface Check samples 10% External						
	a. for Cu, Pb, Zn, Ni, Co, Te, Mo and Se	Nos	4.1.7a & b	3,511	20	70,220	AAS Method

17/10/2023

17/10/2023

	b) For Au (Gold) by Fire Assay	Nos	4.1.5a	2,380	2	4,760	
v)	BH Core Samples						
	a. for Cu, Pb, Zn, Ni, Co, Te, Mo and Se	Nos	4.1.7a & b	3,511	200	7,02,200	AAS Method
	b) For Au (Gold) by Fire Assay	Nos	4.1.5a	2,380	40	95,200	
vi)	BH Core Check samples 10% External						
	a. for Cu, Pb, Zn, Ni, Co, Te, Mo and Se	Nos	4.1.7a & b	3,511	20	70,220	
	b) For Au (Gold) by Fire Assay	Nos	4.1.5a	2,380	4	9,520	
	ICP-MS (for BH Samples)	Nos	4.1.14	7,731	50	3,86,550	
2	Petrological samples (Surface & Trench/BH)						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
ii	Study of Thin Section / pertography	Nos	4.3.4	4,232	10	42,320	
3	Mineragraphic Studies (Surface & Trench/BH						

17/10/2023

17/10/2023

	Samples)						
i	Preparation of polished section	Nos	4.3.2	1,549	10	15,490	
ii	Study of Polished Section	Nos	4.3.4	4,232	10	42,320	
iii)	Digital Photographs	Nos	4.3.7	280	10	2,800	
	Sub Total F					22,14,930	
G	Borehole Geophysical Logging	5 bhs of 350 m each	3.12	622.25	800.0	4,97,802	10,88,941
H	Total A to G					2,17,41,271	
I	Geological Report Preparation	5 Hard copies with a soft copy	5.2	For the projects having cost 150 lakhs to Rs. 300 lakhs - A minimum of Rs.7.5lakhs or 3% of the value of work whichever is more		7,50,000	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
J	Peer review Charges		As per EC decisio n			30,000	

17/10/2023

17/10/2023

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 lower		4,34,825.41	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					22956096	
M	Provision for GST (18% of L)	%				41,32,097	GST will be reimburse as per actual and as per notified prescribed rate
N	Total Estimated Cost with GST					2,70,88,193	
					In Lakhs (Rs.):	270.88	

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 Certifiate 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.

17/10/2023

17/10/2023

Annexure:5B

TIME SCHEDULE /ACTION PLAN FOR RECONNAISSANCE SURVEY (G4) FOR COPPER IN SITHAPUR BLOCK, MALANJKHAND GRANITOID COMPLEX, BALAGHAT DISTRICT, MADHYA PRADESH.

Sl. No.	Activities	Unit	MONTHS												
			1	2	3	4		5	6	7	8	9	10	11	12
1	Camp Setting	Month													
2	Geological mapping (1:5,000 scale)														
3	Ground Geophysical Survey	Lkm													
4	Geophyscist party days (HQ) for data interpretation & Report														
5	Trenching work	Month													
6	Scout Drilling						Review								
7	Sampling Party days, Surface and Trench Sampling (1 Party)	day													
8	Camp Winding	Month													
9	Laboratory Studies	Nos.													
10	Geologist Party days at HQ (1 Party)	day													
11	Report Writing	Month													
12	Peer Review	Month													

Annexure:6A

17/10/2023

17/10/2023

Estimated cost for Reconnaissance Survey for phosphorite in Bijawar-Imiliya Block district:-Chhatarpur, Madhya Pradesh. Area 95.67 sq.km, Bh:10 nos., Timeline: 12 months, Review: 4 months, Cost Estimate for G4 Exploration - Bijawar Phosphorite Project						
Sr No	Work / Activity	SoC Para	Unit	Charges / Cost (Rs)	Qunatity	Amount (Rs)
1	Large scale Geoloical mapping (1:12500) 95.67 sq.km.		Charges for one Geologist per day			
a	Geologist (Field) per day	1.2a	Field	11000	120	1320000
	Labour for geologist	5.7		494	240	118560
b	Geologist (HQ) per day	1.2b	HQ	9000	60	540000
2	Pitting & Trenching					
	Trench upto 2m depth		cu.m.	3330	200	666000
4	Drilling in medium hard rock, depth up to 300 m (Outsourced)	2.2.1.3a	per m	10100	300	3030000
5	Borehole Pillaring	2.2.7a	per borehole	2000	0	0
7	Sampler	1.5.2	Charges for one sample per day	5100	41	210375
	Labour for sampler	5.7		494	165	81510
8	Trasportation of drll rig & truck associated per drill (To & from Headquarter/Previos drill site)	2.2.8	per km	36	0	0
9	Monthly accommodation charges for drilling camp	2.2.9	Monthly basis	50,000	0	0
10	Drilling camp setting cost	2.2.9a	per drill	250000	0	0
11	Drilling camp winding cost	2.2.9b	per drill	250000	0	0
12	Approach road making for flat terrain	2.2.10a	per km	22020	0	0
13	Laboratory Studies					
a	Chemical analysis of phosphate rock (Wet		per sample	9805	300	2941500
	Check Sample (External:10%)			9805	30	294150
b	Petrological Studies					
(i)	Preparation of standard thin section of rock		per sample	2353	10	23530

17/10/2023

17/10/2023

(ii)	Digital photomicrograph of thin polished section		per sample	280	10	2800
(iii)	Modal analysis of thin section		per sample	3780	0	0
(iv)	Complete Petrographic / Ore Microscopic Study / Mineragraphic report of rock samples		per sample	4232	10	42320
c	Geochronology Studies					
(i)	ICPMS (34 elements		per sample	7731	20	154620
c	Geotechnical Laboratory					
(i)	Specific gravity of rock sample		per sample	1605	0	0
14	Drill Core Preservation		per m	1590	160	254400
15	Land / Crop compensation		per borehole	20000	0	0
	Sub Total					9679765
16	Preparation of Exploration Proposal		One Number (5 Hard Copies) alon with soft copy	2% or 380000, whichever is low	1	193595
17	Geological Report Preparation		Cost per 5 hard copies of report along with soft copy		1	483988
19	Tendering Process (2% or 5 lakhs, whichever is less)					60600
21	Operation Charges					303000
22	Peer Review					30000
			Sub Total			10750949
			GST @ 18%			1935171
			Total Cost			12686119
			Rs. in Lakhs			126.86

Note:	
1	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.

17/10/2023

17/10/2023

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 Certifiate 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.

17/10/2023

17/10/2023

Annexure:6B

Time schedule of Reconnaissance Survey for phosphorite in Bijawar -Imiliya Block district:-Chhatarpur, Madhya Pradesh

Sr No	Activities	Unit	Months												
			1	2	3	4		5	6	7	8	9	10	11	12
1	Camp Mobilization & Setting	Months					Review								
2	Trenching	Months													
3	Core Drilling, Core Logging,	Months													
5	Sample Preparation & Analysis	Months													
6	Geological Report preparation	Months													
7	Report Study, enlisting of various modification & Final Copy of the report	Months													

17/10/2023

17/10/2023

Annexure:7A

Estimated cost for Preliminary Exploration (G-3 Stage) of Ion-Adsorption and laterite hosted supergene enriched REE deposits in Sung Valley Block, East Khasi and West Jaintia Hills Districts, Meghalaya.
Total Area - 7.1 sqkm; Nos. of Borehole -12 ; Completion Time - 15 Months; Review: after 4 months ,Average depth: 20m

S.N	Item of Work	Unit	Rates as per NMET SoC		Rate for exploration 3.35 times higher	Estimated Cost of the Proposal		Remark
			SoC-Item -Sl No.	Rates as per SoC		Qty.	Total Amount (Rs)	
A	GEOLOGICAL WORK							
1	Geological mapping (1:4000) & sampling							
a	Charges for one Geologist per day at HQ	one Geologist per day	1.3	9,000	9,000	30	2,70,000	
b	Charges for two Geologist per day at field (2 Nos)	one Geologist per day	1.3	11,000	36,850	120	44,22,000	
c	Labour (4Nos)	per Labor day	5.7	494	1,655	240	3,97,176	Amount will be reimburse as per the notified rates by the Central Labour Commission or respective State Govt. - whichever is higher

17/10/2023

17/10/2023

e	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	17,085	75	12,81,375	
f	Labour (4 Nos/ sampler)	per Labor day	5.7	494	1,655	300	4,96,470	Amount will be reimburse as per the notified rates by the Central Labour Commission or respective State Govt. - whichever is higher
2	Trenching							
a	Excavation of Pits upto 2m depth	per cu m	2.1.2	3,800	12,730	200	25,46,000	infilling pits
	Sub-Total -A						94,13,021	
B	Petrological samples (Surface &Bh Core Samples)							
i	Preparation of standard thin sections	Nos	4.3.1	2,353	-	20	47,060	
ii	Complete Petrographic/Ore microscopy Study/Mineragraphic	Nos	4.3.4	4,232	-	20	84,640	
iii	Preparation of unmounted polished section of rock	per sample	4.3.3	1,185	-	20	23700	

17/10/2023

17/10/2023

	Sub-Total -B						1,55,400	
C	Digital Photograph of thin polished section							
i	Digital Photographs	Nos	4.3.7	280	-	20	5,600	
	Sub-Total -C						5,600	
D	LABORATORY STUDIES							
1	Chemical Analysis	-	-	-	-	-	-	BH depth more than 100m has been considered for deviation.
a	Samples for REE and Trace using ICP-MS (34 elements) 48 radicals	Nos	4.1.14	7,731	-	500	38,65,500	
b	Samples for Major Oxide by XRF	Nos	14.1.15a	4,200	-	50	2,10,000	
c	Samples for Mineral identification using XRD	per sample	4.5.1	4000	-	50	200000	After Review

17/10/2023

17/10/2023

d	Samples for Mineral mapping using Qemscan (14 BRS and Soil + 20 Regolith profile + 1 Check + 10 Pit + 30 Borehole = 70)	per sample	--	20000	-	0	0	Given rates for EPMA is 8540 per hour and each sample ususally takes 2.5-3 hour in detailed study, In this prices Qemscan around 20000 per sample is better as it can study minerology of thin section with large area, fast mineral identification with lower detection limit and able to employ mineral mapping accurately.
e	Samples for ion chromatography 10 water sample	per sample	4.1.8a	3680		0	0	
	Sub-Total -D						42,75,500	
E	Manpower							
i	i) Project Associate	Nos	5.7	25,740		0	-	Minimum wages as per

17/10/2023

17/10/2023

	Sub-Total E						-	the order F. No. 1/5(2)/2023-LS-II Government of India, Ministry of Labour & Employment, Office of the Chief Labour Commissioner, New Delhi, dated 03/04/2023
F	DRILLING (After Review) (outsourced)							
i	Drilling Hard Rock	m	2.2.1.4a	11,500	38,525	240	92,46,000	20 m average depth, 12 bhs
ii	Drilling Borewell for Groudnwater sample	m	nil	4,000		0	-	
iii	Drilling camp setting cost	per drill	2.2.9a	2,50,000		0	-	
iv	Drilling camp winding cost	per drill	2.2.9b	2,50,000		0	-	
v	Approach road making for rugged-Hilly terrain	per km	2.2.10b	32,000		0	-	Extreme hilly terrain, road will be made maintaining gradient for safe transportation
vi	Transportation of drill rig & truck	per km	2.2.8	36		0	-	

17/10/2023

17/10/2023

	associated per drill							
vii	Monthly accomodation charges for drilling camp	Monthly basis	2.2.9	50,000		0	-	
viii	Drill core preservation	per m	5.3	1,590		100	1,59,000	
ix	Land/crop compensation	per BH	5.6	50,000		0	-	
	Sub Total F						94,05,000	
Total -(A to F)							2,32,54,521	
G	Contingency (F)	Nil	Nil	Nil		Nil		
H	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	5 Hard copies with a soft copy	5.1	2% of the Cost subject to a maximum of Rs. 5 lakh			4,65,090.42	This amount will be reimburse 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.

17/10/2023

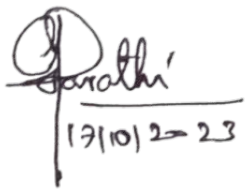
17/10/2023

I	Geological Report Preparation	5 Hard copies with a soft copy	5.2	For the projects having cost exceedingnRs. 150 lakhs but less than Rs. 300 lakh - A minimum of Rs. 7.5 lakhs or 3% of the value of work whichever is more.			7,50,000	This amount will be reimburse after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET by the EA.
J	Tendering cost	One time in case of component of Project work is outsourced	2.3	2% of the Cost subject to a maximum of Rs. 5 lakh			1,84,920	
K	Peer review Charges		As per EC decision				30,000	
L	Operational Charges						8,18,450	92,46,000
M	Total Estimated Cost without GST						2,55,02,981	

17/10/2023

17/10/2023

N	Provision for GST @ 18%					45,90,537	GST will be reimbursed as per actual and as per the applicable notified rate
O	Total Estimated Cost with GST					3,00,93,518	
					Rs. in Lakhs	300.94	
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 Certifiate 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.						





Annexure:7B

Time Schedule /Action Plan For Preliminary Exploration (G-3 Stage) of Ion-Adsorption and laterite hosted supergene enriched REE deposits in Sung Valley Block, East Khasi and West Jaintia Hills Districts, Meghalaya.										
Sl. No.	Activities	MONTHS								
		01-02	03-04		05-06	07-08	09-10	11-12	13-14	15
1	Geologist Party days (1 Party)									
	Sampling									
2	Laboratory Studies			Review						
3	Geologist Party days (1 Party), HQ									
4	Core Drilling									
5	Trenching									
6	Report Writing									

17/10/2023

17/10/2023

Annexure:8A

Estimated Cost for Preliminary Exploration (G3 level of exploration) for Iron Ore in Khandadhar Sub Block - E, Sundargarh district, Odisha
[Block Area: 8.797 sq.km, Nos. of Borehole: 51 Nos., Borehole Depth Range: 70 mtr, Time Schedule: 12 Months, review: after 4 months]

Sl No.	Item of work	Unit	Rate as per NMET SOC 2020-21		Estimated cost of proposal		Remarks
			SOC item Sl. No.	Rate as per SOC in Rs.	Quantum of Work	Total Amount (in Rs.)	
A	Geological Work (Scale:1:4000)						
	Charges for one Geologist per day at Field	Per day	1.3	11,000	270	29,70,000.00	
	Charges for one Geologist per day at HQ	Per day	1.3	9,000	60	5,40,000.00	
	Labour (2 Nosfor geologist)	Per day	5.7	494	540	2,66,760.00	Amount will be reimbursed as per the notified rates by the Central Labour Commission rates or respective State Govt. whichever is higher.
	Charges for one Surveyor per day (Topography	Per day	1.6.1a	8,300	120	9,96,000.00	31 cardinal points+51bhs

17/10/2023

17/10/2023

	Survey)						
	Labour (4 Nos for surveyor)	Per day	5.7	494	480	2,37,120.00	Amount will be reimbursed as per the notified rates by the Central Labour Commission rates or respective State Govt. whichever is higher.
	Charges for One Sampler per day	Per day	1.5.2	5,100	135	6,88,500.00	
	Labour (4 Nos for sampler)	Per day	5.7	494	540	2,66,760.00	Amount will be reimbursed as per the notified rates by the Central Labour Commission rates or respective State Govt. whichever is higher. (dt. 26/09/2023)
	Demarcation of lease boundary, Fixation of Borehole and determination of co-ordinates & Reduced Level (RL) of the boreholes by DGPS	Per point of observation	1.6.2	19,200	77	14,78,400.00	26 Boundary Pillar+51 bhs (as per actual)
					Sub - Total - A	74,43,540.00	

17/10/2023

17/10/2023

B	Drilling Work (Out Sourced)						
	Drilling - Hard rock	Per m	2.2.1.4a	11,500	3570	4,10,55,000.00	Reimbursement of Oursource component will be made as per Para 3 of NMET-SOC
	Land/Crop compensation	Per Borehole	5.6	20,000	0	0.00	As per actuals as certified by local authorities subject to a maximum of 20,000 per bore hole
	Drill core preservation	per m	5.3	1,590	1785	28,38,150.00	
					Sub- Total - B	4,38,93,150.00	
C	Laboratory Studies (Out Source)						
i	Chemical Analysis						
	Primary Samples (Surface Samples + Core Samples + Check Samples)						
	Chemical analysis for seven radicals (Fe%, Al2O3%, SiO2%, P%, S%, Mn% Insolubles& LOI)	per Nos.	4.1.15a	4,200	2550	1,07,10,000.00	50 nos. Surface samples, 2500 nos. Core samples (70%),

17/10/2023

17/10/2023

	Chemical analysis for seven radicals (Fe%, Al2O3%, SiO2%, P%, S%, Mn% Insolubles& LOI) check sample	per Nos.	4.1.15a	4,200	255	10,71,000.00	external check samples (10%)
	Composite samples						
	Chemical analysis for seven radicals (Fe%, SiO2%, Al2O3%, P%, S%, Mn%, Insolubles& LOI)	per Nos.	4.1.15a	4,200	0	0.00	
ii	Analysis of rock sample for determination of a package by 34 elements by ICPMS	per Nos.	4.1.14	7,731	5	38,655.00	
iii	Petrological / Physical Studies						
	Preparation of standard thin section of rock	per Nos.	4.3.1	2,353	10	23,530.00	
	Complete Petrographic Studies	per Nos.	4.3.4	4,232	10	42,320.00	

17/10/2023

17/10/2023

	Preparation of polished thin section of rock/ wafer	per Nos.	4.3.2	1,549	10	15,490.00	
	Complete Minerographic Studies	per Nos.	4.3.4	4,232	10	42,320.00	
iv	XRD analysis	per Nos.	4.5.1	4,000	0	0.00	
v	Bulk Density Determination	per Nos.	4.10	3,540	10	35,400.00	
					Sub - Total - C	1,19,78,715.00	
D					Sub - Total - D (A+B+C)	6,33,15,405.00	633.15405
E	Preparation of Exploration Proposal	One Number (5 Hard copies) along with soft copy	5.1	2% of approved project cost or 5 lakh whichever is lower		5,00,000.00	

17/10/2023

17/10/2023

F	Geological Report Preparation	Cost per 5 Hard copies of report along with soft copy	5.2	Project exceeding ₹300 lakh: Minimum of ₹9 Lakh or 3% of the work which ever is more subject to maximum of ₹20 Lakh and ₹10,000/ each additional copy.		18,99,462.15	
G	Tendering Process Cost	One time, in case of outsourced component	2.3	2% of the approved project cost or 5 Lakh whichever is lower will be paid one time to EA		5,00,000.00	5,30,33,715.00
H	Operational Charges		6.0 iii	In case of total outsourced cost more than ₹ 1 Crore		15,00,000.00	Reimbursement of cost in case of outsource components of Project Work

17/10/2023

17/10/2023

I	Peer Review		As per EC decision			30,000.00	
J					Total Estimated cost without GST (18%) (D+E+F+G+H+I)	6,77,44,867.15	
K					GST (18%)	1,21,94,076.09	
L					Grand Total (J+K)	7,99,38,943.24	
					Rs. in lacs	799.39	

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 Certifiate 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.

17/10/2023

17/10/2023

Annexure:8B

Time Schedule for Preliminary Exploration of Khandadhar Sub Block - E (8.797 Sq.Km) in Sundargarh district																
Sl. No.	Activities	Unit	Months													
			1	2	3	4	Review	5	6	7	8	9	10	11	12
1	Geological Mapping	Sq.Km													
2	Geologist party days	day													
3	Survey party days	day													
4	Surface Drilling	m													
5	Sampling party days/ core sampling	day													
6	Laboratory Studies	Nos.													
7	Geologist party days (HQ)	day													
8	Geological Report Writing and Peer review	day													

17/10/2023

17/10/2023

Cost sheet for G-3 level exploration for limestone in proposed Malkhed-1 and 2 block, District- Gulbarga (Kalaburagi), Karnataka							
Total Area - 18.01 Sq Km; Nos. of Borehole - 10 ; Borehole depth range - 50m (BGL); Compl. Time - 10 Months							
			Rates as per NMET SoC 2020-21		Additional Estimated Cost of the Proposal		
S.N	Item of Work	Unit	SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	Remarks
A	GEOLOGICAL WORK						
1	Mapping, Borhole logging & Sampling & Report writing						
d	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	19	96,900	
e	Labours for sampling work (4 Nos)	day	5.7	494	76	37,544	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
2	Survey (on 1:4000 Scale)						
	Sub-Total A					1,34,444	
B	DRILLING						
	Sub Total B					-	
C	LABORATORY STUDIES						
1	Chemical Analysis						

17/10/2023

17/10/2023

i)	Primary samples						
	a. For 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5 and LOI by XRF	Nos	4.1.15a	4,200	151	6,34,200	
ii)	Check samples Internal (5%) and External(10%)						
	a. For 8 radicals i.e. CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3 and LOI	Nos	4.1.15a	4,200	23	96,600	As informed, this project has been apporved in the earlier TCC, that time Check samples Internal (5%) and External(10%) were allowed.
iii)	Composite Samples						
iv)	Petrological samples (Bh Core Samples)						
v)	Specific Gravity Determination						
	Total - C					7,30,800	
D	Sub Total (A to C)					8,65,244	
E	Geological Report Preparation		5.2			-	
F	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. 3.8 Lakhs whichever is lower		-	

17/10/2023

17/10/2023

G	Peer review Charges		As per EC decision			-	
H	Total Estimated Cost without GST					8,63,952	
I	Provision for GST (18% of H)	%				1,55,511	GST will be reimburse as per actual and as per notified prescribed rate
J	Total Estimated Cost with GST					10,19,463	Total Approved Cost Rs. 147,76,819
					Rs. In Lakhs	*10.19*	147.779 Lakhs
Note - 1. The additional sampling resulted due the thicker and continuouscolumn of limestone ~ 47m of 50m depth borehole and 145m depth in the stratigraphic borehole of 150m depth. The addition al cost of 10.19 Lakhs is 6.90% of the total approved cost (147.77) lakhs of the project.							
2	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.						
3	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.						
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.						

17/10/2023

17/10/2023

Cost sheet for G-3 level exploration for limestone in proposed Kirnagi 1 and 2 block, District- Gulbarga (Kalaburagi) , Karnataka							
Total Area - 12.09 Sq Km; Nos. of Borehole - 10 ; Borehole depth range - 45m (BGL); Compl. Time - 10 Months							
			Rates as per NMET SoC 2020-21		Additional Estimated Cost of the Proposal		
S.N	Item of Work	Unit	SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	Remarks
A	GEOLOGICAL WORK						
1	Mapping, Borhole logging & Sampling & Report writing						
d	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	3	15,300	
e	Labours for sampling work (4 Nos)	day	5.7	494	12	5,928	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
2	Survey (on 1:4000 Scale)						
	Sub-Total A					21,228	
B	DRILLING						
	Sub Total B					0	
C	LABORATORY STUDIES						
1	Chemical Analysis						
i)	Primary samples						

17/10/2023

17/10/2023

	a. For 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5 and LOI by XRF	Nos	4.1.15a	4,200	22	92,400	Approved: 400 Additional: 22 Revised: 422
ii)	Check samples Internal (5%) and External(10%)						
	a. For 8 radicals i.e. CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3 and LOI	Nos	4.1.15a	4,200	3	12,600	Approved: 60 Additional: 3 Revised: 63
iii)	Composite Samples						
iv)	Petrological samples (Bh Core Samples)						
v)	Specific Gravity Determination						
	Total - C					1,05,000	
D	Sub Total (A to C)					1,26,228	
E	Geological Report Preparation		5.2			-	
F	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. 3.8 Lakhs whichever is lower		-	
G	Peer review Charges		As per EC decision			-	
H	Total Estimated Cost without GST					1,26,228	

17/10/2023

17/10/2023

I	Provision for GST (18% of H)	%				22,721	GST will be reimburse as per actual and as per notified prescribed rate
J	Total Estimated Cost with GST					1,48,949	Total Approved Cost Rs. 127,57,798
					or Say Rs. In Lakhs	*1.49*	127.58 Lakhs
Note - 1. The additional sampling resulted due the thicker and continuouscolumn of limestone ~ 47m of 50m depth borehole and 145m depth in the stratigraphic borehole of 150m depth. The addition al cost of 10.19 Lakhs is 6.90% of the total approved cost (147.77) lakhs of the project.							
2	Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.						
3	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.						
4	Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.						

17/10/2023

17/10/2023