Ministry of Mines
National Mineral Exploration Trust
Minutes of 3rd meeting of Technical-cum-Cost Committee -II (TCC-II)
held on 5th and 6th December, 2024

The 3rd meeting of Technical-cum-Cost Committee – II (TCC-II) of National Mineral Exploration Trust (NMET) was held through video conferencing under the Chairmanship of Shri Pradeep Singh, Deputy Director General (DDG), Geological Survey of India (GSI) and Chairman, TCC-II, NMET on 5th and 6th December, 2024.

Members of TCC-II, NMET and representatives from CGM Gujarat, DGM Nagaland, DGM Mizoram, DGM Uttar Pradesh, DGM Tripura, DGM Assam, DMR Meghalaya, DMG Jharkhand, Mineral Exploration and Consultancy Limited (MECL), Jharkhand Exploration and Mining Corporation Limited (JEMCL), Engeotech Consultant, Maheshwari Mining Pvt. Ltd. (MMPL), Geo Marine Solutions Pvt. Ltd., Geovale Services Private Limited, GeoExpOre Pvt. Ltd., Gems Projects Private Limited, Kartikay Exploration and Mining Services Private Limited, Maheshwari Mining Pvt. Ltd. (MMPL) and Gemcokati Exp. Pvt. Ltd etc. have attended the meeting through video conferencing mode.
The list of participants is at Annexure-1.

Shri Pradeep Singh, DDG, GSI and Chairman, TCC-II, NMET offered a warm welcome to all TCC-II members and participants representing various Notified Exploration Agencies (NEAs) and Notified Private Exploration Agencies (NPEAs).

Agenda 3.1: Technical Evaluation of New Project Proposals

Agenda 3.1.1 Reconnaissance (G-4 Stage) for Gold in Jojobera-Ulihurang Block, Arki Block, Khunti District, Jharkhand.
[Implementing Agency: Jharkhand Exploration and Mining Corporation Limited. (JEMCL)]

a) The proposed block of 10.61 sq. km. area, falls in Survey of India OSM no. F45H9 & toposheet no. 73F/9, and forms the part of the Khunti District, Jharkhand. The block is completely covered by forest area.
b) JEMCL informed that exploration for gold by GSI has been carried out in Pundidiri - Puntru block which is situated at about 7.8 km from the proposed area. As per analytical data of collected surface samples (including those from small old pits) from the Pundidiri block total gold (Au) contents range from 0.05 ppm to 1.84 ppm (source: geological memorandum of GSI). In addition, gold mines such as Lawa Gold Mines (ex-lessee M/s. Manmohan Industries Pvt. Ltd.) and Parasi Gold Block are situated at about 50 km and 13 km respectively from the proposed area.
c) JEMCL informed that the geological set-up and the previous analytical data indicate that the proposed area can be prospective in terms of gold deposits.
d) The committee did not recommend topographic survey in a G4 stage exploration and reduced the trenching quantum to 200 m^3.
e) The committee reduced the drilling quantum to 2 BH with total 400 m drilling.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance (G4 Stage) for Gold in Jojobera-Ulihurang Block, Arki Block, Khunti District, Jharkhand" with an estimated cost of ₹113 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 2A & 2B. The item will be reviewed after 4 months.

Agenda 3.1.2 Preliminary Exploration (G-3 Stage) for REE and Associated Minerals in Umprikhola Block, Kamrup District, Assam.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) The proposed block of 4.80 sq. km. area, falls in Survey of India toposheet no. 78N/16, in parts of Kamrup district of Assam State.
b) MECL informed that, DGM, Assam has given consent for this proposed block.
c) MECL informed that during the G-4 stage exploration of REE and associated mineralization by GSI in the Byrnihat area, three potential zones for further investigation has been identified within which Umpri Khola area, i.e., mineralized zone 3 (1.1 sq km area) has been targeted for present G-3 level of exploration.
d) There is total 18 numbers of BRS samples, 2 pits, 3 trenches and 3 numbers of boreholes were drilled during the G-4 investigation within the presently proposed Umri Khola block. It has been observed that the ΣREE value varies from 24.49 ppm to 710.30 ppm where as there are six numbers of samples show ΣREE value more than 500 ppm. All the samples drawn from the pit and trenches also show ΣREE value more than 500 ppm with the highest 1537.70 ppm in Pit No-2. The diorite intersected in the borehole MEGBRK-03 also indicates ΣREE value 1134.168 ppm.
e) The committee advised that BRS samples should be collected in grid pattern and drilling will be subject to getting good values from surface sample of pegmatite and approval from TCC-II, NMET.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Preliminary Exploration (G-3 Stage) for REE and Associated Minerals in Umprikhola Block, Kamrup District, Assam" with an estimated cost of ₹882.01 Lakh (including GST) within the time schedule of 15 months and submission of the report as per Annexures 3A & 3B. The item will be reviewed after 8 months. After review, drilling will start with approval of the committee.

Agenda 3.1.3 Reconnaissance Survey (G-4 Stage) for PGE, Gold & associated minerals in Thapna-Karhiya Block, District Singrauli, Madhya Pradesh.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) The exploration work (G4) is proposed in 124 sq. km. area which falls in Survey of India toposheet no. 63L/07, and forms the part of Singrauli district, Madhya Pradesh. The ridges are occupied by forest in the proposed block.

b) GSI has done large scale mapping on 1:12,500 scale in this area and no promising zone delineated by GSI. Also, there is a slight overlap of the proposed block with the previously explored area by GSI. The block has not been explored for PGE.
c) GSI has submitted GM to the state government for Ni Block in the adjacent area.
d) The committee advised that the shape of the block has to be modified and may be resubmitted in the next TCC-II, meeting.

Recommendation TCC-II:

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

Agenda 3.1.4 Reconnaissance Survey (G-4 Stage) for Tungsten & associated minerals in Hanspur Block, District Jhansi, Uttar Pradesh.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) The proposed block of 22.37 sq. km. area falls partly in Survey of India Toposheet nos. 54K/14, 54K/15, 54O/03 & 54O/04. Fairly dense mixed jungle (mainly bamboo) is present in the south-western part of the block and the remaining area is occupied by private and government land.
b) During reconnaissance survey, all quartz veins were mapped in this area on 1:25000/50000 scale and around 201 samples were collected by GSI, which have given anomalous values for tungsten (i.e >300 ppm).
c) In the proposed Hanspur block, a total 13 no of BRS samples were collected by GSI (2004) whose Tungsten analytical values ranges between minimum 337 ppm to maximum 762 ppm. GSI, recommended for detailed tungsten investigation in this area for anomalous values of tungsten.
d) The committee advised that in Phase-I, geological mapping on 1:12,500 scale with collection of surface samples, Pitting & Trenching to be done. In Phase-II, drilling is subject to review by TCC-II, NMET.
e) The committee also advised for UV lamp survey in the proposed block. Additionally, Mo and Cu may be checked in the block.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G4 Stage) for Copper, Molybdenum, Tungsten & associated minerals in Hanspur Block, District Jhansi, Uttar Pradesh" with an estimated cost of ₹161.97 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 4A & 4B. The item will be reviewed after 4 months. After review, drilling will start with the approval of the committee.

Agenda 3.1.5 Reconnaissance Survey (G-4 Stage) for Glauconite in Ambara-Maru Block, District- Kachchh, Gujarat
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) The proposed block of 94.25 sq. km. area, falls in Survey of India toposheet no. 41E/02 & 41E/03, which is part of Kachchh district, Gujarat. The block area is partially under forest area.
b) MECL informed that the present reconnaissance survey in Ambara-Maru Block has been proposed in the SE of GSI's G-4 block (FSP 2014-15) for potash with report titled "Detailed Investigation for Potash in Glauconite Bearing Shale and Sandstone around Guneri Village of Kachchh District, Gujarat", where the glauconite bearing shale and sandstone of Katrol and Bhuj Formations of Kachchh basin is found to be present.
c) NGCM data suggests the presence of Glauconite in the proposed block. A total of 23 stream sediment samples of NGCM falls within the proposed block. Values of K2O vary between 1.21% - 3.06%. A similar range of values is present in the adjacent north of the proposed block where GSI block for Glauconitic Sandstone is present.
d) MECL collected the 03 nos of samples from the block and the K2O values of the samples are 2.85%, 4.04% and 4.72%.
e) The committee advised checking the REE in the proposed block and reducing the trenching and geochemical sampling.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G-4 Stage) for Glauconite, Phosphorite & REE in Ambara-Maru Block, District-Kachchh, Gujarat" with an estimated cost of ₹229.81 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 5A & 5B. The item will be reviewed after 4 months. After review drilling will start with approval of the committee.

Agenda 3.1.6 Reconnaissance Survey (G-4 Stage) for Limestone in and around Nanhwara Kymore area, Katni District, Madhya Pradesh (Proposed Area 22.52 km2) [Implementing Agency: Engeotech Consultant]

a) The proposed block of 22.52 sq. km. area, falls in Survey of India toposheet no. 63D/12 & 64A/9, is a part of Katni district, Madhya Pradesh.
b) In Katni and Kymore area occurrences and mining of Limestone have been known since 1860. A limestone band starts from Katni, via, Jukehi, Kymore, Sadera, Piprahat, Bhadanpur, and Majhgawan in M.P. This belt is continued in Katni, Satna and Sidhi districts of M.P. and is continued in Sonebhadra district of U.P. and it extends up to Rohtas district of Bihar. More than 200 Nos. of Captive as well Non-Captive Mining leases are being operated in this Limestone belt.
c) In-principle approval was given for the proposed block in 1st TCC-II, meeting held on 26 & 27th September, 2024.
d) The committee advised the agency that in Phase -I, mapping & survey work needs to be carried out.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G-4 Stage) for Limestone in and around Nanhwara Kymore area, Katni District, Madhya Pradesh (Proposed Area 22.52 km2)" with an estimated cost of ₹70.15 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 6A & 6B. The item will be reviewed after 3 months. After review drilling will start with approval of the committee.

Agenda 3.1.7 Reconnaissance Survey (G-4 Stage) for graphite in Korapara, Bankura District, West Bengal.
[Implementing Agency: Maheshwari Mining Pvt. Ltd. (MMPL)]

a) The proposed block of 16.25 sq. km. area, falls in Survey of India toposheet nos. 73J/9, which is a part of Bankura district, West Bengal.
b) MMPL informed that Graphite bodies of economic importance occur in different localities of North Singhbhum Mobile Belt (NSMB), which is composed of calc-granulite, mica schists and phyllites along with metabasics. The graphite zones are found to be associated with the mica schists and phyllites.
c) Analyses of a few grab samples collected during reconnaissance by the geologists of Maheshwari Mining Private indicate FC content varying from Ltd. 2.01 to 6.93%.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G-4 Stage) for graphite in Korapara, Bankura District, West Bengal" with an estimated cost of ₹122.34 Lakh (including GST) within the time schedule of 10 months and submission of the report as per Annexures 7A & 7B. The item will be reviewed after 5 months.

Agenda 3.1.8 Preliminary Exploration (G-3 Stage) for Aluminous Laterite/Bauxite and Gallium in Sandhan Block, Kachchh District, Gujarat.
[Implementing Agency: Geo Marine Solutions Pvt. Ltd.]

a) The exploration block of 9.85 sq. km. area, falls in Survey of India toposheet no. 41E/4 & 41A/16, which is part of Kachchh district, Gujarat. Total proposed area is private land.
b) Geo Marine Solutions Pvt. Ltd. informed that A reconnaissance field work was conducted in Sandhan Block by Geo Marine Solutions Pvt Ltd in 30-31 October 2024. It can be seen from the map that the Clay and Marl of Sandhan Formation and Limestone of Miliolite Formation are present in the block area.
c) NOC issued by CGM Gujarat to Geo Marine Solutions Private Limited for taking up the G3 level exploration in Sandhan Block.
d) In-principle approval was given for the proposed block in 2nd TCC-II, meeting held on 22 & 23rd October 2024.
e) The committee advised to add analysis of Nb, Ta, Y and Sc in the samples.
f) The committee advised that in Phase-I, drilling will be done in 800m x 800m spacing and Phase-II will be decided after review of Phase-I results.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Preliminary Exploration (G-3 Stage) for Bauxite, Gallium, Vanadium, REE in Sandhan Block, Kachchh District, Gujarat" with an estimated cost of ₹203.14 Lakh (including GST) within the time schedule of 14 months and submission of the report as per Annexures 8A & 8B. The item will be reviewed after 5 months.

Agenda 3.1.9 Preliminary Exploration (G-3 Stage) for Bauxite and Gallium in Naredi Bauxite Block, Kachchh District, Gujarat.
[Implementing Agency: Geo Marine Solutions Pvt. Ltd.]

a) The proposed area (3.92 sq. km.) falls in Survey of India toposheet nos. 41E/4, which is part of Kachchh district, Gujarat. Proposed block area is private land.
b) The aluminous Laterite sample from the GMDC quarry analysed 35.5% Al2O3; Gallium was 47ppm. The values of Gallium (Critical Mineral) are above the industry cut-off.
c) NOC issued by CGM, Gujarat to Geo Marine Solutions Pvt Ltd, to undertake exploration in the block
d) In-principle approval was given for the proposed block in 2nd TCC-II, meeting held on 22 & 23rd October 2024.
e) The committee advised that in Phase-I, drilling will be done in 400m x 400m spacing and Phase-II will be decided after review of Phase-I results.
f) The committee also advised analysis for total silica and reactive silica.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Preliminary Exploration (G-3 Stage) for Bauxite, Gallium, Vanadium & REE minerals in Naredi Bauxite Block, Kachchh District, Gujarat" with an estimated cost of ₹233.33 Lakh (including GST) within the time schedule of 14 months and submission of the report as per Annexures 9A & 9B. The item will be reviewed after 5 months.

Agenda 3.1.10 Reconnaissance Survey (G-4 stage) for Lithium and associated minerals in Great Rann of Kachchh, Gujarat.
[Implementing Agency: CGM Gujarat]

a) The proposed block of 45 sq. km. area falls in Survey of India toposheet no. 41M/01, in parts of Kachchh, Gujarat.
b) As per GSI comments there is no overlap of area and no ongoing projects in the proposed block.
c) Surface Distribution of Geochemical data shows promising results for Li in soil variability (NGCM data value for Lithium: 8.55 to 90.47 ppm)
d) The committee advised that CGM, Gujarat may conduct some exploration in the proposed block to prove the potentiality of the Block. Collection of 40 samples in grid pattern was suggested by the committee.
e) The committee suggested AAS & ICPMS analysis for limited samples.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G-4 stage) for establishing the occurrence of Lithium and associated minerals in Great Rann of Kachchh, Gujarat" with an estimated cost of ₹30.93 Lakh (including GST) within the time schedule of 6 months and submission of the report as per Annexures 10A & 10B.

Agenda 3.1.11 Preliminary exploration (G-3 Stage) for limestone in Khongkha Block 1 and Khongkha Block 2, Kiphire District, Nagaland.
[Implementing Agency: DGM Nagaland]

a) DGM, Nagaland informed that the mineral potential of these deposit areas has been assessed by various workers of the Directorate of Geology & Mining, Nagaland (DGM) and Geological Survey of India (GSI). However, all geological activities remain in the G4 level only, except at Wazehoand Longpotrop, Mimi-Pyakatsublocks of Mimi limestone deposit, where exploratory drilling and resource estimation has been carried out by DGM in the former two blocks and MECL-DGM collaboration in the latter.
b) The detailed limestone exploration of Mimi-Pyakatsu block of Mimi limestone deposit, Kiphire district, 2014 (MECL-DGM collaboration under promotional funding) has reported the overall potential of the block as 167.77 million tonnes under 332 & 333 categories of UNFC over an area of 5 sq km.
c) The Khongka limestone block is located just 18 km south of the Mimi limestone deposit. The Khongka in addition to the Mimi limestone deposit is capable of sustaining mega cement plant set up in the vicinity of the deposit area for several decades. The Khongka limestone contains CaO content of 31.22-55.86%, MgO 0.06-1.96% and SiO2 0.13-7.39%.
d) The committee suggested that results from the GSI report (FS 2022-23) may be included in the proposal.

Recommendation TCC-II:

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

Agenda 3.1.12 Preliminary exploration (G-3 Stage) for limestone in Mimi Kheti Block A and Mimi Kheti Block B, Kiphire District, Nagaland.
[Implementing Agency: DGM Nagaland]

a) The Mimi Kheti block A and Mimi Kheti block B both covering approximately 1.8 sq. km each fall under Survey of India Toposheet No.83 K/14.
b) DGM, Nagaland informed that the preliminary investigation carried out in Mimi-Pyakatsu Block of Mimi- Limestone Belt, Kiphire District, Nagaland during the field season of 1972-73 and 1973-74, a total of six limestone bands inner layered with phyllites and quartzites were encountered. It occurs over a distance of 3.1 km with uniform quality. Of the total inferred mineral resources (333) of 111.07 million tonnes

in the Mimi-Pyakatsu Block, the main limestone band alone accounts for 66 million tonnes.

c) The earlier workers have carried out detailed geological mapping on 1:4000 scale covering 4.5 sq.km. A total meterage of 531.50m was drilled in 5 exploratory boreholes in Mimi-Pyakatsu block over a strike length of 1.37 km by DGM, Nagaland. The limestone band occur all along 4.5 km southwest of Turati nala up to Pyakatsu peak and beyond outcrop samples were collected and analysed which reveals the persistence of quality limestone.

d) After drilling 531.5m in 9 boreholes out of approved 1000m target in 9 boreholes DGM, Nagaland had expressed their inability to drill the remaining four boreholes due to limited accessibility and challenging terrain conditions. Subsequently, the matter was discussed in the 27th SCPP meeting held in MOM, New Delhi on 4th September 2013 and decided that the Director (Technical), MECL would visit the exploration block to find out the possibility of continuation of work. The official visited the block and after discussion with the DGM officials, it was decided that surface outcrop samples may be collected from the locations of non-drilled borehole points for logical conclusions. It was recommended that the investigations carried out in this block were on a wider grid and the resources have been placed under 332 and 333 categories of UNFC and further necessary to explore the block sufficiently with optimum pitting and drilling to assess the limestone potential.

e) The committee suggested that results from GSI report (FS 2022-23) may be included in the proposal.

Recommendation TCC-II:

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

Agenda 3.2 New Procurement Project

Agenda 3.2.1 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities. [Implementing Agency: DGM Nagaland]

a) DGM Nagaland presented the proposal **to procure Machinery Laboratory Equipment/instruments etc with a cost of 107.97 Lakhs.**

b) The committee compared the cost of the proposed instruments with the rates from GSI & IBM. In view of the same the committee recommended the following machinery/ instruments and finalised the cost of these instruments for DGM, Nagaland:

c)

S.no	Item	Qty.	Cost (₹) including GST
1	Air Oven	1	1,50,000.00
2	Bomb Calorimeter	1	14,00,000.00
3	Proximate Analyser	1	36,58,000.00

4	Fusion Bead Machine	1	25,00,000.00
Total (inclusive of GST)			**77,08,000.00**

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities" with an estimated cost of ₹77.08 Lakh (including GST) within the time schedule of 12 months

Agenda 3.2.2 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.
[Implementing Agency: DGM Mizoram]

a) DGM Mizoram presented the proposal for the purchase of 2 new DGPS (Trimble DGPSR12i) with a total cost of ₹59 Lakhs.
b) The committee opined that the cost of the instrument is on the higher end and advised DGM Mizoram to get quotations for DGPS from 2 vendors with similar specifications. The committee also suggested taking the comments from GSI for a comparative market price of DGPS.

Recommendation TCC-II:

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

Agenda 3.3 Review of Ongoing Projects/ Completed Project & Timeline Extension

Agenda 3.3.1 Preliminary Exploration (G-3 Stage) for Limestone in Chhasra Block, Kachchh District, Gujarat
[Implementing Agency: CGM Gujarat]

a) CGM Gujarat informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 28th February, 2024 with timeline of 06 months (up to 27.08.2024) and the approved cost was INR 1,74,04,577/-.
b) CGM Gujarat presented the progress of the project work and asked for timeline extension of 6 months up to 28th February 2025.
c) The committee was apprised that implementation of the "Code of Conduct" during the Parliamentary election, heavy rain, water logging and non-approachable condition at drilling site contributed to the delay in project implementation.
a) The committee advised for analysis of clay from the exploration block.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for 6-month extension of timeline up to 28th February 2025 for report submission. The project will be reviewed in January 2025 with GR.

Agenda 3.3.2 Preliminary Exploration (G-3 Stage) for Limestone in Vayor Block, Kachchh District, Gujarat.

[Implementing Agency: CGM Gujarat]

a) CGM Gujarat informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 28th February, 2024 with timeline of 06 months (up to 27.08.2024) and the approved cost was INR 94,28,274/-.
b) CGM Gujarat presented the progress of the project work and requested for timeline extension of 6 months up to 28th February 2025.The committee was apprised that implementation of the "Code of Conduct" during the Parliamentary election, heavy rain, water logging and non-approachable conditions at drilling site contributed to the delay in project implementation.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for 6-month extension of timeline up to 28th February 2025 for report submission. The project will be reviewed in January 2025 with GR.

Agenda 3.3.3 Preliminary Exploration (G-3 Stage) for Limestone in Jadva Block, Kachchh District, Gujarat.

[Implementing Agency: CGM Gujarat]

a) CGM Gujarat informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 28th February, 2024 with timeline of 06 months (up to 27.08.2024) and the approved cost was INR 60,97,512/-.
b) CGM Gujarat presented the progress of the project work and asked for timeline extension of 6 months up to 28th February 2025.
c) The committee was apprised that implementation of the "Code of Conduct" during the Parliamentary election, heavy rain, water logging and non-approachable condition at drilling site contributed to the delay in project implementation.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for a 6-month extension of timeline up to 28th February 2025 for report submission. The project will be reviewed in January 2025 with GR.

Agenda 3.3.4 Preliminary Exploration (G-3 stage) for Bauxite, Titanium and associated minerals in Siskari Pat Block, Lohardaga District, Jharkhand.

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

a) CGM Gujarat informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 27th February, 2024 with timeline of 06 months (up to 26.08.2024) and approved cost was INR 74,20,449/-.
b) MECL presented the progress of the project work and informed that GR is prepared. Peer review of the GR has been done & comments/suggestions of Peer Review have been attended.
c) MECL informed that timeline extension for the project was given up to 30 November 2024.

d) The committee advised for additional analysis for Gallium and Vanadium from the exploration block. The committee also suggested that net resource with 20% correction has to be given in GR.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for extension of timeline up to 31st December, 2024 for report submission and Chemical analysis of additional samples for Gallium and Vanadium with a total estimated total cost of the project at ₹75.97 Lakh (including GST).

Agenda 3.3.5 Preliminary Exploration (G-3 Stage) for Potash in Dhankowali Dhani (North) Block, Hanumangarh District, Rajasthan.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) MECL informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 12th December, 2023 with timeline of 12 months and approved cost was INR 24,06,16,207/-.
b) MECL presented the progress of the project work and asked for timeline extension of 3 months up to 11th March 2025.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for extension of timeline up to 11th March 2025 for report submission.

Agenda 3.3.6 Preliminary Exploration (G-3 Stage) for Iron and Manganese in Silpunji Block, West Singhbhum District, Jharkhand.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) MECL informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 27th February, 2024 with timeline of 10 months (up to 26.12.2024) and approved cost was INR 1,62,42,997/-.
b) MECL presented the progress of the project work and informed that Forest Clearance is awaited for this exploration block.

Recommendation TCC-II:

The committee deferred the proposal till the forest clearance is obtained by MECL.

Agenda 3.3.7 Preliminary Exploration (G-3 Stage) for copper and associated minerals in Sitapur Block, Balaghat District, Madhya Pradesh.
[Implementing Agency: Mineral Exploration and Consultancy Limited (MECL)]

a) MECL informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 12th December, 2023 with timeline of 12 months and approved cost was INR 2,70,88,193/-.
b) MECL presented the progress of the project work and asked for timeline extension of 6 months up to 11th June 2025.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for extension of timeline up to 11th June 2025 for report submission.

Agenda 3.3.8 Reconnaissance Survey (G-4 stage) for Gold, Copper, Graphite and associated minerals in Jamtola-Khandapar Block, Balaghat District, Madhya Pradesh.

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

a) MECL informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 12th December, 2023 with timeline of 12 months and approved cost was INR 2,16,29,787/-.
b) MECL presented the progress of the project work and asked for 6 months timeline extension up to 11 June 2025.
c) MECL informed that project was delayed due to delay in receipt of forest permission. Forest permission for ground geophysical work was obtained in the last week of Nov, 2024 and work is expected to be completed by the end of Dec, 2024. Based on the outcome of the ground geophysical survey further work (scout drilling and associated laboratory studies) shall be taken up in the area.
d) Keeping in view this situation, the ongoing geophysical work, proposed scout drilling and allied field activities, associated laboratory studies and chemical analysis are expected to be completed by the end of April, 2025 tentatively and GR submission by June, 2025

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for extension of timeline up to 30th June 2025 for report submission.

Agenda 3.3.9 Reconnaissance Survey (G-4 stage) for Base metal in Thal-Didihat–Askot area, Pithoragarh District, Uttarakhand.

[Implementing Agency: Geovale Services Private Limited]

a) Geovale Services Private Limited informed that the project was approved in the 34th EC Meeting held on 13th March, 2024. The sanction order was issued on 03rd June, 2024 with timeline of 12 months (up to 11.03.2025) and approved cost was INR 1,37,47,000/- The cost was revised to INR1,87,08,316/- in the 36th EC of NMET held on29th July 2024.
b) Geovale Services Private Limited informed that the proposed quantum of work has been achieved and four (4) target zones were identified.
a) Geovale Services Private Limited proposed a modified NQT. The committee was requested to approve in-house drilling in the project instead of the earlier approved outsourced drilling.

c) The committee advised that out of four (4) targeted zones, Zone1 Askot Extension and Zone2 Askot South should be clubbed and taken for further exploration.
d) The committee also suggested groove/channel sampling, Heavy Mineral sampling by panning. The committee agreed to the revised cost for the project.

Recommendation TCC-II:

The committee recommends the proposal for revised cost for the approval of EC for "Reconnaissance Survey (G4 stage) for Basemetal in Thal-Didihat–Askot area, Pithoragarh District, Uttarakhand" with an estimated cost of ₹232.74 Lakh (including GST) within the time schedule of 12 months as per Annexure 11.

Agenda 3.3.10 Reconnaissance Survey (G-4 stage) for Mailar Base Metal-Gold prospect block in Mailar area, Lalitpur District, Uttar Pradesh.
[Implementing Agency: Geovale Services Private Limited]

b) Geovale Services Private Limited informed that the project was approved in the 34th EC Meeting held on 19th March, 2024. The sanction order was issued on 16th July, 2024 with timeline of 12 months and the approved cost was INR 2,40,95,250/-. The cost was revised to INR 3,22, 39,191/- in the 36th EC of NMET held on 29th July 2024.
c) Geovale Services Private Limited presented the progress of the project work and proposed modifications in NQT. The committee was requested to approve in-house drilling in the project instead of the earlier approved outsourced drilling.
d) The committee agreed to the revised cost for the project.

Recommendation TCC-II:

The committee recommends the proposal for revised cost to EC for "Reconnaissance Survey (G-4 stage) for Mailar Base Metal-Gold prospect block in Mailar area, Lalitpur District, Uttar Pradesh" with an estimated cost of ₹325.01 Lakh (including GST) within the time schedule of 12 months as per annexure 12.

Agenda 3.3.11 Reconnaissance Survey (G-4 Stage) for REE Exploration in Bhuj Clay Prospect Block, Kachchh District, Gujarat.
[Implementing Agency: Geovale Services Private Limited]

a) Geovale Services Private Limited informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 05th October, 2023 with timeline of 12 months and approved cost was INR 1,22,27,994/-
b) Geovale Services Private Limited presented the progress of the project work and proposed modifications in NQT.
c) A few boreholes were proposed y the agency and the committee accepted the same.
d) The committee advised to exclude Magnetic Survey work in this project.

Recommendation TCC-II:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G-4 Stage) for REE Exploration in Bhuj Clay Prospect Block, Kachchh District,

Gujarat" with an estimated cost of ₹265.84 Lakh (including GST) within the time schedule of 18 months as per Annexure 13.

Agenda 3.3.12 Preliminary Exploration (G-3 Stage) for vanadium and titanium in Dandi-Onjal-Surwada Block in Navasari and Valsad Districts, Gujarat.
[Implementing Agency: Geo Marine Solutions Pvt. Ltd.]

a) Geo Marine Solutions Pvt. Ltd informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 12th March, 2024 with timeline of 12 months (up to 11.03.2025) and approved cost was INR 86,27,644/-.
b) Review of the project was done on 1st meeting of TCC-II held on 26 & 27th September, 2024 and sample analysis for Niobium (Nb) and Tantalum (Ta) were recommended. Thirty-seven (37) BH up to 5 m depth were also recommended.
c) Geo Marine Solution Pvt. Ltd. requested for approval for Radiometric determination of monazite equivalent (PHY-5) and XRD studies.

Recommendation TCC-II:

The committee recommends Radiometric determination of monazite equivalent (PHY-5) and XRD studies and instructed to submit the revised cost sheet in the next TCC-II meeting.

Agenda 3.3.13 Reconnaissance Survey (G-4 Stage) for Iron Ore in Mahakoshal Group around Chakdiya, Kushaniya, Jobra and Tusgaon area, Sonbhadra district, Uttar Pradesh.
[Implementing Agency: GeoExpOre Pvt. Ltd.]

a) GeoExpOre Pvt. Ltd. informed that the project was approved in the 33rd EC Meeting held on 19th February, 2024. The sanction order was issued on 28th February, 2024 with timeline of 09 months (up to 27.11.2024) and approved cost was INR 95,41,116/-.
b) GeoExpOre Pvt. Ltd. Presented the progress of the project and asked for timeline extension of 6 months.
c) Revised cost was presented by the agency for additional 150 nos. of channel samples.

Recommendation TCC-II:

The committee recommends the revised cost of the project for the approval of EC for "Reconnaissance Survey (G-4 Stage) for Iron Ore in Mahakoshal Group around Chakdiya, Kushaniya, Jobra and Tusgaon area, Sonbhadra district, Uttar Pradesh" with an estimated cost of ₹110.54 Lakh (including GST) & timeline extension of 6 months up to 26/05/2025.

Agenda 3.3.14 Preliminary Exploration (G-3 Stage) for REE and Associated Minerals in Borana Block, Bhilwara District, Rajasthan.
[Implementing Agency: GeoExpOre Pvt. Ltd.]

a) GeoExpOre Pvt. Ltd. informed that the project was approved in the 35th EC Meeting held on 16th May, 2024. The sanction order was issued on 10th June, 2024 with timeline of 12 months (up to 09.06.2025) and approved cost was INR 1,46,98,108/-.
b) GeoExpOre Pvt. Ltd. Presented the progress of the project.
c) The committee advised that structural data, BRS locations & Trench locations to be shown on the geological map of the proposed block. Anomalous zone should be demarcated along the foliation trend in high value areas.
d) The committee also suggested that three (3) BH of 75m to 80m depth in 200m x 200m spacing may be planned and submitted.

Recommendation TCC-II:

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

Agenda 3.4 Cost Evaluation of New Project Proposals

The recommendation of the TCC-II of NMET for cost evaluation of new proposals are included in the recommendation of agenda from 3.1.1 to 3.1.12.

Agenda 3.5 Review of Ongoing Procurement Projects & Timeline Extension

Agenda 3.5.15 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.
[Implementing Agency: DGM Uttar Pradesh]

a) DGM Uttar Pradesh informed that the project was approved in the 28th EC Meeting held on 16th March, 2023. The sanction order was issued on 03rd April, 2023 with timeline of 12 months and approved cost was INR 76,95,000/-.
b) DGM Uttar Pradesh informed that only ₹4,75,000 have been utilised till date.
c) DGM Uttar Pradesh asked for timeline extension.

Recommendation TCC-II:

The committee recommends the timeline extension for the approval of EC for "Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities" up to 31st March 2025.

Agenda 3.5.16 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.
[Implementing Agency: DGM Tripura]

a) DGM Tripura informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 02nd January, 2024 with timeline of 12 months and approved cost was INR 36,76,000/-.
b) Not presented by DGM Tripura.

Recommendation TCC-II:

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





Agenda 3.5.17 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.
[Implementing Agency: DGM Assam]

a) DGM Assam informed that the 2 projects was approved in the 27th EC Meeting held on 10th January, 2023 as financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. . The sanction order for one of the project was issued on 24th March, 2023 with timeline of 12 months and approved cost was INR 4,03,64,950/-.The sanction order for another project was issued on 30th May, 2024 with timeline of 12 months and approved cost was INR 1,07,00,000/-.
was approved in the 27th EC Meeting held on 10th January, 2023.
b) DGM Assam informed that there is a significant increase in the cost of the machinery/ instruments in comparison to the approved cost by NMET. DGM Assam requested the committee to approve the revised cost.
c) The committee asked NMET to provide a format to DGM, Assam for submission of detailed proposal in next meeting of TCC-II.

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

Agenda 3.6: Project Evaluation for In-Principle Approval

Agenda 3.6.1 Reconnaissance survey (G-4 Stage) for base metal – gold prospect in Bijortha area, Lalitpur district Uttar Pradesh.
[Implementing Agency: Geovale Services Private Limited]

a) The proposed exploration block falls in Survey of India toposheet no. 54L/5 & 54L/9 in Lalitpur District, Uttar Pradesh.
b) Geovale Services Pvt. Ltd. Informed that this block is the continuation of the volcanics in the eastern part of the Mailar block (Geovale is currently exploring in this block), where potassic alteration has taken place which might be caused by high sulphide alteration associated with porphyry Cu-Mo-Au type of deposits. Six (6) samples from this block area have already analysed and found to be anomalous in Cu (129.2 ppm), Ni (421 ppm) and Zn (151.9 ppm).
c) As per the comments of GSI, the proposed block area is overlapping with the exploration blocks of GSI.

Recommendation TCC-II:
The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.2 Reconnaissance survey (G-4 Stage) for base metal – gold prospect in Talbehat area, Lalitpur district, Uttar Pradesh.
[Implementing Agency: Geovale Services Private Limited]

a) The proposed exploration block falls in Survey of India toposheet no. 54K/8, 54K/12 & 54L/5 in Lalitpur District, Uttar Pradesh.
b) Geovale Services Pvt. Ltd. informed that this block contains NNE-SSW trending Giant Quartz Veins (GQVs) that continue for few tens of kilometers with a width of few tens of meters which are highly prospective for gold mineralization.
c) Potassic alteration identified in the Mailar Block, where Geovale is exploring, extends into the southern part of the adjacent block. This suggests a continuous alteration zone between the two areas, potentially indicating similar geological conditions or mineralization processes. Two (2) samples from this block have already been analyzed and found to be anomalous in Au and Mo (0.016 ppm and 2ppm respectively).
d) As per the comments of GSI, the proposed block area is overlapping with the exploration blocks of GSI.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.3 Reconnaissance survey (G-4 Stage) for base metal – gold prospect in Terai area, Lalitpur district, Uttar Pradesh.
[Implementing Agency: Geovale Services Private Limited]

a) The proposed exploration block falls in Survey of India toposheet no. 54K/8, 54K/12, 54L/5 & 54L/9 in Lalitpur District, Uttar Pradesh.
b) Geovale Services Pvt. Ltd. informed that this block is the continuation of the volcanics in the eastern part of the Mailar block (Geovale is currently exploring in this block), where potassic alteration has taken place which might be caused by high sulphide alteration associated with porphyry Cu-Mo-Au type of deposits. Three (3) samples have already been analyzed from this block area and found to be anomalous in Cu (100.3 ppm) and Au (0.005 ppm).
c) As per the comments of GSI, the proposed block area is overlapping with the exploration blocks of GSI.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.4 Reconnaissance survey (G-4 Stage) for base metal – gold prospect in Todi area, Lalitpur district, Uttar Pradesh.
[Implementing Agency: Geovale Services Private Limited]

a) The proposed exploration block falls in Survey of India toposheet no. 54L/5 & 54L/9 in Lalitpur District, Uttar Pradesh.
b) Geovale Services Pvt. Ltd. informed that the western boundary of this block is continuous with the Mailar Block in which Geovale is presently working. In this western part in the Mailar Block a large zone of rhyolite-andesite with moderately intense potassic alteration is documented, which usually indicates a proximal zone to

the mineralization in the case of porphyry type of mineralization. Additionally, a traverse is taken in this proposed block in the southern part. This traverse has also documented a fairly large zone of andesite-rhyolite with moderately intense potassic alteration.

c) Three (3) samples from this area have also been analyzed and found to be anomalous in Mo (2.6 ppm). Banded chalcedony from Todi village has been tested and shows Cu (3194.8 ppm), Zn (680.9 ppm), Mo (10.5 ppm), Pb (12539.8 ppm).
d) As per the comments of GSI, the proposed block area is overlapping with the exploration blocks of GSI.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.5 Reconnaissance Survey (G-4 Stage) for Bauxite in Chakdipapat Block, Gumla District, Jharkhand.
[Implementing Agency: Gems Projects Private Limited]

a) The proposed exploration block of 24.86 sq. km. area falls in Survey of India toposheet no. 73A/7 & 73A/8 in Gumla District, Jharkhand. Out of total proposed block 46.28% area comes under forest area.
b) Gems Projects Private Limited informed that the proposed area is located at South western limit of the Chhotanagpur Gneissic Complex. Several occurrences of Bauxite mineralization have been reported within the Chhotanagpur Gneissic Complex. There are working Bauxite Mines around proposed area, the elevation of the area is more than 1000m and showing surface exposure of Bauxite proposed area. A number of bed rock samples were collected and analyzed for Alumina and Silica content.
c) DGM Jharkhand informed that there is an approved project of DGM, Jharkhand in this proposed block.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.6 Reconnaissance survey (G-4 Stage) for limestone in Budh area Lohit district, Arunachal Pradesh.
[Implementing Agency: Kartikay Exploration and Mining Services Private Limited]

a) The proposed exploration block of 106 sq. km. area falls in Survey of India toposheet no. 92A/5 & 92A/9 in Lohit District, Arunachal Pradesh.
b) Kartikay Exploration and Mining Services Private Limited informed that there is a working Limestone Mine around proposed area, the elevation of the area is more than 1000m and showing surface exposure of Limestone in proposed area. A number of bed rock samples were collected and analysed for Alumina and silica content.
c) The committee suggested that advice from State Government for this proposed exploration block has to be taken.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.6.7 Preliminary exploration (G-3 Stage) for Iron Ore in Amhawa, Satnara Kothar, Sidhi district, Madhya Pradesh.
[Implementing Agency: Maheshwari Mining Pvt. Ltd. (MMPL)]

a) The proposed block of 2.3 sq. km. area falls in Survey of India toposheet no. 63H/15 in Sidhi District, Madhya Pradesh.
b) Maheshwari Mining Pvt. Ltd. (MMPL) informed that BIF bands in the studied area are prominent and have extensive exposure. At places either by deformation or by auto brecciation or by regional scale faulting, the bands have brecciated and developed massive and oxidised zones that have led to rich iron zones which gave iron values ranging from 40 to 60 %. Banded Iron Formations (that has alternate bands of hematite and quartzite or chert) have width of hematitic bands varying from a few millimetres to centimetres.
c) As per the comments of GSI, the proposed block is recommended by GSI for further exploration of Iron Ore.

Recommendation TCC-II:

The committee has given In–Principle Approval to the proposal.

<u>Additional Agenda</u>

Agenda 3.1 Technical Evaluation of New Project Proposals (Contd…)

Agenda 3.1.13 Preliminary Exploration (G3 Stage) of Bauxite in Sirmaur Kevati Sub Block-A, Sub-Block-B and Sub-Block-D Rewa District, Madhya Pradesh.
[Implementing Agency: Maheshwari Mining Pvt. Ltd. (MMPL)]

a) Maheshwari Mining Pvt. Ltd. (MMPL) presented the proposal for the project. Three blocks, Block-A (9.93 sq. km.), Block-B (7.79 sq. km.) and Block-D (2.23 sq. km.) has been proposed for Bauxite exploration.
b) The committee advised that Block-A only should be proposed in next TCC-II meeting, also 400m x 400m spacing BH may be planned, including existing BH in the area.

Recommendation TCC-II:

The committee does not agree for In–Principle Approval of the project.

Agenda 3.3 Review of Ongoing Projects/ Completed Project & Timeline Extension (Contd…)

Agenda 3.3.15 Reconnaissance Survey (G-4) for PGE, Gold & REE in Maneri-Sitapala Block, Balaghat District, Madhya Pradesh.
[Implementing Agency: Gemcokati Exp. Pvt. Ltd.]





a) Gemcokati Exp. Pvt. Ltd informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 05th October, 2023 with timeline of 08 months and approved cost was INR 64,92,482/-.
b) Gemcokati Exp. Pvt. Ltd. Presented the proposal of the project. The proposed area falls in Survey of India toposheet no. 64C/11, in Balaghat District, Madhya Pradesh.
c) Gemcokati Exp. Pvt. Ltd. Informed that forest clearance is awaited for pitting/ trenching work in the exploration block .
d) The committee advised trenching across the litho contact. The total PGE value may also be checked.

Recommendation TCC-II:

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

Agenda 3.3.16 Reconnaissance Survey (G-4) for PGE, Vanadium & associated minerals in Bhursadongari - Murum Block (100 Sq Km), Balaghat District, Madhya Pradesh. [Implementing Agency: Gemcokati Exp. Pvt. Ltd.]

a) Gemcokati Exp. Pvt. Ltd informed that the project was approved in the 62nd TCC Meeting held on 28th, 29th February and 01st March, 2024. The OM was issued on 12th March, 2024 with timeline of 06 months and the approved cost was INR 61,01,057/-.
b) Gemcokati Exp. Pvt. Ltd. Presented the proposal of the project and informed that forest clearance is awaited for the exploration block.

Recommendation TCC-II:

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

Agenda 3.5 Review of Ongoing Procurement Projects & Timeline Extension (Contd…)

Agenda 3.5.18 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities. [Implementing Agency: DMR Meghalaya)

a) DMR Meghalaya informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 07th December, 2023 with timeline of 12 months and approved cost was INR 60,25,000/-
b) DMR Meghalaya presented the status of the procurements of the project and asked for timeline extension of 3 months up to 31st March 2025.

Recommendation TCC-II:

The committee recommends the timeline extension for the approval of EC for "Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities" up to 31st March 2025.

Agenda 3.5.19 Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities. [Implementing Agency: DMG Jharkhand]

a) DMG Jharkhand informed that the project was approved in the 28th EC Meeting held on 16th March, 2023. The sanction order was issued on 18th August, 2023 with timeline of 12 months and approved cost was INR 5,27,90,000/-.

b) DMG Jharkhand presented the status of the procurements of the project and asked for timeline extension up to 31st May 2025. For procurement of XRF and ICPMS timeline extension up to 31st August 2025 was also requested.

Recommendation TCC-II:

The committee recommends the timeline extension for the approval of EC for "Financial Assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities" up to 31st May 2025 & up to 31st August 2025 for Procurement of XRF & ICPMS.

Agenda 3.6 Project Evaluation for In-Principle Approval (Contd…)

Agenda 3.6.8 Reconnaissance Survey (G-4 Stage) for bauxite in Chandipat Block, Gumla District, Jharkhand.
[Implementing Agency: Gems Projects Private Limited]

a) The proposed exploration block of 15.13 sq. km. area falls in Survey of India Toposheet no. 73A/3, in parts of Gumla District, Jharkhand.

b) Gems Projects Private Limited informed that the proposed area is located at South-western limit of the Chhotanagpur Gneissic Complex. Several occurrences of Bauxite mineralization have been reported within the Chhotanagpur Gneissic Complex. There is a working Bauxite Mine around proposed area, the elevation of the area is more than 1000m and showing surface exposure of Bauxite in proposed area. A number of bed rock samples were collected and analyzed for Alumina and silica content.

Recommendation TCC-II:

The committee has given In–Principle Approval to the proposal.

List of participants attended 3rd meeting of Technical-cum-cost Committee (TCC-II) of NMET held on 5th and 6th December, 2024 through video conferencing mode

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1	Sh. Pradeep Singh, Dy. Director General, GSI, Kolkata	ddg.it@gsi.gov.in	9810233957	**Chairman, TCC -II**
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56	Shri Rajesh Sharma, Senior Geologist	nmet.mines@gov.in	8377851047	NMET
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Annexure 2A

Estimate Cost for Reconnaissance (G-4 Stage) for Gold in Jojobera-Ulihurang Block, Arki Block, Khunti District, Jharkhand.

Area : 10.61 sq.km, Drilling :400m, 2 BH Timeline : 10 months , Review : after 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 MAPPING, SAMPLING AND SURVEYING DAYS**						
1	**Geological Mapping (1:12500), & Sampling**						
a	Charges for one Geologist per day at field	day	1.3	11000	120	1320000	
b	Labour for Geologist (4 Nos. i.e. 2 workers/geologist)	day	5.7	526	240	126240	Amount will be reimbursed as per the notified rates by the central labour commissioner or respective state govt. whichever is higher
c	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	67	341700	
d	Labours for sampling work (4 Nos) Base rate - Rs. 427 (Unskilled)	day	5.7	526	268	140968	Amount will be reimbursed as per the notified rates by the central labour commissioner or respective state govt. whichever is higher
2	**Survey (on 1:12500 Scale) (Outsourcing)- Phase 2**						
a	Bore Hole Fixation and determination of co-ordinates & Reduced Level of the boreholes and trench points by DGPS/Total station	Per Point of observation	1.6.2	19200	8	153600	Borehole-02, Corner Points - 06
b	Charges of one Surveyor (1 Party)	one surveyor per day	1.6.1a	8300	0	0	
c	Labours (2 Nos) Base rate - Rs. 526 (Unskilled)	day	5.7	526	0	0	
3	**Trenching upto 2 m depth**	cu.m	2.1.1	3330	200.00	666000	Trenching - 200cu.

	Sub-Total A					**2748508**	
B	**DRILLING (Outsourcing)**						
a	Drilling - Hard Rock	m	2.2.1.4a	11500	400	4600000	
b	Borehole Deviation Survey	m	2.2.6	330	0	0	
c	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2000	0	0	
d	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	0	0	
e	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50000	0	0	
f	Drilling Camp Setting Cost	Nos	2.2.9a	250000	0	0	
g	Drilling Camp Winding up Cost	Nos	2.2.9b	250000	0	0	
h	Road Making (Flat Terrain)	Km	2.2.10a	22020	0	0	
e	Drill Core Preservation	per m	5.3	1590	40	63600	
	Sub Total B					**4663600**	
C	**LABORATORY STUDIES (Outsourcing)**						
i)	**Chemical Analysis**						
a	5% of total bore-hole samples for trace and REE analysis under 34 element package analysis through ICP-MS for bed rock, drill core, soil and stream sediment samples	Nos	4.1.14	7731	20	154620	
b	**Check samples External(10%)**- Trace and REE analysis under 34 element package analysis by ICP-MS for bedrock, drill core, soil, and stream sediment samples	Nos	4.1.14	7731	2	15462	
c	Gold analysis by **AAS** (Atomic Absorption Spectrometry) method for bed rock, drill core, soil, trench and stream sediment samples.	Nos	4.1.6	1557	465	724005	BRS-265,Trench- 100,SSS- 40, Core - 60
d	**Check samples External(10%)**- for Gold analysis by AAS method of bed rock, drill core, soil, trench and stream sediment samples.	Nos	4.1.6	1557	47	73179	
ii)	**Petrological/Mineralogical studies**						

a	Preparation of thin section	Per Samples	4.3.1	2353	20	47060	
b	Study of Thin Section	Per Samples	4.3.4	4232	20	84640	
c	Preparation of polish section	Per Samples	4.3.2	1549	10	15490	
d	Study of polish Section	Per Samples	4.3.4	4232	10	42320	
e	Digital photomicrograph of thin-poilish setions	Per Samples	4.3.7	280	20	5600	
	Total - C					**1162376**	
D	**Sub Total (A to C)**					**8574484**	
E	**Geological Report Preparation**		**5.2**	**For the projects exceeding Rs. 300 Lakhs: A Minimum of Rs. 9 lakhs or 3% of the work whichever is more subject to a maximum amount of Rs. 20 lakh and Rs. 10,000/- per each additional copy**		**257235**	
F	**Preparation of Exploration Proposal**	**5 Hard copies with a soft copy**	**5.1**	**2% of the Cost or Rs.5 Lakhs whichever is lower**		**171490**	
	Tender Processing cost		**2.3**			**95060**	2% of (Rs.153000+Rs.4600000)
	Operational Charges		**6**			**475300**	10% upto Rs.50 Lakh of outsource component

G	**Peer review Charges**		**As per EC decision**			**30000**	
H	**Total Estimated Cost without GST**	**Approx.**				**9603568**	
I	**Provision for GST (18% of H)**	**%**				**1728642**	
J	**Total Estimated Cost with GST**					**11332210**	
				or Say Rs. In Lakhs		**113**	
Note - If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.							

Annexure 2B

Time Schedule/ Action Plan for Reconnaissance (G-4 Stage) for Gold in Jojobera-Ulihurang Block, Arki Block, Khunti District, Jharkhand.

Sl. No.	Activities	Unit	Months										
			1	2	3	4	Review	5	6	7	8	9	10
1	Camp Mobilization	Days											
2	Geological Mapping & Sampling	Days											
3	Lab Analysis-Samples (bed rock, soil, stream sediment)	Days											
4	Trenching & Sampling	Days											
5	Lab Analysis of Trench Samples	Days											
6	Survey (topographic, block boundary & borehole demarcation)	Days											
7	Drilling (2 rigs)	Days											
8	Sample preparation for drill core samples	Days											
9	Lab Analysis of Drill core samples	Days											
10	Camp Demobilization	Days											
11	Geological Report	Days											
12	Peer review	Days											

Annexure 3A

Estimate cost for Preliminary Exploration (G-3 Stage) for REE and Associated Minerals in Umprikhola Block, Kamrup District, Assam
Total Area - 4.80 sq km; Boreholes: 30 Nos, Average Depth: 30 m , 1080m drilling Completion Time -15 Months, Review after 8 Month

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	Rates as per SoC North Eastern States and Hilly Terrain of Himalaya (3.35 times than the normal SoC rate)	Qty.	Total Amount (Rs)	
A	**GEOLOGICAL WORK**							
a	Charges for Geologist at HQ for data processing	day	1.3	9,000	-	60	5,40,000	
b	Charges for Geologist at field for detail mapping at 1:4000 scale, Surface sampling, Pitting and Scout Drilling	day	1.2	11,000	36,850	180	66,33,000	Hilly Tearrain with Forest area
c	Labour Charges for Geologist at Field	day	5.7	526	1,762.10	360	6,34,356	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher

d	Charges for Sampler for BRS and BH Core Samples	one sampler per day	1.5.2	5,100	17,085.00	124	21,18,540	
e	Labour Charges for Sampling Work; Base rate - Rs. 526/ per day	day	5.7	526	1,762.10	496	8,74,002	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total A						**1,07,99,898**	
B	**Topographical Surveying**							
a	Charges for Surveyor for Topographical Survey by total Station	Day	1.6.1a	8,300	27,805	60	16,68,300	
b	Labour Charges (4 labour for one Surveyor)	Day	5.7	526	1,762.10	240	4,22,904	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
c	Demarcation of Lease boundary and BH Fixation by DGPS	Per point of observation	1.6.2	19,200	64,320	36	23,15,520	6 Corner Points and 30 Nos of Boreholes
	Sub-Total B						**44,06,724**	
C	**DRILLING**							
1	Core Drilling up to depth of 300m - Hard Rock	m	2.2.1.4a	11,500	38,525	1,080	4,16,07,000	
2	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	67,000	30	20,10,000	

3	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	6,700	30	2,01,000	
4	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	NA	3,800	1,36,800	Approx3800 km to & fro from Nagpur/ Rig
5	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	1,67,500	5	8,37,500	
6	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	8,37,500	1	8,37,500	
7	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	8,37,500	1	8,37,500	
8	Road Making (Hilly Terrain)	Km	2.2.10b	32,200	1,07,870	5	5,39,350	
9	Drill Core Preservation	Per m	5.3	1,590	5,326.50	375	19,97,438	
	Sub-Total C						**4,90,04,088**	
D	**Sub Total A to C**						**6,42,10,709**	
E	**LABORATORY STUDIES**							
1	**Chemical Analysis**							
	Primary Samples Surface + BH Core Samples)							
i)	**Primary samples**							

	REE associated Trace Elements (34 Element)by ICPMS	Nos	4.1.14	7,731		880	68,03,280	Surface samples-50 BRS Bh Core Samples : 830 nos
ii)	**External check samples (10%)**							
	REE associated Trace Elements (34 Element)by ICPMS	Nos	4.1.14	7,731		88	6,80,328	
iii)	Ni and Cr by AAS method	Nos	4.1.7a	2,506		10	25,060	
iv)	PGE by ICP-MS Ni-S fire assay technique	Nos	4.1.5d	11,800		10	1,18,000	
2	**Physical & Petrological Studies**							
i)	Preparation of thin section	Nos	4.3.1	2,353		15	35,295	
ii)	Complete petrographic study report	Nos	4.3.4	4,232		15	63,480	
iii)	Preparation of polish section	Nos	4.3.2	1,549		15	23,235	
iv)	Complete mineragraphic study report	Nos	4.3.4	4,232		15	63,480	
v)	Digital Photographs	Nos	4.3.7	280		20	5,600	
vi)	EPMA Study	Hour	4.4.1	8,540		15	1,28,100	
vii)	XRD Study	Nos	4.5.1	4,000		15	60,000	
	Sub-Total -E						**80,05,858**	
F	**Total D+E**						**7,22,16,567**	

I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	For the projects having cost exceding Rs 300 Lakh, A minimum of Rs 9 Lakh or 3% of the work whichever more and Rs 10000/- per each additional copy			**20,00,000**	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
J	**Peer review Charges**		**As per EC decision**				**30,000**	
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. 5.00 Lakhs whichever is lower**			**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.
L	**Total Estimated Cost without GST**						**7,47,46,567**	
M	**Provision for GST (18% of L)**	**%**					**1,34,54,382**	GST will be reimburse as per actual and as per notified prescribed rate
N	**Total Estimated Cost with GST**						**8,82,00,949**	

or Say Rs. , In Lakhs:							***882.01***	
Note:								
$	Trenching/Pitting dimensions are tentative may vary depending upon the geology and field conditions							
	2nd level of work shall be carried out after review of 1st level work i.e. Geological mapping, geochemical sampling and analysis							
Note - If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.								
Drilling and connected sampling is subjected to review of the project by TCC2								

Annexure 3B

Time Schedule/Action Plan for Preliminary Exploration (G-3 Stage) for REE and Associated Minerals in Umprikhola Block, Kamrup District, Assam

		1	2	3	4	5	6	7	8		9	10	11	12	13	14	15
1	Camp Setting																
2	Geological Mapping																
3	Topographic Survey/DGPS survey /BH Fixation																
4	Core Dilling																
5	Camp Winding									Review							
6	Laboratory Studies																
7	Geologist Party days, HQ																
8	Geological Report Writing																
9	Peer Review																

Annexure 4A

Estimate Cost for Reconnaissance Survey (G-4 Stage) for Tungsten & associated minerals in Hanspur Block, District Jhansi, Uttar Pradesh
Total Area - 74.34 0 sq km ; Scout drilling: 500m, 5BH Completion Time - 10 Months, Review: after 4 months

S.N	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal (FY 2022-23)		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	
A	**GEOLOGICAL WORK**						
a	Charges for one Geologist per day at HQ for monitoring, data processing etc.	day	1.3	9,000	60	5,40,000	
b	Charges for one Geologist per day at field for geological mapping (1:12,500 sacle), bedrock sampling,trenching and logging (1 party)	day	1.3	11,000	180	19,80,000	This includes UV survey to be carried out in late hours.
c	Labour (2 Nos)	day	5.7	526	360	1,89,360	Amount will be reimburse 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) for geochemical,bedrock,trenching and core samples	one sampler per day	1.5.2	5,100	48	2,44,800	250 primary samples
e	Labours (4 Nos)	day	5.7	526	192	1,00,992	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
2	**Survey - Phase 2**						

b	Bore Hole Fixation and determination of co-ordinates & Reduced Level (RL) of the boreholes and one reference point by DGPS	Per Point of observation	1.6.2	19,200	6	1,15,200	5 Boundary points & one refernce point.
	Sub-Total A					**31,70,352**	
B	**MINERAL INVESTIGATION**						
1	**Pitting &Trenching**						
a	Trenching	per cu. m	2.1.2	3800	0	-	
2	**DRILLING**						
a	Core Drilling (NQ size)- very hard rock	m	2.2.1.5a	12,650	500	63,25,000	05 bhs to be drilled
b	Land / Crop Compensation (in case the BH falls in agricultural Land)	per borehole	5.6	20,000	5	1,00,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities.
c	Construction of concrete Pillar (12"x12"x30")	per point	2.2.7a	2,000	5	10,000	05 bhs points
d	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	1,500	54,000	1500 km to and fro for 1 Rig from Nagpur
e	Monthly Accommodation Charges for drilling Camp	month	2.2.9	50,000	4	2,00,000	
f	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	1 Rig
g	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	1 Rig
h	Road Making (Rugged/Hilly Terrain)	per km	2.2.10b	32,200	3	96,600	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed accordingly.
i	Drill Core Preservation	per m	5.3	1,590	200	3,18,000	
	SUB-TOTAL B					**76,03,600**	
C	**LABORATORY STUDIES**						
1	**Chemical Analysis**						

I	**Primary & Check Samples from Surface outcrop and channel sample (BRS/Soil /Channel Samples)**						
i)	**Primary samples**						
	a. For W, Sn, Mo, Co, Cu, Pb, Zn, Ta,Nb, K by AAS method	Nos	4.1.7a	4,181	250	10,45,250	10 radicals
	a. 10% of primary samples will be studied for 34 elemental analysis by IC-PMS method	Nos	4.1.14	7,731	25	1,93,275	
ii)	**External check samples (10%)**						
	a. For W, Sn, Mo, Co, Cu, Pb, Zn, Ta,Nb, K by AAS method	Nos	4.1.7a	4,181	25	1,04,525	
III	**Primary & Check Samples from Core Samples**						
i)	**Primary samples**						
	a. For W, Sn, Mo, Co, Cu, Pb, Zn, Ta,Nb, K by AAS method	Nos	4.1.7a	4,181	75	3,13,575	
ii)	**External check samples (10%)**						
	a. For W, Sn, Mo, Co, Cu, Pb, Zn, Ta,Nb, K by AAS method	Nos	4.1.7a	4,181	8	31,358	
2	**Physical & Petrological Studies**						
i)	XRD studies for identification of minerals (Random)	Nos.	4.5.1	4,000	10	40,000	
ii)	SEM-EDX Studies	per hour	4.4.2	2,940	16	47,040	
iii)	EPMA studies	per hour	4.4.1	8,540	16	1,36,640	
iv)	Complete Petrograhic Studies	Nos.	4.3.4	4,232	10	42,320	
v)	Complete Mineragraphic Studies	Nos.	4.3.4	4,232	10	42,320	
3	**Geotechnical Laboratory**						
i.	Bulk Density	No.	4.10	3,540	5	17,700	
	Sub-Total -C					**20,14,003**	

D	**Total A to C**					**1,27,87,955**	
E	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	For the projects exceeding ₹50 lakh but less than 150 lakh: A Minimum of ₹2.5 lakh or 5% of the work whichever is more		**6,39,398**	
F	**Peer review Charges**		**As per EC decision**			**30,000**	
G	**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**		**2,68,547**	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.
H	**Total Estimated Cost without GST**					**1,37,25,899**	
I	**Provision for GST (18% of J)**	**%**				**24,70,662**	GST will be reimburse as per actual and as per notified prescribed rate
J	**Total Estimated Cost with GST**					**1,61,96,561**	
or Say Rs. , In Lakhs:						***161.97***	
Note:							
$	Trenching/Pitting dimensions are tentative may vary depending upon the geology and field conditions						
#	2nd level of work i.e. Core Drillingshall be carried out after review of 1st level work i.e. Geological mapping, geochemical sampling and analysis.						

Note - 1. 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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required. 2. Rates are calculated as per NMET SOC issued on 31st March 2020 without escalation. Although billing for particular financial years (execution FY of work) will be done as per the actual escalations as per RBI Indices.

Annexure 4B

Time Schedule/ Action Plan for Reconnaissance Survey (G-4 Stage) for Tungsten & associated minerals in Hanspur Block, District Jhansi, Uttar Pradesh

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

Annexure 5A

Estimate Cost for Reconnaissance Survey (G-4 Stage) for Glauconite in Ambara-Maru Block, District- Kachchh, Gujarat
[Block area- 94.25 sq. km; Drilling :800m, 20 BH Schedule timeline- 10months, 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)**						
i	Charges for one Geologist- Field	day	1.2	11,000	150	16,50,000	
ii	Charges for one Geologist per- HQ	day	1.2	9,000	60	5,40,000	
iii	2 labours/ party (As per rates of Central Labour Commissioner)	day	5.7	526	300	1,57,800	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
iv	Sampling Party Days -1 Sampler Labour charge not included	day	1.5.2	5,100	151	7,70,100	
v	4 labours/ party (As per rates of Central Labour Commissioner)	day	5.7	526	604	3,17,704	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub Total- A					**34,35,604**	
B	**PITTING AND TRENCHING**						
i	Trenching	Cu m	2.1.1	3330	150	4,99,500	
	Sub Total- B					**4,99,500**	
C	**DRILLING**						
i	Drilling upto 300m (Soft Rock) (1 rigs)	m	2.2.1.4a	7,168	800	57,34,400	20BH x 40m =800m, MoC rate

ii	Land / Crop Compansation	per BH	5.6	20,000	20	4,00,000	Amount will be reimburse 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	20	40,000	
iv	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	2,500	90,000	Certification in this regard is required to be provided
v	Monthly Accomodation Charges for drilling Camp	month	2.2.9	50,000	4	2,00,000	
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 for max. 4 km.
ix	Bore Hole Fixation and determination of co-ordinates & Reduced Level of the boreholes and by DGPS	Nos	1.6.2	19,200	20	3,84,000	
x	Borehole core preservation-One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	610	9,69,900	610
	Sub Total- C					**84,28,400**	
D	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i	**Bedrock/Channel/Chip/Trench/BH etc Samples)**						
	a) Primary samples for K_2O, SiO_2, MgO, CaO, Na2O, P2O5, Al_2O_3 & Fe_2O_3	Nos	4.1.15a	4,200	900	37,80,000	900 (200 + 100+ 600) (Surface+Trench+BH)
	b) External Check sample (10% of Primary samples)	Nos	4.1.15a	4,200	90	3,78,000	

	c) Trace element (34 element)- ICPMS +10% Check	Nos	4.1.14	7,731	220	17,00,820	Samples with tuffaceous materials rich in phosphorite. Only BH samples.
ii	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
iii	Complete petrographic study report	Nos	4.3.4	4,232	10	42,320	
iv	Digital Photographs	Nos	4.3.7	280	10	2,800	
v	XRD Study	Nos	4.5.1	4,000	5	20,000	
vi	Bulk Density Determination	Nos	4.10	3,540	5	17,700	
	Sub Total- D					**59,65,170**	
E	**Total A to D**					**1,83,28,674**	
F	**Geological Report Preparation**		**5.2 (iii)**	Reconnaissance Survey/ Preliminary exploration/ General exploration/ Detailed exploration exceeding ₹150 lakh but less than 300 lakh: A Minimum of ₹7.5 lakh or 3% of the work whichever is more and ₹3000/- per each additional copy.		**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.
G	**Peer review Charges**		**As per EC decision**			**30,000**	

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 or Rs. 5.0 Lakhs whichever is lower		**3,66,573**	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.
I	**Total Estimated Cost without GST**					**1,94,75,247**	
J	**Provision for GST (18% of I)**					**35,05,545**	GST will be reimburse as per actual and as per notified prescribed rate
K	**Total Estimated Cost with GST**					**2,29,80,792**	
				or Say Rs. In Lakhs		**229.81**	
Note:							
1	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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.						

Annexure 5B

Time Schedule/ Action Plan for Reconnaissance Survey (G-4 Stage) for Glauconite in Ambara-Maru Block, District- Kachchh, Gujarat

S. No.	Particulars	Months/ Days	1	2	3	4	Review	5	6	7	8	9	10
1	Camp Setting	months											
2	Geological Mapping	months											
3	Survey days	days											
4	Trenching/Pitting	cu.m											
5	Drilling (1 rig)	m											
6	Geologist days	days											
7	Sampling days	days											
8	Camp winding	months											
9	Laboratory Studies	months											
10	Geologist days, HQ	days											
11	Report Writing with Peer Review	months											

Annexure 6A

Estimate Cost for Reconnaissance Survey (G-4 Stage) for Limestone in and around Nanhwara Kymore area, Katni District, Madhya Pradesh
Area 22.52 sq. km, No.of BH: 03, Borehole depth range- 30/50 m; Schedule timeline- 10 months Review: After 3 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.	Total Amount (Rs)	
A	**Geological Mapping (1:12500) & Other Geological Work**						
1	Charges for Geologist man days for LSM and & sampling	day	1.2.b	11,000	90	9,90,000	2 geologists x 45 days each
2	Labours Charges; Base rate	day	5.7	526	180	94,680	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
3	Charges for Geologist per day (HQ) for data interpretation and Map preparation	day	1.2.a	9,000	60	5,40,000	
	Sub Total- A					**16,24,680**	
B	**Survey work**						
1	Charges of Surveyor for survey layout work & Block boundary demarcation	per day	1.6.1a	8,300	45	3,73,500	2 surveyors x 45 days each
2	Labours Charges; Base rate	day	5.7	526	180	94,680	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
3	DGPS Survey for boundary pillar, BH fixation & RL determination	Per Point	1.6.2	19,200	16	3,07,200	3 Bh and 13 boundary
	Sub-Total B					**7,75,380**	

C	**Mineral Investigation**						
1	Excavation of Trenches upto 2.0 m depth	per cu.m.	2.1.1	3,300	-	-	2 trenches (1.5x1.5x30)
2	Excavation of Pit upto 2.0 m depth	per cu.m.	2.1.2	3,800	18	68,400	3 pits (1x1x6)
	Sub-Total C					**68,400**	
D	**DRILLING (in -house)**						
1	Drilling up to 300m - soft rock	m	2.2.1.3a	7,168	110	7,88,480	As per MoC rate 30m + 30m + 50m
2	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	3	6,000	
3	Transportation of Drill Rig & Truck associated per drill (1 rigs)	Km	2.2.8	36	300	10,800	a per actuals. To & fro from Jabalpur
4	Monthly Accomodation Charges for drilling Camp	month	2.2.9	50,000	2	1,00,000	
5	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
6	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
7	Road Making (Flat Terrain)	Km	2.2.10a	22,020	1	22,020	as per actual
8	Drill Core Preservation	per m	5.3	1,590	110	1,74,900	
9	Sample Processing	per day	1.5.2	5,100	19	96,900	
10	Labours Charges; Base rate	day	5.7	526	76	39,976	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
11	Land/Crop Compensation	per BH	5.6	20,000	3	60,000	
	Sub Total D					**17,99,076**	
E	**Borehole Geophysical Logging & Sampling**						
1	Logging & Sampling	per day	1.2.b	11,000	-	-	
	Sub Total E					**-**	
F	**LABORATORY STUDIES**						
	Chemical Analysis						





1	Quantitative chemical analysis of rock by conventional wet chemical method for 12 determinations (other than alumino-silicate and phosphate rock) (Bedrock/Channel /Soil/Stream sediment)	Nos	4.1.1	8,157	150	12,23,550	110 drilling and 40 BRS sample
	Physical & Petrological Studies						
2	Preparation of thin section	Nos	4.3.1	2,353	5	11,765	
3	Study of thin section	Nos	4.3.4	4,232	5	21,160	
4	Digital Photographs	Nos	4.3.7	280	10	2,800	
5	Bulk Density	Nos	4.10	3,540	5	17,700	
	Sub Total F					**12,76,975**	
G	**Total A to F**					**55,44,511**	
H	**Geological Report Preparation**	5 Hard copies with a soft copy	5.2	Exploration cost exceeding 50 lakh but less than 150 lakh: A Minimum of ₹2.5 lakh or 5% of the work whichever is more		**2,50,000**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
I	**Peer review Charges**		As per EC decision			**30,000**	

J	**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 less		**1,20,000**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
K	**Total Estimated Cost without GST**					**59,44,511**	
L	**Provision for GST (18% of J)**					**10,70,012**	GST will be reimburse as per actual and as per notified prescribed rate
M	**Total Estimated Cost with GST**					**70,14,523**	
				or Say Rs. In Lakhs		**70.15**	
Note:							
1	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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.						

Annexure 6B

Time Schedule/ Action Plan for Reconnaissance Survey (G-4 Stage) for Limestone in and around Nanhwara Kymore area, Katni District, Madhya Pradesh

S. No.	Description		1	2	3		4	5	6	7	8	9	10
1	Camp Setting	**Months/Days**											
2	Large Scale Mapping (1:12500) & BRS Sampling	**Months/Days**											
3	Pitting/Trenching	**Months/Days**											
3	Surface Drilling (1 rigs)	**600 m**											
4	Core Logging & Sampling	**days**				**Review**							
5	Laboratory Studies	**Nos.**											
6	Camp Winding	**months**											
7	Report Writing with Peer Review	**months**											

Annexure 7A

Estimate cost of Reconnaissance Survey (G-4 Stage) for graphite in Korapara, Bankura District, West Bengal.

Total area: 16.25 sq km, Period of Completion: 10 months, No. of Bh:5 , 300m: Review: after 5 months

Sl. Nos.	Item of work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item-Sl No	Quantity	Rates as per SoC	Total	
1	**Geological Mapping (on 1:12,500) (16 sq km)**						
	(a) Charges for Geologist in field (without labourer)	per day per Geologist	1.2. b	120	11,000	1320000	
	(b) Charges for Geologist at Headquarters	per day per Geologist	1.2. a	60	9,000	540000	
	(c) Wages for 2 labourers for geologist	per day	5.7	240	526	126240	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
2	**Land/Crop compensation**	per borehole	5.6	5	20000	100000	
3	**Geochemical sampling (Bedrock sampling)**	150nos (BRS:50 & PT:100)					
4	**Geophysical survey (SP survey 5 L.km)**	5 L.km					
	(a) Charges for 1 Geophysicist in field (without labourer)	per day	3.18b	0	11000	0	
	(b) Charges for 1 Geophysicist at Headquarters	per day	3.18a	30	9000	270000	
	(c) Wages for 4 labourers in field with geophysicist	per day	5.7	0	504	0	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	(d) Charge for Gravity survey	per station	3.1a.i	0	3800	0	
	(e) Charge for Magnetic survey	per station	3.2a.i	0	1800	0	
	(f) Charge for SP survey	per L.km	3.3a	5	29600	148000	
5	**Survey work**						

	(a) Surveyor Charges (without labourer)	per day	1.6.1a	0	8300	0	
	(b) Labour(4nos) charges for survey work	per day	5.7	0	504	0	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
6	**Technological Survey**						
	(a) Pitting (Where BRS are not available)	per cu m	2.1.2	50	3800	190000	
	(a) Trenching	per cu m	2.1.1	100	3330	333000	
	(b) Drilling	per m in soft rock	2.2.1.4a	300	11500	3450000	
	(c) Borehole pillaring (construction of concrete pillar) 12 inches x12 inches x 30 inches	per borehole	2.2.7a	5	2000	10000	
	(d) Transportation of Drill Rig and truck(to and from Headquarter s or Previous drill site)	per km	2.2.8	900	36	32400	
	(e) Drilling camp setting cost	per drill	2.2.9a	1	250000	250000	
	(f) Drilling camp winding cost	per drill	2.2.9a	1	250000	250000	
	(g) Monthly accommodation charges for drilling camp	per month	2.2.9	2	50000	100000	
	(h) Approach road making to drill site (as per actual)	per km	2.2.10a	5	22020	110100	
7	**Laboratory Studies**						
	(a) Proximate analysis for graphite (BRS: 50; PT: 100; BH Core: 100)	per sample	4.1.16	250	3000	750000	
	(a) Proximate analysis for graphite 10% external check	per sample	4.1.16	25	3000	75000	
	(b) Analysis for associated trace element (Vanadium)					0	
	(c) Analysis for associated REE+ Vanadium (ICPMS 14 elements)	per sample	4.1.13	150	5380	807000	

	(d) Petrochemical studies (PCS)	per sample	4.1.15a	10	4200	42000	
8	**Petrographic studies**						
	(a) Preparation of thin sections	per sample	4.3.1	10	2353	23530	
	(b) Study of thin sections	per sample	4.3.4	10	4232	42320	
	Whole Rock Analysis by XRF	per sample	4.1.15a	10	4200	42000	
	Sampler		1.5.2	45	5100	229500	
	Labour		5.7	180	526	94680	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
9	**Bulk Density/specific gravity Determination**	per sample	4.8.1	5	1605	8025	
10	**Drill core preservation (1 bh+ mineralised zone : as per actual)**	per m	5.3	200	1590	318000	
	Total					9661795	
11	**Geological Report preparation (5 hard copies with a soft copy)**	cost per 5 hard copies along with soft copy	5.2		As the exploration cost is exceeding 50 lakhs but less than 150 lakhs.	483090	
12	**Peer Review**	lumpsump	as per EC decision	1	30000	30000	
13	**Preparation of exploration proposal (5 hard copies with a soft copy)**	one number (5 hard copies) along with soft copies	5.1	1	2% of approved project cost or 5lakh, whichever is lower	193236	
	Grand Total of estimated cost:					**₹1,03,68,120.65**	
	Grand Total including 18%GST					**₹18,66,261.71**	
Total						**₹1,22,34,382.36**	





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 execusion 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 Reconnaissance Survey (G-4 Stage) for graphite in Korapara, Bankura District, West Bengal.

	Months										
Item of work	**1**	**2**	**3**	**4**	**5**		**6**	**7**	**8**	**9**	**10**
Camp Setup											
Large Scale Mapping (1:12,500)											
Bed rock sampling											
Trenching & Sampling											
Chemical analysis of surface samples											
Drilling						**Review**					
Core Sampling & its preparation											
Chemical analysis of core samples											
Processing of Analytical data											
Preparation of Geological report											

Annexure 8A

Estimate Cost for Preliminary Exploration (G-3 Stage) for Bauxite, Gallium, Vanadium, REE in Sandhan Block, Kachchh District, Gujarat.
Total Area - 9.85 Sq. Km; Drilling- 630m, BH: 63 nos., Completion Time - 14 Months, Review: after 5 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.	Total Amount (Rs)	
A	**Geological Mapping Other Geological Work & Surveying**						
	Geological mapping, (1:4,000 scale)						
i	a. Charges for Geologist per day (Field) for geological mapping(125 days) & drilling work(75days)	day	1.3	11,000	200	22,00,000	
ii	b. Labours Charges; Base rate	day	5.7	526	400	2,10,400	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	c. Charges for Geologist per day (HQ)	day	1.3	9,000	60	5,40,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	68	3,46,800	

	e. Labour	day	5.7	526	2,104	11,06,704	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub Total- A					**44,03,904**	
C	**Survey work**						
a	Surveyor for topographic survey/DGPS Survey and for BH fixation & RL determination(63 BH plus 6 Boundary points)	Per Point of observation	1.6.2	19,200	69	1324800	
b	Charges of Surveyor (1 party) for topographic mapping in 1:4000 scale	one surveyor per day	1.6.1a	8,300	60	498000	
c	Labours Charges for survey work(4 labourers)	day	5.7	526	240	126240	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total C					**19,49,040**	
D	**Piiting(20 PIT upto 2 m)**	CU M	2.1.2	3,800	40	152000	
E	**DRILLING**						
1	Drilling in soft rock 10.0m,or upto bedrock whichever is occuring first (63 BH *10)	m	2.2.1.1b	7,168	630	45,15,840	As per MoC. In Phase 1, 800X800m grid spacing, Phase 2 will be based review of Phase 1 results.
2	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH					as per actuals/SoC and details will be submitted during Review
3	Transportation of Drill Rig & Truck associated per drill (1 rigs)	Km	2.2.8	36	3,673	1,32,228	To & From Mangalore to Bhuj, As per actuals

4	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	3	1,50,000	
5	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
6	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
7	Drill core Preservation	m	5.3	1,590	630	10,01,700	
	Sub Total E					**62,99,768**	
G	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
v)	**BH Core samples**						
	Primary + 10 % Check Sample for major oxides and LOI by XRF technique(one third of total 630 samples+40 pit samples from 20 pits)	Nos	4.1.15a	4,200	275	11,55,000	
	Analysis for Gold by fire assay technique	Nos	4.1.5a	2,380	10	23,800	TCC-II recommended in 3rd meeting
	b.Primary +check samples For REE ,Ga,V,Sc,Y,Nb,Ta,Li and other Trace elements : by ICPMS 34 elements (one third of total 630 samples+20 pit samples)	Nos	4.1.14	7,731	231	17,85,861	TCC-II recommended in 3rd meeting
	Combined determination of Trihydrate Alumina(THA-140°C), Monohydrate Alumina(MHA-240°C)& Reactive Silica	Nos	4.1.17a	6,700	5	33,500	TCC-II recommended in 3rd meeting
	Determination of Trihydrate Alumina (THA-140°C)	Nos	4.1.17b	2,000	5	10,000	TCC-II recommended in 3rd meeting

	Determination of Monohydrate Alumina(MHA-240°C)	Nos	4.1.17c	3,500	5	17,500	TCC-II recommended in 3rd meeting
	Determination of Reactive Silica	Nos	4.1.17d	1,500	5	7,500	TCC-II recommended in 3rd meeting
	Determination of Bond Work Index	Nos	4.1.17e	10,000	5	50,000	TCC-II recommended in 3rd meeting
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
iii	Preparation of polished section	Nos	4.3.3	1,185	10	11,850	
ii	petrographic/ore microscopic study	Nos	4.3.4	4,232	20	84,640	
v	Digital Photographs	Nos	4.3.7	280	20	5,600	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
	XRD	Nos	4.5.1	4,000	10	40,000	TCC-II recommended in 3rd meeting
	Determination of insitu bulk density	Nos	4.10	3,540	10	35,400	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
	Sub Total G					**32,84,181**	
H	**Total A to H**					**1,60,88,893**	GST will be reimburse as per actual and as per notified prescribed rate
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	Exploration cost exceeding 50 lakh but less than 150 lakh : A Minimum of ₹2.5 lakh or 5% of the work whichever is more		**8,04,445**	

J	**Peer review Charges**		**As per EC decision**				
K	**Preparation of Exploration Proposal (5 Hard copies with a soft copy)**	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is less		**3,21,778**	
L	**Total Estimated Cost without GST**					**1,72,15,116**	
M	**Provision for GST (18% of J)**					**30,98,721**	
N	**Total Estimated Cost with GST**					**2,03,13,836**	
				or Say Rs. In Lakhs		**203.14**	
Note:							
1	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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.						

Annexure 8B

Time Schedule/ Action Plan for Preliminary Exploration (G-3 Stage) for Aluminous Laterite/Bauxite and Gallium in Sandhan Block, Kachchh District, Gujarat.

S. No.			1	2	3	4	5	Review	6	7	8	9	10	11	12	13	14
1	Camp Setting	**Months**															
2	Geological Mapping & Sampling	**days**															
3	Surface Drilling (1 rigs)	**months**															
4	Pitting	**days**															
4	Survey Party days	**days**															
5	Geologist Man days(field)	**days**															
6	Sampler Man days	**days**															
7	Camp Winding	**months**															
8	Laboratory Studies	**Nos.**															
9	Report Writing with Peer Review	**months**															

Annexure 9A

Estimate Cost for Preliminary Exploration (G-3 Stage) for Bauxite, Gallium, Vanadium & REE in Naredi Bauxite Block, Kachchh District, Gujarat. Total Area - 3.92 Sq. Km; Drilling- 910m, BH- 91 nos. , Completion Time - 14 Months, Review: after 5 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.	Total Amount (Rs)	
A	**Geological Mapping Other Geological Work & Surveying**						
	Geological mapping, (1:4,000 scale)						
i	a. Charges for Geologist per day (Field) for geological mapping(60 days) & drilling work(100 days)	day	1.3	11,000	160	17,60,000	
ii	b. Labours Charges; Base rate	day	5.7	526	320	1,68,320	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	c. Charges for Geologist per day (HQ)	day	1.3	9,000	60	5,40,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	88	4,48,800	
	e. Labours Charges; Base rate	day	5.7	526	352	1,85,152	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub Total- A					**31,02,272**	
C	**Survey work**						

a	Surveyor for topographic survey/DGPS Survey and for BH fixation & RL determination(91 BH plus 5 Boundary points)	Per Point of observation	1.6.2	19,200	96	1843200	
b	Charges of Surveyor (1 party) for topographic mapping in 1:4000 scale	one surveyor per day	1.6.1a	8,300	45	373500	
c	Labours Charges for survey work(4 labourers)	day	5.7	526	180	94680	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total C					**23,11,380**	
E	**DRILLING**						
1	Drilling in soft rock 10.0m,or upto bedrock whichever is occuring first (91 BH *10)	m	2.2.1.1b	7,168	910	65,22,880	As per MoC. In Phase 1, 400X400m grid spacing, Phase 2 will be based review of Phase 1 results.
2	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH					as per actuals / SoC and details will be submitted during Review
3	Transportation of Drill Rig & Truck associated per drill (1 rigs)	Km	2.2.8	36	3,493	1,25,748	To & From from Mangalore to Naredi
4	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	4	2,00,000	
5	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
6	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
7	Drill core Preservation	m	5.3	1,590	910	14,46,900	
	Sub Total E					**87,95,528**	
G	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
v)	**BH Core samples**						

	Primary + 10 % Check Sample for major oxides and LOI by XRF technique(one third of total 910 samples)	Nos	4.1.15a	4,200	333	13,98,600	
	b.Primary +check samples For REE ,Ga,V ,Sc,Y,Nb,Ta,Li and other Trace elements : by ICPMS 34 elements : by ICPMS(one third of total 910 samples)	Nos	4.1.14	7,731	333	25,74,423	TCC-II recommended in 3rd meeting
	Analysis for Gold by fire assay technique	Nos	4.1.5a	2,380	10	23,800	TCC-II recommended in 3rd meeting
	Combined determination of Trihydrate Alumina(THA-140°C), Monohydrate Alumina(MHA-240°C)& Reactive Silica	Nos	4.1.17a	6,700	5	33,500	
	Determination of Trihydrate Alumina (THA-140°C)	Nos	4.1.17b	2,000	5	10,000	
	Determination of Monohydrate Alumina(MHA-240°C)	Nos	4.1.17c	3,500	5	17,500	
	Determination of Reactive Silica	Nos	4.1.17d	1,500	5	7,500	
	Determination of Bond Work Index	Nos	4.1.17e	10,000	5	50,000	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
iii	Preparation of polished section	Nos	4.3.3	1,185	10	11,850	
ii	petrographic/ore microscopic study	Nos	4.3.4	4,232	10	42,320	
v	Digital Photographs	Nos	4.3.7	280	10	2,800	
	XRD	Nos	4.5.1	4,000	10	40,000	TCC-II recommended in 3rd meeting
	Determination of insitu bulk density	Nos	4.10	3,540	10	35,400	
	Sub Total G					**42,71,223**	
H	**Total A to H**					**1,84,80,403**	
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	Exploration cost exceeding 50 lakh but less than 150 lakh : A		**9,24,020**	Reimbursement will be made after submission of the final Geological Report in Hard

				Minimum of ₹2.5 lakh or 5% of the work whichever is more			Copies (5 Nos) and the soft copy to NMET.
J	**Peer review Charges**		**As per EC decision**				
K	**Preparation of Exploration Proposal (5 Hard copies with a soft copy)**	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is less		**3,69,608**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
L	**Total Estimated Cost without GST**					**1,97,74,031**	
M	**Provision for GST (18% of J)**					**35,59,326**	GST will be reimburse as per actual and as per notified prescribed rate
N	**Total Estimated Cost with GST**					**2,33,33,357**	
				or Say Rs. In Lakhs		**233.33**	
Note:							
1	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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.						

Annexure 9B

Time Schedule/ Action Plan for Preliminary Exploration (G-3 Stage) for Bauxite and Gallium in Naredi Bauxite Block, Kachchh District, Gujarat.

S. No.			1	2	3	4	5		6	7	8	9	10	11	12	13	14
1	Camp Setting	**Months**															
2	Geological Mapping & Sampling	**days**															
3	Surface Drilling (1 rigs)	**months**															
4	Survey Party days	**days**															
5	Geologist Man days	**days**															
6	Sampler Man days	**days**															
7	Camp Winding	**months**															
8	Laboratory Studies	**Nos.**															
9	Report Writing with Peer Review	**months**															

Annexure 10A

Estimate cost sheet for Reconnaissance Survey (G-4 stage) for Lithium and associated minerals in Great Rann of Kachchh, Gujarat.
Area: 45 sq. km.,
Scheduled Timeline: 6 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.	Total Amount (Rs)	
A	**Geological Mapping Other Geological Work & Surveying**						
	Geological mapping, (1:10,000 scale) & Trenching , drilling work						
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.2	11,000	60	6,60,000	
ii	b. Labours Charges (2 Nos)	day	5.7	526	120	63,120	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	c. Charges for Geologist per day (HQ)	day	1.2	9,000	30	2,70,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	15	76,500	
	e. Labours (4 Nos)	day	5.7	522	60	31,320	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub Total- A					**11,00,940**	
B	**Ground Geophysical Survey**						

1	IP. Induced Polarization (I.P) cum Resistivity S.P and Magnetic (30 Lkm)	8-10 Line Km					
3	Geophysicist party days (Field)	per day					
4	c. Labours Charges	day					
5	Geophysicist party days (HQ)	per day					
	Sub Total- B					-	
C	**Survey work**						
a	DGPS Survey for BH fixation & RL determination	Per Point of observation					
b	Charges of Surveyor (1 party) for Geophysical survey layout work & Block boundary demarcation	one surveyor per day	1.6.1a	8,300	60	498000	
c	Labours Charges for survey work;	day	5.7	522	240	125280	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total C					**6,23,280**	
D	**Trenching/Pitting**						
	a) Excavation of Pits	per cu.m	2.1.2	3,800	40	**1,52,000**	
E	**DRILLING (after review)**						
1	Drilling up to 300m (Hard Rock)	m					
2	Borehole deviation Survey by Multishot Camera	m					
3	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH					
4	Construction of concrete Pillar (12"x12"x30")	per borehole					
5	Transportation of Drill Rig & Truck associated per drill (2 rigs)	Km					

6	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month					
7	Drilling Camp Setting Cost	Nos					
8	Drilling Camp Winding up Cost	Nos					
9	Road Making (Flat Terrain)	Km					
10	Drill Core Preservation	per m					
	Sub Total E						
F	**Borehole Geophysical Logging**	5 Bhs of 350m each					
G	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)**						
	a. analysis of sample for determination of a package by 34 elements by ICPMS	Nos	4.1.14	7,731	-	-	
	b. Rapid Geochemical analysis by AAS method for first Five radicals	Nos	4.1.7a	2,506	-	-	
	c. Rapid Geochemical analysis by AAS method for other 5 radicals (Li, Cs, Au, Ag, Cd)	Nos	4.1.7b	1,675	-	-	
ii)	**Surface Check samples (10% External)**						
	a. analysis of sample for determination of a package by 34 elements by ICPMS	Nos	4.1.14	7,731	-	-	
	b. Rapid Geochemical analysis by AAS method for first Five radicals	Nos	4.1.7a	2,506	-	-	
	c. Rapid Geochemical analysis by AAS method for other 5 radicals (Li, Cs, Au, Ag, Cd)	Nos	4.1.7b	1,675	-	-	

iii)	**Pitting/ Trench & Check Samples from Trench**						
	Pitting/Trench samples						
	a. analysis of sample for determination of a package by 34 elements by ICPMS	Nos	4.1.14	7,731	40	3,09,240	
	b. Rapid Geochemical analysis by AAS method for first Five radicals	Nos	4.1.7a	2,506	40	1,00,240	
	c. Rapid Geochemical analysis by AAS method for other 5 radicals (Li)	Nos	4.1.7b	1,675	40	67,000	
iv)	**Pitting/Trench Check samples (10% External)**						
	a. analysis of sample for determination of a package by 34 elements by ICPMS	Nos	4.1.14	7,731	-	-	
	b. Rapid Geochemical analysis by AAS method for first Five radicals	Nos	4.1.7a	2,506	-	-	
	c. Rapid Geochemical analysis by AAS method for other 5 radicals (Li)	Nos	4.1.7b	1,675	-	-	
v)	**BH Core samples**						
	a. Au by Fire Assay	Nos					
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by ICPMS-34 elements	Nos					
	c. For PGE	Nos					
vi)	**BH Core samples (10%External)**						
	a. Au by Fire Assay	Nos					
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos					
	c. For PGE	Nos					
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
ii	Study of thin section	Nos	4.3.4	4,232	10	42,320	
iii	Preparation of polish section	Nos					
iv	study of polished section	Nos					

v	Digital Photographs	Nos	4.3.7	280	10	2,800	
vi	Whole Rock Analysis	Nos					
vii	Sp. Gravity	Nos					
	SEM Studies	per hour					
viii	EPMA studies	per hour					
						5,45,130	
H	**Total A to H**					**24,21,350**	
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	Exploration cost exceeding 50 lakh but less than 150 lakh: A Minimum of ₹2.5 lakh or 5% of the work whichever is more		**1,21,068**	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 decision**			**30,000**	
K	**Preparation of Exploration Proposal (5 Hard copies with a soft copy)**	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is less		**48,427**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
L	**Total Estimated Cost without GST**					**26,20,845**	
M	**Provision for GST (18% of L)**					**4,71,752.01**	GST will be reimburse as per actual and as per notified prescribed rate
N	**Total Estimated Cost with GST**					**30,92,597**	
				or Say Rs. In Lakhs		**30.93**	
Note:							
1	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 execusion of the project by NEA on its own, a Certifiate regarding non outsourcing of any component/project is required.						

Annexure 10B

Time Schedule/ Action plan of Reconnaissance Survey (G-4 stage) for Lithium and associated minerals in Great Rann of Kachchh, Gujarat.

Sl. No.	Activities	Unit	1	2	3	4	5	6
1	Desktop Studies	Month						
2	Camp setting	m.						
3	Survey Party days (2 Party)	day						
4	Geologist Party days in field (2 Party)	day						
5	Pitting/Trenching/ Geochemical Sampling	Nos.						
6	Sampling Party days (1 party)	day						
7	Laboratory Studies	Nos.						
8	Camp Winding	Month						
9	Geologist Party days in HQ (1 Party)	day						
10	Geological Report Writing with Peer Review	Month						
11	Peer review	Month						

Annexure 11

Review for Reconnaissance Survey (G-4 stage) for Base metal in Thal-Didihat–Askot area, Pithoragarh District, Uttarakhand.
Total Area - 92 sq. km; **Nos. of Borehole:** 3 **-Core drilling: 600m**; **Completion Time -**12 Months

S.N	Item of work	Unit	Rates as per NMET SoC		Estimated Cost of the Proposal		Proposed Revised Cost			Remarks
			SoC-Item - Sl No.	Rates as per SOC	Quantum	Total Amount (Rs)	Rates as per SOC	Quantum	Total Amount (Rs)	
1	**Geological Work**									
A	**Geological Mapping & sampling (1:12,500 scale)**	92 sq km								
a	Geologists (HQ) days (1 No)	Man-days	1.2	9,000.00	45	4,05,000.00	9,000.00	45	4,05,000.00	
b	Geologist field-days	Man-days	1.2	11,000.00	180	19,80,000.00	11,000.00	250	27,50,000.00	92 sq.km
c	Labor (Field days) (2 workers per geologist)	per labor day	5.7	504.00	360	1,81,440.00	504.00	500	2,52,000.00	Amount will be reimbursed as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher

B	**Pitting/trenching**	92 sq km								
a	Pitting	per cubic meter	2.1.2	3,800.00	100	3,80,000.00	3,800.00	100	3,80,000.00	No of samples 20 samples
	Sub-Total 1					**29,46,440.00**			**37,87,000.00**	
2	**Laboratory Studies**									
A	**Geochemical Analysis for regional and detail survey**									Sample: 100 BRS, 80 Stream sediments and 20 Pit samples
a	XRF (major oxides)	per sample	4.1.15a	4,200.00	20	84,000.00	4,200.00	20	84,000.00	
b	Check samples for XRF- External 10%	per sample	4.1.15a	4,200.00	2	8,400.00	4,200.00	2	8,400.00	
c	AAS Method	per sample	4.1.7a	2,506.00	200	5,01,200.00	2,506.00	200	5,01,200.00	
d	Check samples for AAS - External 10%	per sample	4.1.7a	2,506.00	20	50,120.00	2,506.00	20	50,120.00	
e	ICPMS (34 elements)	per sample	4.1.14	7,731.00	50	3,86,550.00	7,731.00	200	15,46,200.00	
f	Analysis for gold by fire assay technique	per sample	4.1.5a				2,380.00	50	1,19,000.00	Sample:Both BR and Drill samples
g	Sampler man-days	one sampler per day	1.5.2	5,100.00	36	1,83,600.00	5,100.00	62	3,13,650.00	

h	Labor (Man days) (4 labours per sampler)	per labor day	5.7	504.00	144	72,576.00	504.00	246	1,23,984.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
	Sub-Total 2					**12,86,446.00**			**27,46,554.00**	
3	**Petrological studies**									
a	Thin section preparation	per sample	4.3.1	2,353.00	20	47,060.00	2,353.00	20	47,060.00	
b	Microscopic study	per sample	4.3.4	4,232.00	20	84,640.00	4,232.00	20	84,640.00	
c	EPMA (10 samples, 20 hours)	per hour	4.4.1	8,540.00	20	1,70,800.00	8,540.00	20	1,70,800.00	
	Sub-Total 3					**3,02,500.00**			**3,02,500.00**	
4	**Geophysical Survey (After Review)**									
a	IP cum resistivity, S.P., magnetic (8-10 line km)	per line km	3.4.b	14,48,693.00	1	14,48,693.00	14,48,693.00	1	14,48,693.00	
b	Ground Magnetic (10 sq km, 1,000 station)	per station	3.2a	1,800.00	160	2,88,000.00	1,800.00	160	2,88,000.00	
c	Resistivity profiling	per line km	3.6a				58,880.00	30	17,66,400.00	

d	Expert Charges for Geophysicist (Field)	Geophysicist per day	3.18	9,000.00	20	1,80,000.00	9,000.00	25	2,25,000.00	
	Sub-Total 4					**19,16,693.00**			**37,28,093.00**	
	Review									
5	**Geological Work (After Review,Drilling in-house)**									
a	Core drilling up to 400m depth (3 BH)	per meter	2.2.1.3a	10,100.00	600	60,60,000.00	10,100.00	600	60,60,000.00	No of samples 300 samples
b	Land / Crop Compansation	per BH	5.6				20000	3	60,000.00	as per actual
c	Transportation of Drill Rig & Truck associated per drill (2 rigs)-Two way	km	2.2.8				36	6400	2,30,400.00	as per actual
d	Monthly Accomodation Charges for drilling Camp	month	2.2.9				50000	3	1,50,000.00	
e	Drilling Camp Setting Cost	Nos	2.2.9a				250000	1	2,50,000.00	
f	Drilling Camp Winding up Cost	Nos	2.2.9b				250000	1	2,50,000.00	
g	Approach Road making for rugget/hilly terrain	km	2.2.10b				32200	6	1,93,200.00	as per actual
h	Drill Core Preservation	per meter	5.3.0	1,590.00	500	7,95,000.00	1,590.00	500	7,95,000.00	
	Sub-Total 5					**68,55,000.00**			**79,88,600.00**	
6	**Laboratory Studies (After**									

	Review, BH samples)									
A	**Geochemical Analysis (BH samples)**									(100 BH Sample)
a	AAS Method	per sample	4.1.7a	2,506.00	100	2,50,600.00	2,506.00	100	2,50,600.00	
b	Check samples for AAS - External 10%	per sample	4.1.7a	2,506.00	10	25,060.00	2,506.00	10	25,060.00	
d	ICPMS (34 elements)	per sample	4.1.14	7,731.00	20	1,54,620.00	7,731.00	20	1,54,620.00	
e	XRD	per sample	4.5.1	4,000.00	10	40,000.00	4,000.00	10	40,000.00	
f	EPMA (5 samples, 10 hours)	per hour	4.4.1	8,540.00	10	85,400.00	8,540.00	10	85,400.00	
g	Sampler man-days	per day	1.5.2	5,100.00	19	96,900.00	5,100.00	19	95,625.00	
h	Labor (Man days) (4 labours per sampler)	per labor day	5.7	504.00	76	38,304.00	504.00	75	37,800.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
	Sub-Total 6					**6,90,884.00**			**6,89,105.00**	
7	**Petrological studies (BH samples)**									
a	Thin section preparation	per sample	4.3.1	2,353.00	10	23,530.00	2,353.00	10	23,530.00	
b	Microscopic study	per sample	4.3.4	4,232.00	10	42,320.00	4,232.00	10	42,320.00	

	Sub-Total 7					**65,850.00**			**65,850.00**	
	Total (Sub-Total 1-7)					**1,40,63,813.00**			**1,93,07,702.00**	
8	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	Lumpsum	5.1	2% of the cost subject to a maximum of 5 lakhs	1	2,81,276.26	2% of the cost subject to a maximum of 5 lakhs	1	3,86,154.04	This amount 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.

9	Final report preparation	3% of project cost or 7.5 lakh whichever is higher	5.2	For the projects having cost exceeding 300 lakhs-A minimum of 9 lakhs or 3% of the value of work whichever is more	1	7,03,190.00	Reconnaissance Survey/ Preliminary exploration/General exploration/Detailed exploration exceeding ₹150 lakh but less than 300 lakh: A Minimum of ₹7.5 lakh or 3% of the work whichever is more and ₹3000/- per each additional copy.	1	7.50,000	Final report submission, peer review and project conclusion
10	Operation cost		6			6,39,125.00			0	
11	Tendering cost		2.3			1,37,100.00			-	
12	Report Peer Review	Lump sum	As per EC	30,000.00	1	30,000.00	30,000.00	1	30,000.00	
Project Cost without GST						**1,58,54,504.26**			**1,97,23,856.04**	
18% GST						**28,53,810.77**			**35,50,294.09**	GST will be reimbursed as per actual and as per the applicable notified rate
Total Project Cost						**1,87,08,315.03**			**2,32,74,150.13**	**24.41% increase**

Annexure 12

Review for Reconnaissance Survey (G-4 stage) for Mailar Base Metal-Gold prospect block in Mailar area, Lalitpur District, Uttar Pradesh.
Total Area - 206 sq. km; **Core drilling: 4**; **Completion Time -**12 Months, **Review:** 6 months and 10 months

S.N	Item of work	Unit	Rates as per NMET SoC		Estimated Cost of the Proposal					Remarks
			SoC-Item - Sl No.	Rates as per SOC	Quantum	Total Amount (Rs)	Rates as per SOC	Quantum	Total Amount (Rs)	
1	**Geological Work**									
A	**Geological Mapping (1:25000) & sampling**	206 sq km								
a	Geologists (HQ) days (1 No)	one geologist per day	1.2	9,000.00	60	5,40,000.00	9,000.00	60	5,40,000.00	
b	Geologist field-days (2 No. geologists for 60 days)	one geologist per day	1.2	11,000.00	180	19,80,000.00	11,000.00	180	19,80,000.00	206 sq.km
c	Labor (Field days) (2 workers per geologist, i.e Total 4 No.)	per labor day	5.7	504.00	360	1,81,440.00	504.00	360	1,81,440.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
B	**Auger Drilling and pitting**	per meter	2.2.2	4,760.00	100	4,76,000.00				
a	Pitting	per cu.m	2.1.3	5,330.00	250	13,32,500.00	5,330.00	250	13,32,500.00	No of samples 60 samples

	Sub-Total 1					**45,09,940.00**			**40,33,940.00**	
2	**Laboratory Studies**									
A	**Geochemical Analysis for regional and detail survey**									40 BRS; 100 Auger drilling sample; 60 pitting samples
a	XRF (major oxides)	per sample	4.1.15a	4,200.00	30	1,26,000.00	4,200.00	100	4,20,000.00	10% of total sample
b	Check samples for XRF	per sample	4.1.15a	4,200.00	3	12,600.00	4,200.00	10	42,000.00	
c	ICPMS (34 elements)	per sample	4.1.14	7,731.00	200	15,46,200.00	7,731.00	200	15,46,200.00	10% of total sample
d	Analysis for gold by fire assay technique	per sample	4.1.5a	2,380.00	50	1,19,000.00	2,380.00	50	1,19,000.00	10% of total sample
e	Check samples	per sample	4.1.5a	2,380.00	5	11,900.00	2,380.00	5	11,900.00	
f	XRD	per sample	4.5.1	4,000.00	50	2,00,000.00	4,000.00	50	2,00,000.00	10% of total samples
g	Sampler man-days	one sampler per day	1.5.2	5,100.00	42	2,14,200.00	5,100.00	52	2,64,562.50	
h	Labor(4 workers per sampler)	per labor day	5.7	504.00	168	84,672.00	504.00	208	1,04,580.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
	Sub-Total 2					**23,14,572.00**			**27,08,242.50**	
3	**Petrological studies**									
a	Thin section preparation	per sample	4.3.1	2,353.00	25	58,825.00	2,353.00	50	1,17,650.00	

b	Microscopic study	per sample	4.3.4	4,232.00	25	1,05,800.00	4,232.00	50	2,11,600.00	
	Sub-Total 3					**1,64,625.00**			**3,29,250.00**	
4	**Geophysical Survey**									
a	S.P. & Shallow electrical resistivity (10-20 line km)	per line km	3.3c	60,000.00	20	12,00,000.00	60,000.00	20	12,00,000.00	
b	Magnetic (20 sq km, 2000 points)	per station	3.2a	1,800.00	2000	36,00,000.00	1,800.00	2000	36,00,000.00	
c	Expert Charges for Geophysicist (Field)	Geophysicist per day	3.18	9,000.00	40	3,60,000.00	9,000.00	40	3,60,000.00	
	Sub-Total 4					**51,60,000.00**			**51,60,000.00**	
5	**Geological Work (Drilling In-house)**									
a	Core drilling up to 400m depth (4 BH*200m)	per meter	2.2.1.4a	11,500.00	600	69,00,000.00	11,500.00	800	92,00,000.00	No of samples 200 samples
	Core drilling between 301 to 400 m	per meter	2.2.1.4b	12,420.00	200	24,84,000.00				
c	Land / Crop Compansation	per BH	5.6				20,000.00	4.00	80,000.00	In house drilling 1250 km from Kolktata to Lalitpur (2 rigs, 2 trucks to and fro)
d	Transportation of Drill Rig & Truck associated per drill (2 rigs)-Two way	km	2.2.8				36.00	5,000.00	1,80,000.00	

e	Monthly Accomodation Charges for drilling Camp	month	2.2.9				50,000.00	4.00	2,00,000.00	
f	Drilling Camp Setting Cost	Nos	2.2.9a				2,50,000.00	1.00	2,50,000.00	
g	Drilling Camp Winding up Cost	Nos	2.2.9b				2,50,000.00	1.00	2,50,000.00	
h	Approach Road making for rugget/hilly terrain	km	2.2.10b				32,200.00	4.00	1,28,800.00	
i	Drill core preservation	per meter	5.3.0	1,590.00	500	7,95,000.00	1,590.00	500	7,95,000.00	
	Sub-Total 5					**1,01,79,000.00**			**1,10,83,800.00**	
6	**Laboratory Studies**									
7	**Geochemical Analysis (BH samples)**									(200BHS)
a	XRF (major oxides)	per sample	4.1.15a	4,200.00	30	1,26,000.00	4,200.00	100	4,20,000.00	10% of total sample
b	Check samples for XRF	per sample	4.1.15a	4,200.00	3	12,600.00	4,200.00	10	42,000.00	
c	ICPMS (34 elements)	per sample	4.1.14	7,731.00	200	15,46,200.00	7,731.00	200	15,46,200.00	
d	Analysis for gold by fire assay technique	per sample	4.1.5a	2,380.00	50	1,19,000.00	2,380.00	50	1,19,000.00	10% of total sample
e	Check samples	per sample	4.1.5a	2,380.00	5	11,900.00	2,380.00	5	11,900.00	
f	XRD	per sample	4.5.1	4,000.00	20	80,000.00	4,000.00	20	80,000.00	10% of total samples

g	EPMA	per hour	4.4.1				8,540.00	10	85,400.00	
h	Sampler man-days	per day	1.5.2	5,100.00	39	1,98,900.00	5,100.00	39	1,98,900.00	
i	Labor (4 workers per sampler)	per labor day	5.7	504.00	156	78,624.00	504.00	156	78,624.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
	Sub-Total 6					**21,73,224.00**			**25,82,024.00**	
7	**Petrological studies (After Review)**									
a	Thin section preparation	per sample	4.3.1	2,353.00	50	1,17,650.00	2,353.00	50	1,17,650.00	
b	Microscopic study	per sample	4.3.4	4,232.00	50	2,11,600.00	4,232.00	50	2,11,600.00	
	Sub-Total 7					**3,29,250.00**			**3,29,250.00**	
	Total (Sub-Total 1-7)					**2,48,30,611.00**			**2,62,26,506.50**	
8	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	Lumpsum	5.1	2% of the cost subject to a maximum of 5 lakhs	1	4,96,612.00	2% of the cost subject to a maximum of 5 lakhs	1	5,00,000.00	This amount 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 TCCNMET in its meeting while clearing the proposal.

9	Final report preparation	3% of project cost or 7.5 lakh whichever is higher	5.2	For the projects having cost exceeding 150 lakhs but less than 300 lakhs-A minimum of 7.5 lakhs or 3% of the value of work whichever is more	1	7,50,000.00	For the projects having cost exceeding 150 lakhs but less than 300 lakhs-A minimum of 7.5 lakhs or 3% of the value of work whichever is more	1	7,86,795.20	Final report submission, peer review and project conclusion
10	Operation cost		6			9,74,375.00			0	
11	Tendering cost		2.3			2,39,750.00			-	
12	Report Peer Review	Lump sum	As per EC	30,000.00	1	30,000.00	30,000.00	1	30,000.00	
Project Cost without GST						**2,73,21,348.00**	**Project Cost without GST**		**2,75,43,301.70**	
18% GST						**49,17,842.64**	**18% GST**		**49,57,794.31**	GST will be reimbursed as per actual and as per the applicable notified rate
Total Project Cost						**3,22,39,190.64**	**Total Project Cost**		**3,25,01,096.00**	**0.81% increase**

Annexure 13

Review for Reconnaissance Survey (G-4 Stage) for REE Exploration in Bhuj Clay Prospect Block, Kachchh District, Gujarat
Total Area - 252 sq. km; Core Drilling: 600m, No of BHs= 4 ; Completion Time - 18 Months

S.N	Item of work	Unit	Rates as per NMET SoC		Estimated Cost of the Proposal		Rates as per NMET SoC		Revised Cost		Remarks
			SoC-Item - Sl No.	Rates as per SOC	Quantum	Total Amount (Rs)	SoC-Item - Sl No.	Rates as per SOC	Quantum	Total Amount (Rs)	
1	**Geological Work**										
A	**Geological Mapping (1:12,500) & sampling**										
a	Geologists (HQ) days (1 No)	one geologist per day	1.2	9,000.00	55	4,95,000.00	1.2	9,000.00	55	4,95,000.00	
b	Geologist field-days (2 No. geologists)	one geologist per day	1.2	11,000.00	180	19,80,000.00	1.2	11,000.00	250	27,50,000.00	252 sq.km
c	Labor (Field days) (2 workers per geologist)	per labor day	5.7	497.00	360	1,78,920.00	5.7	497.00	500	2,48,500.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
B	Pitting										
a	Pitting	per cu.m	2.1.2	3,800.00	20	76,000.00	2.1.2	3,800.00	200	7,60,000.00	25 pits, 200 cubic meter, 50 samples
	Sub-Total 1					**27,29,920.00**				**42,53,500.00**	
2	**Laboratory Studies**										
A	**Geochemical Analysis for**										10 Orientation sample, 60

	orientation, reconnaisance, regional survey										Reconnaisance sample, (100 BR,200 RS, 30SSS)
a	XRF (major oxides)	per sample	4.1.15a	4,200.00	40	1,68,000.00	4.1.15a	4,200.00	40	1,68,000.00	
b	Check samples for XRF	per sample	4.1.15a	4,200.00	4	16,800.00	4.1.15a	4,200.00	4	16,800.00	
b	Heavy Liquid Separation	per sample	4.3.6a	2,380.00	20	47,600.00	4.3.6a	2,380.00	20	47,600.00	
c	Magnetic Separation	per sample	4.3.6b	13,820.00	20	2,76,400.00	4.3.6b	13,820.00	20	2,76,400.00	
a	ICPMS (34 elements)	per sample	4.1.14	7,731.00	330	25,51,230.00	4.1.14	7,731.00	330	25,51,230.00	
b	Check samples for ICPMS	per sample	4.1.14	7,731.00	33	2,55,123.00	4.1.14	7,731.00	33	2,55,123.00	
a	XRD	per sample	4.5.1	4,000.00	40	1,60,000.00	4.5.1	4,000.00	40	1,60,000.00	
b	Check samples for XRD	per sample		4,000.00	0	-		4,000.00	0	-	
	Sub-Total 2					**34,75,153.00**				**34,75,153.00**	
3	**Petrological studies**										
a	thin section preparation	per sample	4.3.1	2,353.00	10	23,530.00	4.3.1	2,353.00	10	23,530.00	Only for orientation samples
b	Microscopic study	per sample	4.3.4	4,232.00	10	42,320.00	4.3.4	4,232.00	10	42,320.00	
c	SEM-EDX	per hour	4.4.2	2,940.00	30	88,200.00	4.4.2	2,940.00	30	88,200.00	
d	EPMA	per hour	4.4.1	8,540.00	15	1,28,100.00	4.4.1	8,540.00	15	1,28,100.00	No of samples 5
	Sub-Total 3					**2,82,150.00**				**2,82,150.00**	
4	**Sampling work**										
e	Sampler man-days	one sampler per day	1.5.2	5,100.00	62	3,16,200.00	1.5.2	5,100.00	62	3,16,200.00	

f	Labor (Field days) (4 workers per sampler)	per labor day	5.7	494.00	248	1,22,512.00	5.7	494.00	248	1,22,512.00	Amount will be reimburse as per the notified rates by the Central Labor Comission or respective State Govt. whichever is higher
	Sub-Total 4					**4,38,712.00**				**4,38,712.00**	
5	**Geophysical Survey (after review)**										
a	Resistivity Profiling (Station interval 200m.)	per line km	3.6a	58,880.00	40	23,55,200.00	3.6a	58,880.00	40	23,55,200.00	Geophysical survey along the structural discontinuities 20 line km and regolith and placer thikness determination 20 line-km
b	Magnetic Surveys (10-30 line km)	per station	3.2a				3.2a	1,800.00	0	-	60 sq. km.
c	Expert Charges for Geophysicist (HQ)	Geophysicist per day	3.18	9,000.00	10	90,000.00	3.18	9,000.00	0	-	
	Sub-Total 5					**24,45,200.00**				**23,55,200.00**	
6	**Geological Work (after review)**										
a	Core Drilling (4 Boreholes) 600m (in House)	per meter	2.2.2	4,760.00	60	2,85,600.00	2.2.1.3a	10,100.00	600	60,60,000.00	Core drilling is proposed in lieu of auger drilling.

b	Land / Crop Compensation	per BH					5.6	20000	4	80000	
c	Transportation of Drill Rig & Truck associated per drill (2 rigs)- Two way	km					2.2.8	36	9400	338400	As per actuals
d	Monthly Accomodation Charges for drilling Camp	month					2.2.9	50000	3	150000	
e	Drilling Camp Setting Cost	Nos					2.2.9a	250000	1	250000	
f	Drilling Camp Winding up Cost	Nos					2.2.9b	250000	1	250000	
g	Approach Road making for rugget/hilly terrain	km					2.2.10b	32200	4	128800	
h	Drill core preservation	per meter					5.3	1590	400	636000	
	Sub-Total 6					**2,85,600.00**				**78,93,200.00**	
7	**Laboratory Studies**										
	Geochemical Analysis (BH samples)										Drillcore samples' analysis
a	XRF (major oxides)	per sample					4.1.15a	4,200.00	100	4,20,000.00	pit sample 50; BH sample 600 samples for each meter

b	Check samples for XRF	per sample					4.1.15a	4,200.00	10	42,000.00	
c	ICPMS (34 elements)	per sample					4.1.14	7,731.00	300	23,19,300.00	
d	Sampler man-days	per day					1.5.2	5,100.00	51	2,61,375.00	
e	Labor (4 workers per sampler)	per labor day					5.7	504.00	205	1,03,320.00	
	Sub-Total 7									**31,45,995.00**	
	Total (Sub-Total 1-7)					**96,56,735.00**				**2,18,43,910.00**	
6	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	Lumpsum	5.1	2% of the cost subject to a maximum of 5 lakhs	1	1,93,134.70	5.1	2% of the cost subject to a maximum of 5 lakhs	1	5,00,000	This amount 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 TCCNMET in its meeting while clearing the proposal.
7	Final report preparation	A minimum of ₹ 9 lakh or 3% of the value of work whichever is more subject to a maximum amount of ₹ 20 lakh and ₹	5.2	For the projects having cost exceeding 150 lakhs but less than 300 lakhs-A minimum of 7.5 lakhs or	1	4,82,836.75	5.2	For the projects having cost exceeding 150 lakhs but less than 300 lakhs-A minimum of 7.5 lakhs or		6,55,317.30	This amount will be reimbursed after submission of the final Geological Report in Hard Copies (5 No.s) and the soft copy to NMET by the EA.

		10,000/- per each additional copy.		3% of the value of work whichever is more				3% of the value of work whichever is more			
8	Report Peer Review	Lump sum	As per EC	30,000.00	1	30,000.00	As per EC	30,000.00	1	30,000.00	
Project Cost without GST						**1,03,62,706.45**				**2,25,29,227.30**	
18% GST						**18,65,287.16**				**40,55,260.91**	
Total Project Cost						**1,22,27,993.61**				**2,65,84,488.21**	
						1,22,27,994.00				**2,65,84,488.21**	
										265.88Lakhs	

Annexure 14

Estimate Cost for Reconnaissance Survey (G-4 Stage) for Iron Ore in Mahakoshal Group around Chakdiya, Kushaniya, Jobra and Tusgaon area, Sonbhadra district, Uttar Pradesh.
; Area 18.56sq. km, No.of BH: 05, Borehole depth range 300m; Schedule timeline: 09months 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 No. *	Rates as per SoC * (a)	Qty. (b)	Total Amount (Rs) (a*b)	
A	**Geological Mapping Other Geological Work & Surveying**					-	
	Geological mapping, (1:12,500 scale) & Trenching , drilling work					-	
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.3	11,000	120	13,20,000	30 additional days seeking approval as only a few meters sampling was possible to collect in a day
ii	b. Labours Charges; Base rate	day	5.7	504	240	1,20,960	60 days extra
	c. Charges for Geologist per day (HQ)	day	1.3	9,000	35	3,15,000	5 day towards HQ days
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	56	2,85,600	25 days channel sampling)
	e. Labours (2 Nos)	day	5.7	504	224	1,12,896	100 days labour

	Sub Total- A					**21,54,456**	
B	**Ground Geophysical Survey**						
1	IP. Induced Polarization (I.P) cum Resistivity S.P and Magnetic (30 Lkm)	8-10 Line Km		-	-	-	
2	Geophysicist party days (Field)	per day		-	-	-	
3	c. Labours Charges	day		-	-	-	
4	Geophysicist party days (HQ)	per day		-	-	-	
	Sub Total- B					-	
C	**Survey work**						
a	DGPS Survey for BH fixation & RL determination	Per Point of observation	1.6.2	19,200	5	96000	5 DGPS survey points for 5 BH
b	Charges of Surveyor (1 party) for Geophysical survey layout work & Block boundary demarcation	one surveyor per day	1.6.1a	8,300	5	41500	5 days seeking
c	Labours Charges for survey work;	day	5.7	477	10	4,770	10 days
	Sub-Total C					**1,42,270**	
D	**Trenching/Pitting**						
	a) Excavation of Trenches	per cu.m	2.1.1	3,330			These were part of Channel sampling - this need to be cancelled under pitting/trenching head
E	**DRILLING (out sourced)/In house**						
1	Drilling up to 300m (Hard Rock)	m	2.2.1.5a	12,650	300	**3795000**	
2	Borehole deviation Survey by Multishot Camera	m				**0**	
3	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	1,590	-	**0**	
4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	-	**0**	

5	Transportation of Drill Rig & Truck associated per drill (2 rigs)	Km	2.2.8	36		**0**	2500 kms (2500X36 = 90000)
6	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	-	**0**	50000 per month (3months - 1,50,000)
7	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	-	**0**	250000
8	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	-	**0**	250000
9	Road Making (Flat Terrain)	Km	2.2.10b	32,200	-	**0**	1,61,000
10	Drill Core Preservation	per m	5.3	1,590	150	**238500**	
11	Drill Core Transportation	per km				**0**	
	Sub Total E					**4033500**	
F	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)**						
	a)Primary Samples (Drill core)for 5 Radicals Fe, Al2O3, P2O5&SiO2,LOI	per sample	4.1.15a	4,200	**375**	15,75,000	addional 150 samples need to be added (Channal samples)- 375 numbers
	(b)Check Samples-5Radicals Fe, Al2O3, P2O5&SiO2, LOI(20%)	per sample	4.1.15a	4,200	**38**	1,59,600	10% of the total samples (BRS / Channel Samples / Drill)- 38 samples
ii)	**Surface Check samples (10% External)**						
	a. Au by Fire Assay	Nos			-		
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos			-		

	c. For PGE	Nos			-		
iii)	**Trench & Check Samples from Trench**						
	Trench samples						
	a. Au by Fire Assay	Nos			-		
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos	4.1.14	7,731	10	77,310	Copper observed in the channel samples- Requested for 10 sample analysis
	c. For PGE	Nos			-		
iv)	**Trench Check samples (10% External)**						
	a. Au by Fire Assay	Nos			-		
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos			-		
	c. For PGE	Nos					
v)	**BH Core samples**						
	a. Au by Fire Assay	Nos			-		
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by ICPMS-34 elements	Nos			-		
	c. For PGE	Nos			-		
vi)	**BH Core samples (10%External)**						
	a. Au by Fire Assay	Nos			-		
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos			-		
	c. For PGE	Nos			-		
2	**Physical & Petrological Studies**						
i	Preparation of thin section	per sample	4.3.1	2,353	10	23,530	
ii	Study of thin section	per sample	4.3.4	4,232	10	42,320	
iii	Preparation of polish section	per sample	4.3.2	1,549	10	15,490	
iv	study of polished section	per sample	4.3.4	4,232	10	42,320	

v	Digital Photographs	per sample				-	
vi	Whole Rock Analysis	per sample	4.1.15a	4,200		-	10 samples requested
G	**Geotechnical Studies**	per sample				-	
a	Sp. Gravity Determination	per sample	4.8.1	1,605		-	5 samples requested
b	Bulk desnity	per sample	4.1	3,540	10	35,400	TCC - II recommended
						19,70,970	
	Total A to G					**83,01,196**	
H	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	**5.2 (i/ii/iii/iv)**	**1.00**	**4,15,060**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
I	**Peer review Charges**		**As per EC decision**			**30,000**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
J	**Preparation of Exploration Proposal (5 Hard copies with a soft copy)**	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is less	1	**1,66,024**	
K	**Tender Processing Cost**					**75,900**	Tender cost- not known (kindly include)
L	**Operational Charge**					**3,79,500**	operational cost not known (kindly include)
M	**Total Estimated Cost without GST**					**93,67,680**	
N	**Provision for GST (18% of J)**					**16,86,182**	GST will be reimburse as per actual and as per notified prescribed rate
O	**Total Estimated Cost with GST**					**1,10,53,862**	
				or Say Rs. In Lakhs		**110.54**	
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 execusion 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.**
5	**Any item of work not mentioned above shall be added as per SoC.**
*	**SoC Item No, Unit and Rate for each item of work must be as mentioned in the SoC.**