Ministry of Mines
National Mineral Exploration Trust
Minutes of 1st meeting of Technical-cum-Cost Committee -II (TCC-II) held on 26th and 27th September, 2024

The 1st meeting of Technical-cum-Cost Committee – II (TCC-II) of National Mineral Exploration Trust (NMET) was held under the Chairmanship of Shri Pradeep Singh, Deputy Director General (DDG), Geological Survey of India (GSI) and Chairman, TCC-II, NMET on 26th and 27th September, 2024 in Director General's Camp Office (DGCO), GSI, Delhi.

Members of TCC-II of NMET have attended the meeting in DGCO, GSI, Delhi and representatives from DGM Assam, DGM J&K, DGM Mizoram, MECL, CMPDI, Engeotech Consultant, Gems Projects Private Limited, GeoExpore Private Limited, Geovale Services Private Limited, Kartikay Exploration and Mining Services Private Limited, M/s Mining Tech Consultancy Services Limited, MPSMC, Geomarine, MMPL 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 extended a warm welcome to all TCC-II members and participants representing various Notified Exploration Agencies (NEAs) and Notified Private Exploration Agencies (NPEAs).

Agenda 1.1: Project Evaluation for In-Principle Approval

Agenda 1.1.1 Reconnaissance Survey (G4) for Limestone in and around Nanhwara Kymore Area, Katni District, Madhya Pradesh.
[Implementing Agency: Engeotech Consultant]

a) Nanhwara Kymore Area, Katni District, Madhya Pradesh, falls in SOI Toposheet no. 63D/12 and 64A/9.
b) Comments from GSI, MECL & DGM, MP has been received for the project. No chemical data is available to mark the potential of the block.
c) The committee suggested 3 BHs up to 50 m depth. Further, one BH may be drilled beyond 50 m up to bottom of limestone if its continuing.

Recommendation TCC-II:

The committee has given In-principle approval for the project. The committee recommended drilling of 3 nos. boreholes in triangular pattern with 1.8 km spacing. Out of this, 2nos. boreholes to be drilled to 30-meter depth each and 1 no. borehole may be drilled up to 50-meter depth.

Agenda 1.1.2 Reconnaissance survey (G4) for Graphite and other associated minerals in and around Kukurbandhwashivari, District Palamau, Jharkhand.
[Implementing Agency: Gems Projects Private Limited]

a) As per the comments shared by GSI, the proposed block has approximately 70 percent overlapping with already explored area by GSI.
b) The proposed block to be revised/demarcated excluding already explored area and to be resubmitted.

Recommendation TCC-II:

The committee does not agree for In-principle approval of the project. Unexplored area to be submitted in next proposal.

Agenda* 1.1.3 Reconnaissance survey (G4) for REE and associated minerals in Kharajwat Carbonatite Block, Tawa, Vadodara District, Gujarat.
[Implementing Agency: GeoExpOre Private Limited]

Agenda* 1.1.4 Reconnaissance survey (G4) for REE and associated mineralisation in and around Vasva River, Dahod and Chhota Udaipur District, Gujarat.
[Implementing Agency: GeoExpOre Private Limited]

Agenda* 1.1.5 Reconnaissance survey (G4) for REE and associated minerals in and around Khavda Block, Kachchh District, Gujarat.
[Implementing Agency: GeoExpOre Private Limited]

Agenda* 1.1.6 Reconnaissance survey (G4) for Graphite mineralisation in and around Pavijetpur, Chota Udaipur District, Gujarat.
[Implementing Agency: GeoExpOre Private Limited]

Agenda* 1.1.7 Reconnaissance survey (G4) for REE and associated mineralisation in and around Samatra Devpura Block, Kachchh District, Gujarat
[Implementing Agency: GeoExpOre Private Limited]

Agenda* 1.1.8 Reconnaissance survey (G4) for REE in Goma River Basin, Pachmahal District, Gujarat.
[Implementing Agency: Geovale Services Private Limited]

Agenda* 1.1.9 Reconnaissance survey (G4) for REE in Mesri River Basin, Pachmahal District Gujarat.
[Implementing Agency: Geovale Services Private Limited]

For Agenda 1.1.3 to Agenda 1.1.9 and 1.1.11 and 1.1.12 ***the CGM, Gujarat has informed that they have carved out 212 projects for mineral exploration in Gujarat and the proposal submitted by the agencies are part of the 212 projects. CGM Gujarat has requested for some more time to provide comments.***

Recommendation TCC-II:

In view of the above, TCC decided to defer the projects till receipt of comments from CGM Gujarat.

Agenda 1.1.10 Reconnaissance survey (G4) for Graphite & Vanadium in and around Lalpani area, Lohit District, Arunachal Pradesh.
[Implementing Agency: Kartikay Exploration and Mining Services Private Limited]

a) Lalpani area (52.20 sq. km. area), Lohit District, Arunachal Pradesh, falls in SOI Toposheet no. 92A/5 and 91D/8.
b) As per the comments shared by GSI, the area was previously explored for graphite and PGE. Further it is suggested to incorporate the details of earlier exploration carried out by GSI/other agencies in surrounding areas of revised block.

Recommendation TCC-II:

In principle approval given by the committee, subject to a revised block boundary as suggested by the committee.

Agenda 1.1.11 Reconnaissance survey (G4) for Lithium near Niruna and Dhoro Village, Lakhpat, Nakhatrana and Bhuj Taluka, Kachchh District, Gujarat (Toposheet: Parts of 41E/02 & 41E/06) Area: 230.96 Sq. Km.
[Implementing Agency: M/s Mining Tech Consultancy Services Limited]

The committee decided to defer the project till receipt of comments from CGM Gujarat.

Agenda 1.1.12 Reconnaissance survey (G4) for Lithium near Niruna and Dhoro Village, Nakhatrana and Bhuj Taluka, Kachchh District, Gujarat (Toposheet: Parts of 41E/06, E/07, E/10, E/11, E/14, E/15) Area: 272.85 Sq. Km.
[Implementing Agency: M/s Mining Tech Consultancy Services Limited]

The committee decided to defer the project till receipt of comments from CGM Gujarat.

Note: Agenda points 1.1.3, 1.1.4, 1.1.5, 1.1.6, 1.1.7, 1.1.8, 1.1.9, 1.1.11 and 1.1.12 were not discussed in the TCC-II, NMET meeting. The committee decided to defer the review till the receipt of comments from CGM, Gujarat for these project proposals.

Agenda 1.2: Technical Evaluation of New Project Proposals

Agenda 1.2.1 Preliminary (G3) exploration for Potash and associated minerals in Pitupura block, Sawai Madhopur and Karauli Districts, Rajasthan.
[Implementing Agency: GeoExpOre Private Limited]

a) Pitupura block (12.8 sq. km. area), Sawai Madhopur and Karauli Districts, Rajasthan, falls in SoI Toposheet no. 54B/15.
b) Existing data of 2 GSI boreholes to be included in the plan. In first phase 8 boreholes of 70-100 meter depth with 800 meter spacing to be drilled. Borehole actual section with bedding data to be shown. Geological mapping in 1:5000 scale to be carried out. Block coordinates should be given by DGPS. In map, location of surface samples and data are to be plotted. The committee agreed for 100 days field work in the project. In second phase 2 boreholes of 125-meter depth may be drilled if encouraging results are obtained on first phase of drilling. Instead of specific gravity, bulk density should be incorporated.
c) The committee recommended modification in Title of the project as “Preliminary (G3) exploration for Glauconite and associated minerals in Pitupura block, Sawai Madhopur and Karauli Districts, Rajasthan”.

d) The committee recommended BH profile/grid to be planned on map in such a way that two BHs already drilled by GSI are included in BH plan. Process of FC to be initiated with commencement of mapping activity.

Recommendation TCC-II

The committee recommends the proposal for the approval of EC for "Preliminary (G3) exploration for Glauconite and associated minerals in Pitupura block, Sawai Madhopur and Karauli Districts, Rajasthan" with an estimated cost of Rs. 195.03 lakh (including GST) within time schedule of 18 months and submission of report as per Annexures 2A & 2B. The item will be reviewed after 09 months.

Agenda 1.2.2 Preliminary exploration (G3) for Limestone in Sangmania Block, Satna District, Madhya Pradesh
[Implementing Agency: MPSMC]

a) MPSMC has proposed drilling of 19 vertical boreholes on a grid of 800m x 800m in an area of 4.07 km^2.
b) However, this drilling plan is not feasible in the proposed area of 4.07 km^2, since drilling 19 boreholes on 800m x 800m grid requires an area much larger than the proposed block area.
c) The committee recommended drilling in systematic grid pattern in 800 meter spacing. Borehole no. 6 and 4 are to be included in the plan. Stripping ratio should be given.
d) MPSMC has prepared revised cost sheet with proposed drilling of 10 vertical boreholes of 40m depth, on a grid of 800m x 800m in an area of 5.5 km^2.

Recommendation TCC-II

The committee recommends the proposal for the approval of EC for "Preliminary exploration (G3) for Limestone in Sangmania Block, Satna District, Madhya Pradesh" with an estimated cost of Rs. 112.65 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 3A & 3B. The item will be reviewed after 04 months.

Agenda 1.2.3 Reconnaissance survey (G4) for REE & associated minerals in and around Langmipi – Laching Thing Area (124.68 sq. km.), West Karbi Anglong District, Assam
[Implementing Agency: MECL]

a) The committee recommended basin pattern sampling in upper catchment areas. Drainage pattern to be shown on the map. Source of REE in upstream should be identified. Orientation pits are suggested by the committee. Stream sediments and soil (Regolith) samples to be collected & analysed. Panning is also suggested by the committee.
b) Decision on drilling to be taken at review based on chemical results of surface samples.

c) Recommended for preparation of drainage map, study of geomorphology of area, potassic alteration map in exposed part of area, identification of REE bearing minerals, methodology of heavy mineral separation.

Recommendation TCC-II

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G4) for REE & associated minerals in and around Langmipi - Laching Thing Area (124.68 sq. km), West Karbi Anglong District, Assam" with an estimated cost of Rs. 457.16 lakh (including GST) within time schedule of 15 months and submission of report as per Annexures 4A & 4B. The item will be reviewed after 08 months.

Agenda 1.2.4 Reconnaissance survey (G4) for Glauconite in Ambara West Block (143.15 sq. km.) Kachchh District, Gujarat
[Implementing Agency: MECL]

Recommendation TCC-II

The committee recommends the proposal for the approval of EC for "Reconnaissance survey (G4) for Glauconite in Ambara West Block Kachchh District, Gujarat" over an area of 143.15 km^2, with an estimated cost of 107.78 lakh (including GST), within time schedule of 12 months and submission of report as per Annexure 5A & 5B. The progress of work will be reviewed after 06 months.

Agenda 1.2.5 Reconnaissance survey (G4) for Glauconitic Sandstone in Kisanpur Block (52.00 sq. km.), Satna District, Madhya Pradesh
[Implementing Agency: MECL]

Recommendation TCC-II

The committee recommends the proposal for the approval of EC for "Reconnaissance survey (G4) for Glauconitic Sandstone in Kisanpur Block, Satna District, Madhya Pradesh" over an area of 52.17 km^2, with an estimated cost of 91.40 lakh (including GST), within time schedule of 12 months and submission of report as per Annexure 6A & 6B. The progress of work will be reviewed after 06 months.

Agenda 1.2.1: Procurement project

Agenda 1.2.1.1 Financial assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities.
[Implementing Agency: DGM J & K]

Not Presented

Agenda 1.3: Review of Ongoing Projects/ Completed Projects & Timeline Extension

Agenda 1.3.1 Preliminary Exploration for Bauxite in Dhuluapat block Lohardaga District, Jharkhand (Approval for Analysis of additional Primary samples)
[Implementing Agency: CMPDI]

a) Dhuluapat Bauxite block, Lohardaga District, Jharkhand, falls in SoI Toposheet no. 73A/11. Block area is 4.0 sq. km.

b) Timeline extension accorded by 65th TCC of NMET up to 31st December 2024.
c) CMPDI informed the committee that 303.20m drilling in 13 boreholes has been done against the approved drilling target of 300 meter.
d) Drilling work stopped by LWE on 19-09-2024. MECL intimated that the further drilling work in the block is not possible. However, 13 out of 15 proposed boreholes have been completed.
e) CMPDI asked permission of the committee to conclude the drilling work in the block due to Law &n Order situation, and preparation of Geological Report excluding South east part of the block i. e. 0.60 sq. km. area, as no borehole could be drilled in that part of the block.

Recommendation TCC-II

The committee recommended that after getting results of chemical analysis, resource may be calculated with the data from drilled borehole. The committee accorded the permission to conclude the drilling. Samples are required to be preserved based on the analytical results of REE. Ga, Sc, V & Zr to be analysed in sample from Bauxitic zones. Analysis of organic carbon to be excluded. Approval for analysis of additional primary samples will be accorded after the receipt of analytical results of already submitted samples. The committee also recommended that, CMPDI needs to seek approval from TCC-II of NMET for additional drilling, against the approved drilling target. The committee decided that the project will be reviewed in next meeting of TCC-II of NMET. Revised cost estimate to be submitted in the next TCC-II meeting.

Agenda1.3.2 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 informed the committee that NMET had approved financial assistance to the DGM costing ₹ 4,54,31,000 and has disbursed ₹ 2,02,12,400 in this regard, till date.
b) DGM has incurred an expenditure of ₹ 61,95,000/- till date. Further DGMR has floated GEM Tender using Custom Service Bidding on 16/09/2024 for 11 items .
c) DGM Mizoram requested to enhance the cost for Handheld GPS from ₹ 8,000 per item to ₹ 18,997, stating that minimum price of Handheld GPS during GeM survey was found to be ₹ 18,997
d) DGM Mizoram requested approval for additional item -Terrestrial Laser Scanner with a total cost of 1,10,00,000.00

Recommendation TCC-II

The committee recommended that DGM Mizoram may submit a revised proposal with justification for Handheld GPS. The committee did not recommend Terrestrial Laser Scanner to DGM Mizoram.

Agenda 1.3.3 Preliminary exploration (G3) for Vanadium and Titanium in Dandi-Onjal-Surwada Block in Navsari and Valsad Districts, Gujarat
[Implementing Agency: Geomarine]

a) Dandi-Onjal-Surwada Block in Navsari and Valsad Districts, Gujarat, falls in Toposheet nos. 46D/13 & 14

b) Geomarine informed the committee about Auger drilling in 37 BH points for 5.0 m depth in place of 73 Pits and 10 BH (as per MEMC rules for G3 exploration)

Recommendation TCC-II

The committee recommended EPMA study. Samples to be analysed for Niobium (Nb) and Tantalum (Ta) and also advised to follow timeline for report submission. The committee recommended 37 BH up to 5.0 m depth instead of 73 Pits & 10 BHs.

Agenda 1.3.4 Preliminary Exploration (G3) for Potash in Lakhasar East Block (7.16 sq. km), Lakhasar Sub Basin, Bikaner District, Rajasthan
[Implementing Agency: MECL]

a) Lakhasar East Block (7.16 sq. km area), Lakhasar Sub Basin, Bikaner District, Rajasthan in SOI Toposheet no. 44H/16. The block was technically evaluated in 39th meeting of TCC and approved in 28th EC meeting of NMET held on 16th March 2023, with an estimated cost of Rs. 15.51 Cr. and timeline of 18 months.
b) MECL informed the committee that the GR has been prepared and shared the comments of Peer Review with the committee.

Recommendation TCC-II

The committee recommended that the report should be submitted within timeline with Peer Review Comments.

Agenda 1.3.5 Reconnaissance Survey (G4) for REE in Sarnu Block (118.10 sq. km), Barmer District, Rajasthan
[Implementing Agency: MECL]

a) The project was recommended in 50th meeting of TCC of NMET (2nd & 3rd March 2023), and approved in 28th meeting of EC, NMET (16th March 2023) for 12-month duration at a cost of 69.92 Lakhs.
b) The project was reviewed in 64th TCC meeting on 25th April 2024 and 65th TCC meeting on 28th May 2024 & it was recommended to submit the Geological Report. In 68th TCC meeting timeline extension was given up to 30th September 2024.
c) The comments/observations of Peer Review have been received.

Recommendation TCC-II

The committee recommended that the timeline should be followed for report submission i. e. 30th September 2024.

Agenda 1.3.6 Reconnaissance survey (G4) for Iron in Parsili Karmai Block (18.34 sq. km), Sidhi District, Madhya Pradesh
[Implementing Agency: MECL]

a) Parsili Karmai Block falls in SOI Toposheet no. 63H/12. Project proposal was recommended in 58th TCC meeting of NMET held on 30th to 31st October 2023.
b) The block was approved in 32nd EC of NMET on 6th December 2023.
c) MECL informed the TCC-II committee, that the block was reviewed in 67th TCC meeting on 24th July 2024 and it was recommended to submit the Geological

Report. In 67th TCC meeting of NMET timeline extension was given till 30th September 2024.

d) The comments/ observations of Peer Review have been received on 23rd September 2024.

Recommendation TCC-II

The committee recommended that the extended timeline i. e. 30th September 2024, should be followed for report submission.

Agenda 1.3.7 Reconnaissance survey (G4) for Iron ore and Associated minerals in Karmai Chuwahi Block (33.40 sq. km), Sidhi District, Madhya Pradesh
[Implementing Agency: MECL]

a) Karmai Chuwahi Block (33.40 sq. km area), Sidhi District, Madhya Pradesh falls in SOI Toposheet no. 63H/12.
b) The project was recommended in 57th TCC meeting of NMET held on 26th September 2023 and approved in 32nd EC, NMET on 6th December 2023.
c) The project was reviewed in 68th TCC meeting on 28th August 2024, and it was recommended to submit the Geological Report.
d) In 68th TCC meeting, timeline extension was given till 30th September 2024. However, the comments/ observations of Peer Review have not been received.

Recommendation TCC-II

The committee accorded timeline extension up to 31st October 2024 (for 1 month) for report submission.

Agenda 1.3.8 Preliminary Exploration (G3) for Diamond in Adjacent area of Angira-B & Angira-A Block (2.30 sq. km), Chhattarpur District, Madhya Pradesh.
[Implementing Agency: MECL]

a) Adjacent areas of Angira-B & Angira-A Block (2.30 sq. km area), Chhattarpur District, Madhya Pradesh falls in SOI Toposheet no. 54P/07.
b) The project was recommended in 58th TCC of NMET, held on 30th & 31st October 2023 and approved in 32nd EC meeting held on 12th December 2023 for the period of 18 months.
c) MECL informed the committee that the exploration work commenced on 16th February 2024 after obtaining forest clearance for Geophysical Survey & Geological Mapping only, no sampling permission granted in this stage.

Recommendation TCC-II

The committee recommended cross checking of lamproite samples. The committee also approved infill Ground Magnetic and TDM survey followed by geochemical soil sampling and drill hole plan. Revised cost estimate to be submitted in the next TCC-II meeting.

Agenda 1.3.9 Preliminary Exploration (G3) for Bauxite, Titanium & Associated Minerals in Siskari Pat Block (0.28 sq. km), Lohardaga District, Jharkhand.
[Implementing Agency: MECL]

a) Siskari Pat Block, Lohardaga District, Jharkhand, falls in SOI Toposheet no. 73A/10.

b) On recommendation of 61st TCC, NMET, 33rd EC meeting, held on 19th February 2024 has approved the project with timeline of 6 months (up to 26-08-2024), with approved cost of 0.74 Cr.
c) MECL informed the committee that the exploration activities with Geological Mapping and Drilling was commenced in the month of April 2024. Currently 167 meter of drilling in 5 no of boreholes with generation of 153 primary core samples has been completed. Analysis of 2 nos. of boreholes received.
d) Analysis of 3 boreholes is under progress with physical studies.

Recommendation TCC-II

The committee accorded timeline extension up to 30th November 2024 (2 months) for report submission.

Agenda 1.3.10 Preliminary Exploration (G3) for Copper and Associated minerals in Thakurdih Area-1 Block (4.10 sq. km), Singhbhum Copper Belt, East Singhbhum District, Jharkhand.

[Implementing Agency: MECL]

a) Thakurdih Area-1 Block (4.10 sq. km area), Singhbhum Copper Belt, East Singhbhum District, Jharkhand, falls in SOI Toposheet no. 73J/11.
b) The project was recommended by 63rd TCC meeting of NMET (22nd, 26th and 27th march, 2024) and approved by 35th EC of NMET (16th March 2024)
c) MECL informed the committee that outcome of Phase-I work (7 boreholes), is encouraging. Hence phase-II work (infilling boreholes) is to be carried out.

Recommendation TCC-II

The committee recommended drilling of 3 boreholes in second phase in the locales where copper value is 0.5% or more. In addition, Bismuth (Bi), Germanium (Ge), Tellurium (Te), Tin (Sn), Gold (Au) and Silver (Ag) are to be checked. Additional 770 numbers of samples are approved by the committee. Revised cost estimate to be submitted in the next TCC-II meeting.

Agenda 1.3.11 Reconnaissance Survey (G4) for Iron Ore in Mahakoshal Group around Chakdiya, Kushaniya, Jobra and Tusgaon area, Sonbhadra District, Uttar Pradesh

[Implementing Agency: GeoExpOre Private Limited]

a) The progress of exploration in the project was presented by Geoexpore.

Recommendation TCC-II

The committee recommended channel sample collection across the thickest BIF bands. Two (2) channels are to be cut across the BIF bands at 1000m spacing and samples to be collected at 2-meter intervals on the most promising bands both in terms of strike continuity, width and assay value and restrict the total sample number to 150. The 50 numbers of trench samples will not be collected. Precise plot of Fe data along channel samples to be shown on the map. Quality of map must be improved. Since the terrain is structurally deformed there may be repetition of strata, hence sufficient no of structural data is to be plotted on the map. Analytical results are required for further recommendation. Revised cost estimate to be submitted in the next TCC-II meeting.

Agenda 1.3.12 Reconnaissance Survey (G4) for Graphite and associated Minerals around Sonaghati, Amdol, Jharegaon and Bhayawari, Betul District, Madhya Pradesh
[Implementing Agency: GeoExpOre Private Limited]

a) The progress of exploration in the project was presented by Geoexpore.
b) Graphite hosting target lithology to be identified. GP & trenching can only be recommended after establishing evidence of mineralisation on ground surface.

Recommendation TCC-II

The committee recommended that drilling is subject to demarcating the presence of appreciable content of Graphite on the ground. Geophysical profiling and trenching cannot be done without finding ground control for Graphite. Graphite bands are required to be plotted on map.

Agenda 1.3.13 Reconnaissance Survey (G4) for Graphite in Ranibandh Block in Bankura District, West Bengal
[Implementing Agency: MMPL]

a) Ranibandh Block in Bankura District, West Bengal falls in SOI Toposheet no. 73J/13.
b) MMPL presented the progress of work in the block and informed the committee that Forest clearance is awaited for the block.

Recommendation TCC-II

The committee noted the progress of work and advised MMPL to expedite forest clearance.

Agenda 1.3.14 Preliminary Exploration (G3) for Limestone in N.W. of Boro Lakhindong, Dima Hasao District, Assam
[Implementing Agency: MMPL]

a) Northwest of Boro Lakhindong block, Dima Hasao District, Assam falls in SOI Toposheet no. 83C/11 with 4.82 sq. km. area.
b) MMPL informed the committee, that approval for drilling is received from the North Cachar Hills Autonomous Council (NCHAC), administrative body having partial legislative and executive jurisdiction over the district of Dima Hasao in Assam and clearance from the DFO, Haflong is expected in due course of time. After the permission from the DFO office drill rigs will be set up in the site.

Recommendation TCC-II

The committee advised MMPL to seek the assistance of DGM Assam for seeking forest permission

Agenda 1.3.15 Reconnaissance survey (G4) for Iron Ore in Lengupara area, Goalpara District, Assam
[Implementing Agency: DGM ASSAM]

a) DGM, Assam informed the committee that geological report of the project has already been submitted to NMET.

Recommendation TCC-II

The committee accorded timeline extension for report submission up to 30th September 2024 for the project.

Agenda 1.3.16 Financial assistance from NMET funds to procure Machinery Laboratory Equipment/instruments etc. aimed at enhancing the exploration activities. [Implementing Agency: DGM J & K]

a) DGM J & K requested an extension in timeline (expired in May 2024) for utilising the funds for procurement.
b) DGM J & K informed that the LOI will be formalised soon.
c) The committee was informed that the EC of NMET in its 36th Meeting held on 29th July 2024 had had approved 12 months time extension for the project upto 31st May 2025 considering the model code of conduct during Assembly Elections and further Lok Sabha Elections

Recommendation TCC-II

No action. The committee informed DGM J & K that time extension has already been given for the project upto 31st May 2025.





Annexure 1

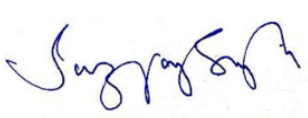
1st Technical-cum-Cost Committee (TCC-II) meeting held on 26h and 27th September, 2024 in hybrid mode.

S.No.	Name/ Designation	Status	Remarks
1	Shri Pradeep Singh, Dy. D.G, GSI	Chairman, TCC-II	Physical
2	Sh. Sanjay Singh, Director, GSI	Member Secretary	Physical
3	Sh. B S Jodha, Dy. D.G (Retired) GSI	Member	Physical
4	Sh M.K.Patel, Dy. D.G (Retired) GSI	Member	Physical
5	Sh. D.S.Jeere, Director, GSI	Member	Physical
6	Dr. Dilip Kanungo, Chief Ore Dressing Officer, IBM	Member	Physical
7	Dr. T.S.Sunil Kumar, Addl. Director (Retired), AMD	Member	Physical
8	Dr. Mrinal Kanti Mukherjee, Associate Professor, IIT- ISM Dhanbad	Member	Physical
9	Shri. Alok Kumar, Deputy Secretary, (IFD), Ministry of Mines.	Member	Not attended
10	Shri. Geetika Sharma Deputy Secretary ,NMET, Ministry of Mines	Member	Physical
11	Shri. P.K. Maharana, DGM (Finance), NALCO, Bhubaneswar	Member	Physical
12	Shri. Ravi Kumar Gupta General Manager (Finance) HCL, Kolkata	Member	VC
13	Sh. Sunil Kumar Vashisth, GM (Retired), HZL	Member	Physical
14	Sh. Anoop Kumar, CAO, GSI, CHQ Kolkata	Member	Physical

List of participants attended 1st Technical-cum-cost Committee (TCC-2) meeting of NMET held on 26th and 27th September, 2024 in hybrid mode

S. No.	Name/ Designation	Email ID	Contact No	Organization
1.	Dr. Pradeep Singh, Dy. Director General, GSI, Kolkata	ddg.it@gsi.gov.in	9810233957	Chairman, TCC -II
2.	Sh. Sanjay Singh, Director, GSI, Western Region, Jaipur	sanjay.singh3@gsi.gov.in	9928860884	Member Secretary TCC-II
3.	Sh. B S Jodha, Dy. Director General (Retired), GSI	jodha1961@gmail.com	9414023478	Member TCC-II
4.	Sh. Sunil Kumar Vashisth, GM (Retired), Hindustan Zinc Limited, Udaipur	sunilhzl@gmail.com	09829059236	Member TCC-II
5.	Sh Dilip Kanungo, Chief Ore Dressing officer, IBM	codo@ibm.gov.in	8237047897 9405147897	Member TCC-II
6.	Sh. D.S.Jeere, Director, GSI, RSAS Bengaluru.	dattatreya.jeere@gsi.gov.in		Member TCC-II
7.	Sh M.K.Patel, Dy. Director General (Retired), GSI	patelmk27@gmail.com	09040011231	Member TCC-II
8.	Dr. Mrinal Kanti Mukherjee, Associate Professor, IIT-ISM Dhanbad	mrinal@iitism.ac.in	9431711148	Member TCC-II
9.	Dr. T.S.Sunil Kumar, Addl. Director (Retired), AMD	ts.sunilkumar@gmail.com	9502560153	Member TCC -II
10	Ms. Geetika Sharma, Deputy Secretary & HoD, NMET, Ministry of Mines	geetika.sharma@gov.in	-	Member TCC-II
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12	Sh. Ravi Kumar Gupta, ED (Finance), HCL, Tamra Bhawan, 1, Ashutosh Chowdhury Avenue, Kolkata	ravi_g@hindustancopper.com	09433274328	Member TCC-II
13	Sh. P.K. Maharana, GM (Finance), NALCO, NALCO Bhawan, P/1, Nagapalli, Bhubaneswar	pmaharana@rediffmail.com	08500669500	Member TCC-II
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23	Representative from Uttar Pradesh	-	-	Uttar Pradesh
24	Representative from West Bengal	-	-	West Bengal
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51	Sh. K.D. Singh /TAE	kundan@gemsgroup.in	8789075572	Gems Projects Pvt. Ltd.
52	Sh. U.K. Ravi /TM	uditkumar@gemsgroup.in	8083380244	Gems Projects Pvt. Ltd.
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55	Sh. Jadhav Dileep Kumar (Sr Geologist)	dileep.kumar@kartikay.co.in	8956919711	Kartikay Exploration And Mining Services Pvt Ltd
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Annexure 2A

Estimated Cost Preliminary (G3) exploration for Glauconite and associated minerals in Pitupura block, Sawai Madhopur and Karauli Districts, Rajasthan

Area 12.80 sq. km, Scale: 1: 5000, No.of BH: 10, Borehole depth range- 85 m in phase 1 and 125 m in phase 2 , Schedule timeline-18 months Review: After 9 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, (1:5000 scale) & Trenching , drilling work						
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	**1.3**	11,000	**100**	11,00,000	
ii	b. Labours Charges; Base rate	day	5.7	522	200	1,04,400	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	1.3	9,000	30	2,70,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	48	2,44,800	
	e. Labours (4 Nos)	day	5.7	522	192	1,00,224	
	Sub Total- A					**18,19,424**	
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	10	192000	First phase 8 boreholes, second phase 02 BH
b	Charges of Surveyor (1 party) for Geophysical survey layout work & Block boundary demarcation	one surveyor per day	1.6.1(a)	8,300	30	249000	
c	Labours Charges for survey work;	day	5.7	522	120	62640	
	Sub-Total C					**5,03,640**	
D	**Trenching/Pitting**	Per Cu, m	2.1.1	3,330	100	333000	
	a) Excavation of Trenches (5 nos)	per cu.m					xon
E	**DRILLING (after review)**						
1	Drilling up to 300m (Medium Hard Rock)	m	2.2.1. (3a)	10,100	930	93,93,000	680 (85m x 8 BH) phase 1 and phase 2 (125m x 2 BH)
2	Borehole deviation Survey by Multishot Camera	m					
3	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	4	80,000	20% of the area in private land
4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	10	20,000	





5	Transportation of Drill Rig & Truck associated per drill (2 rigs)	Km	2.28	35	4,000	1,40,000	
6	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	per month	2.2.9	50,000	2	1,00,000	
7	Drilling Camp Setting Cost	per project	2.2.9a	2,50,000	1	2,50,000	
8	Drilling Camp Winding up Cost	per project	2.2.9b	2,50,000	1	2,50,000	
9	Road Making (Flat Terrain)	Km	2.2.10a	22,020	18	3,96,360	
10	Drill Core Preservation	per meter	5.3	1,590	300	4,77,000	
	Sub Total E					**1,11,06,360**	
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)**						
	BRS/Channel/Soil - Major Oxides (K2O, Na2O, P2O5, Fe2O3, MnO,MgO, CaO, TiO2, Al2O3, SiO2)	Per sample	4.1.15a	4,200	100	4,20,000	
ii)	**Surface Check samples (10% External)**					-	
	Major Oxides	Per sample	4.1.15a	4,200	10	42,000	
iii)	**Trench & Check Samples from Trench**					-	
	Trench samples					-	

	Major Oxides	Per sample	4.1.15a	4,200	50	2,10,000	
iv)	**Trench Check samples (10% External)**					-	
	Major Oxides	Per sample	4.1.15a	4,200	5	21,000	
v)	**BH Core samples**					-	
	Major Oxides	Per sample	4.1.15a	4,200	200	8,40,000	
vi)	**BH Core samples (10%External)**						
	Major Oxides	Per sample	4.1.15a	4,200	20	84,000	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	per sample	4.3.1	2,353	15	35,295	
ii	Study of thin section	per sample	4.3.4	4,232	15	63,480	
iii	Preparation of polish section	per sample	4.3.2	1,549	15	23,235	
iv	study of polished section	per sample	4.3.4	4,232	15	63,480	
v	Digital Photographs	Nos					
vii	Bulk Density	Nos	4.1	3,540	18	63,720	
vii	XRD Samples	per sample	4.5.1	4,000	5	20,000	
						18,86,210	
H	**Total A to G**					**1,56,48,634**	
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	**5.2 (i/ii/iii/iv)**		**4,69,459**	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	**1**	**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		**3,80,000**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and

				whichever is less			Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
L	**Total Estimated Cost without GST**					**1,65,28,093**	
M	**Provision for GST (18% of J)**					**29,75,057**	GST will be reimburse as per actual and as per notified prescribed rate
N	**Total Estimated Cost with GST**					**1,95,03,150**	
	or Say in Lakhs: 195.03						
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.**						





Annexure 2B

Time Schedule /Action plan for Preliminary (G3) exploration for Glauconite and associated minerals in Pitupura block, Sawai Madhopur and Karauli Districts, Rajasthan

S. No.	Activity	Unit	1	2	3	4	5	6	REVIEW	7	8	9	REVIEW	10	11	12	13	14	15	16	17	18
1	Camp Setting	Month																				
3	Geological Party Days	Day																				
4	Core Drilling (2rigs)	Month																				
5	Sampling Party Days/ Core Sampling	Day																				
6	Camp Winding	Day																				
7	Laboratory Studies	Month																				
8	Geological Party Days (HQ)	Day																				
9	Report Writing & Peer Review	Day																				

Annexure 3A

Estimate cost for Preliminary Exploration (G3) for Sangmania Limestone Block, Satna district, Madhya Pradesh 5.5 sq. km, No.of BH: 10, Borehole depth range 40 m; Schedule timeline 12 months , Review : after 4 months]

S. No.	Item of Work *	Unit *	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item No. *	Rates as per SoC * (a)	Qty. (b)	Total Amount (Rs) (a*b)	
A	**Geological Mapping Other Geological Work & Surveying**						
	Geological mapping, (1:4,000 scale) & Trenching , drilling work						
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.2a	11,000	80	8,80,000	
ii	b. Labours Charges; Base rate	day	5.7	522	160	83,520	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	1.2b	9,000	50	4,50,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	44	2,24,400	

	e. Labours (4 Nos)	day	5.7	504	176	88,704	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
	Sub Total- A					**17,26,624**	
B	**Ground Geophysical Survey**						
1	Gravity Method detailed **(outsourced)**	Per station	3.1a	3,800	-	-	
2	Magnetic survey **(outsourced)**	Per station	3.2a	1,800	-	-	
3	Electromagnetic survey (sounding) **(outsourced)**	Line km	3.7a	21,197	-	-	
4	c. Labours Charges	day	5.7	504	-	-	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
5	Geophysicist party days (HQ) (Outsourced)	per day		9,000	-	-	
	Sub Total- B					**-**	
C	**Survey work**						
a	DGPS Survey for BH fixation & RL determination **(outsourced)**	Per Point of observation	1.6.2	19,200	13	249600	

b	Charges of Surveyor (1 party) for geological mapping	one surveyor per day	1.6.1a	8,300	25	207500	
c	Survey man days for forest clearance works **(Outsourced)**	days	1.6.1b	8,300	-	0	
d	Labours Charges for survey work;	day	5.7	522	-	0	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
	Sub-Total C					**4,57,100**	
D	**Trenching/Pitting**						
	a) Excavation of Trenches	per cu.m	2.1.1	3,330	20	**66600**	
E	**DRILLING (after review)**						
1	Drilling up to 300m (Medium Hard Rock) **(Outsourced)**	m	2.2.1.3a	10,100	400	40,40,000	
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 **(Outsourced)**	per m	5.3	1,590	300	4,77,000	
	Sub Total E					**45,17,000**	
F	**Borehole Geophysical Logging (Outsourced)**		3.12	622.00	-	**-**	
G	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)**						
	a. Au by Fire Assay	Nos					
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by AAS Method	Nos	4.1.7a	3,846		-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	-	-	
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	4.1.7a	3,846	-	-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	-	-	
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	4.1.7a	3,846		-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	20	84,000	
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	4.1.7a	3,846	-	-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	2	8,400	
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	4.1.14	7,731	-	-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	300	12,60,000	
vi)	**BH Core samples (10%External)**						
	a. Au by Fire Assay	Nos					
	b. For Ag, Ni, Co, Cr, Cu, Pb, Zn, V, Ti by ICPMS-34 elements	Nos	4.1.14	7,731	-	-	
	c. For PGE by Fire Assay	Nos	4.1.5d	11,800	-	-	
	Major Oxides	Nos	4.1.15a	4,200	30	1,26,000	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	5	11,765	
ii	Study of thin section	Nos	4.3.4	4,232	5	21,160	

iii	Preparation of polish section	Nos	4.3.2	1,549	-	-	
iv	study of polished section	Nos	4.3.4	4,232	-	-	
v	Digital Photographs	Nos	4.3.7	280	5	1,400	
vi	Separation of heavy mineral	Nos	4.3.6b	13,820	-	-	
vii	Sp. Gravity	Nos	4.8.1	1,605	5	8,025	
	SEM Studies	per hour					
viii	EPMA studies	per hour					
	Sub Total G					**15,20,750**	
H	**3D ore body modeling**		**As per the actuals/implementing agency to put the cost based on the market survey**			**-**	As the rate varies from mineral to mineral and on mode of occurrence, hence charges applicable would be as per actual, based on market survey
I	**Total A to H**					**82,88,074**	
J	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	**5.2 (i/ii/iii/iv)**		**4,14,404**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
K	**Peer review Charges**		**As per EC decision**			**30,000**	
L	**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		**1,65,761**	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.
M	**Operational Charges**		**6 (iii)**			**4,82,495**	
M	**Tendering cost**					**1,65,761**	
N	**Total Estimated Cost without GST**					**95,46,496**	
0	**Provision for GST (18% of J)**					**17,18,369**	GST will be reimburse as per actual and as per notified prescribed rate
P	**Total Estimated Cost with GST**					**1,12,64,865**	
				or Say Rs. In Lakhs		**112.65**	
Note:							
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**						
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**						
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.**						
4	**Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.**						
5	**Any item of work not mentioned above shall be added as per SoC.**						
*****	**SoC Item No, Unit and Rate for each item of work must be as mentioned in the SoC.**						





Annexure 3B

Time Schedule/ Action Plan for Preliminary Exploration (G3) for Sangmania Limestone Block, Satna district, Madhya Pradesh

S. No.			1	2	3	4	5	6	7	8	9	10	11	12
1	Camp Setting	Months	■											
2	Geological Mapping & Sampling	Months		■	■	■			■	■	■			
3	Geophysical survey	Months												
5	Pitting/Trenching	Months			■	■								
6	Surface Drilling (1 rigs)	Months					■	■	■	■				
7	Survey Party days	Months				■								
8	Geologst Man days	Months		■	■	■			■	■	■	■	■	■
9	Geophysict man days	Months												
9	Sampler Man days	Months				■	■	■	■					
10	Camp Winding	Months												
11	Laboratory Studies	Months								■	■	■		
12	Report Writing with Peer Review	Months											■	■



Annexure 4A

Estimate cost for Reconnaissance Survey (G4) for REE & associated minerals in and around Langmipi - Laching Thing Area (124.68 sq. km), West Karbi Anglong District, Assam
Total Area - 124.68 sq km; Scout Boreholes: 5 Nos, Average Depth: 100 m Completion Time -15 Months (After Recipt of NoC), Review after 8 Months

ANNEXURE-I

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 LSM mapping at 1:12500 scale, Surface sampling, Pitting and Scout Drilling	day	1.2	11,000	36,850	180	66,33,000	Hilly Terrain with Forest area
c	Labour Charges for Geologist at Field	day	5.7	522	1,749	360	6,29,532	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 geochemical, channel, Pit and BH Core Samples	one sampler per day	1.5.2	5,100	17,085	45	7,68,825	
e	Labour Charges for Sampling Work; Base rate - Rs. 522/ per day	day	5.7	522	1,749	180	3,14,766	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
	Sub-Total A						**88,86,123**	
B	**PITTING**							
a	PITTING	Cu m	2.1.2	3,800	12,730	90	11,45,700	A total 60 Nos of Pit with average Depth of 1.50m = 60 X 1.5 m = 90 m
	Sub-Total B						**11,45,700**	

C	**DRILLING (Subjected to REE potentiality of Block in Primary /Secondary dispersion), after review)**							
1	Core Drilling up to depth of 300m - Hard Rock	m	2.2.1.4 a	11,500	38,525	500	1,92,62,500	
2	Fixation of borehole and determination of co-ordinates & Reduced Level (RL) of the boreholes by DGPS (including charges for labours deployed for the work)	Per point of observation	1.6.2	19,200	64,320	5	3,21,600	5 Scout BHs
3	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	67,000	5	3,35,000	
4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	6,700	5	33,500	
5	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	121	4,400	5,30,640	Approx 4400 km to & fro from Nagpur/ Rig
6	Monthly Accommodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	1,67,500	3	5,02,500	
7	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	8,37,500	1	8,37,500	
8	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	8,37,500	1	8,37,500	
9	Road Making (Hilly Terrain)	Km	2.2.10b	32,200	1,07,870	5	5,39,350	
10	Drill Core Preservation	Per m	5.3	1,590	5,327	200	10,65,300	
	Sub-Total C						**2,42,65,390**	

D	**Sub Total A to C**						**3,42,97,213**	
E	**LABORATORY STUDIES**							
1	**Chemical Analysis**							
	Primary Samples Surface + Pit + Heavy Minerals + BH Core Samples)							
i)	**Primary samples**							
	REE associated Trace Elements (34 Element)by ICPMS	Nos	4.1.14	7,731		275	21,26,025	Surface samples-110 (60 Stream Sediment, 50 BRS) Pit sample- 55 (For Soil Profile Sampling) Orientation Sample-10 (5 Pit X 2 samples from B and C Horizon) Core Sample: 100
ii)	**External check samples (10%)**							
	REE associated Trace Elements (34 Element)by ICPMS	Nos	4.1.14	7,731		28	2,12,603	
iii)	Whole Rock Analysis for Major Oxides by XRF technique	Nos	4.1.15a	4,200		20	84,000	
2	**Physical & Petrological Stusies**							

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)	SEM Study	Hour	4.4.2	2,940		-	-	
vii)	EPMA Study	Hour	4.4.1	8,540		15	1,28,100	
viii)	XRD Study	Nos	4.5.1	4,000		15	60,000	
	Sub-Total -E						**28,01,818**	
F	**Total D+E**						**3,70,99,031**	
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	For the projects having cost exceeding Rs 300 Lakh, A minimum of Rs 9 Lakh or 3% of the work whichever more and Rs			**11,12,971**	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.

				10000/- per each additional copy				
J	**Peer review Charges**		**As per EC decisio n**				**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 whicheve r 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**						**3,87,42,00 1**	

M	**Provision for GST (18% of L)**	**%**					**69,73,560**	GST will be reimburse as per actual and as per notified prescribed rate
N	**Total Estimated Cost with GST**						**4,57,15,562**	
or Say Rs. , In Lakhs:							***457.16***	
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.





Annexure 4B

Time Schedule/ Action plan for Reconnaissance Survey (G-4 Stage Exploration) For REE & associated minerals in and around Langmipi - Laching Thing Area, Districts: West Karbi Anglong, State: Assam

		1	2	3	4	5	6	7	8	Review	9	10	11	12	13	14	15
1	Camp Setting																
2	Geological Party Days																
3	Pitting & Sampling																
4	Heavy Mineral Separation/ Sample Preparation																
5	Laboratory Studies																
6	DGPS survey /BH Fixation																
8	Core Dilling																
9	Camp Winding																
10	Geologist Party days, HQ																
11	Geological Report Writing																
12	Peer Review																

Annexure 5A

Estimate cost for Reconnaissance survey (G4) for Glauconite in Ambara West Block Kachchh District, Gujarat [Block area- 143.15 sq. km; Schedule timeline- 12 months]

S. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC- Item -Sl No.	Rates as per SoC	Qty.	Amount (Rs)	
A	**GEOLOGICAL WORK (1:12,500 scale)**						
i	Charges for one Geologist- Field	day	1.2	11,000	150	16,50,000	
ii	Charges for one Geologist per- HQ	day	1.2	9,000	60	5,40,000	
iii	2 labours/ party (Rs 494/day/labour) (As per rates of Central Labour Commissioner)	day	5.7	522	300	1,56,600	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	40	2,04,000	
v	4 labours/ party (Rs 494/day/labour) (As per rates of Central Labour Commissioner)	day	5.7	522	160	83,520	Amount will be reimburse as per the notified rates by the Central

							Labour Commissioner or respective State Govt. whichever is higher
	Sub Total- A					**26,34,120**	
B	**PITTING AND TRENCHING**						
i	Trenching/Pitting	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	300	21,50,400	10BH, MoC rate
ii	Land / Crop Compensation	per BH	5.6	20,000	10	2,00,000	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	10	20,000	
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 Accommodation 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	10	1,92,000	
x	Borehole core preservation-One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	220	3,49,800	
	Sub Total- C					**38,12,300**	
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	300	12,60,000	300= (100 + 100+ 100) (BRS+Pit+BH)
	b) External Check sample (10% of Primary samples)	Nos	4.1.15a	4,200	30	1,26,000	
	c) Trace element (34 element)	Nos	4.1.14	7,731	30	2,31,930	10% of Primary 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	4.1	3,540	5	17,700	
	Sub Total- D					**17,24,280**	
E	**Total A to D**					**86,70,200**	
F	**Geological Report Preparation**		**5.2**	For the projects having cost exceeding Rs. 50 lakhs and less than Rs. 150 lakhs - A minimum of Rs. 2.5 lakhs or 3% of the value of work whichever is more		**2,60,106**	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		**1,73,404**	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**					**91,33,710**	
J	**Provision for GST (18% of I)**					**16,44,068**	GST will be reimburse as per actual and as per notified prescribed rate
K	**Total Estimated Cost with GST**					**1,07,77,778**	
				or Say Rs. In Lakhs		**107.78**	
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 for Reconnaissance survey (G4) in Ambara West Block for Glauconite, District: Kachchh, Gujarat
[Block area- 143.25 sq. km; Schedule timeline- 12 months]

S. No.	Particulars	Months/ Days	1	2	3	4	5	6	Review	7	8	9	10	11	12
1	Camp Setting	months	■												
2	Geological Mapping	months		■	■	■	■								
3	Survey days	days													
4	Trenching/Pitting	cu.m					■	■							
5	Drilling (1 rig)	m								■	■	■			
6	Sampling days	days			■	■	■	■		■	■	■			
7	Camp winding	months										■			
8	Laboratory Studies	months			■	■	■	■			■	■	■		
9	Geologist days, HQ	days											■	■	■
10	Report Writing with Peer Review	months												■	■

Annexure 6A

Estimate cost for Reconnaissance survey (G4) for Glauconitic Sandstone in Kisanpur Block (52.00 sq. km.), Satna District, Madhya Pradesh

Total Area - 52.17 Sq. Km; Completion Time - 12 Months, BH – 5 nos12

Sl. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Total Cost of the Project		Remarks
			SoC - Item-S. No.	Rates as per SoC	Qty.	Total Amount (Rs)	
1.0	**Geology & Survey**						
1.1	Geologist man days for Geological Mapping in 1:12500 scale (Field)/Sampling	days	1.3	11,000	120	13,20,000	
1.2	Labour Mapping (Field) (2 workers per geologist)	per worker	5.7	522	240	1,25,280	Amount will be reimburse as per the notified rates by the Central Labour Commissioner (Rs. 431/- per day) or respective State Govt. whichever is higher
1.3	Sampling man days - Sampler (Geochemical/Trenching/Pitting) Labour charge not included	day	1.5.2	5,100	20	1,02,000	(150 primary samples/8 samples per day)

1.4	4 labours/ party (Rs 431/day/labour) (As per rates of Central Labour Commissioner) for sampling work	day	5.7	522	80	41,760	Amount will be reimburse as per the notified rates by the Central Labour Commissioner (Rs. 431/- per day) or respective State Govt. whichever is higher
1.5	Determination of co-ordinates and Reduced Level (RL) of boreholes by DGPS	Nos.	1.6.2	19200	6	1,15,200	5 boreholes + 1 base station
Sub-Total 1						**17,04,240**	
2.0	**Drilling**						
2.1	Drilling -Medium hard rock (100m to 300m)	m	2.2.1.3a	10100	300	30,30,000	5 bh depth 60m or upto panna shale whichever is earlier
2.2	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	5.6	20000	10	2,00,000	
2.3	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2000	10	20,000	
2.4	Transportation of Drill Rig & Truck associated per drill (for 1 rig)	Km	2.2.8	36	1200	43,200	1200 Km to and fro for one rig
2.5	Monthly Accommodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50000	3	1,50,000	
2.6	Drilling Camp Setting Cost	Nos	2.2.9a	250000	1	2,50,000	

2.7	Drilling Camp Winding up Cost	Nos	2.2. 9b	250000	1	2,50,000	
2.8	Road Making (Flat Terrain)	Km	2.2. 10a	22020	5	1,10,100	
2.9	Drill Core Preservation	per m	5.3	1590	200	3,18,000	
Sub-Total 2						**43,71,300**	
3.0	**Laboratory Studies**						
3.1	Primary + Check Sample - 4 radicals viz. K_2O, SiO_2, Al_2O_3 & Fe_2O_3	per sample	4.1. 7a	2,506	185	4,63,610	150 primary, 15 external check (20 samples BH)
3.2	Chemical Analysis (Composite) for 12 radicals viz. K_2O, Na_2O, CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3, SO_3, P_2O_5, Mn_2O_3, TiO_2, and LOI.	per sample	4.1. 7a	4,851	20	97,020	8m composite
3.3	Bulk Density	per sample	4.8. 1	1,605	5	8,025	
3.4	XRD Study	per sample	4.5. 1	4,000	5	20,000	
Sub-Total 3						**5,88,655**	
4.0	**Geologist man days (1 No.) for geological map & Report (HQ)**	days	1.2	9,000	60	**5,40,000**	
Total (1.0 to 4.0)						**72,04,195**	

5.0	**Preparation of Exploration Proposal**	Nos	5.1	2% of the cost or Rs. 3.80 lakh - whichever is lower	1	**1,51,288**	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.
6.0	**Geological Report Preparation**	Nos	5.2	For the projects having cost exceeding Rs. 50 Lakhs but less than Rs. 150 Lakhs: A Minimum of Rs.2.5 lakhs or 5% of the value of work whichever is more and Rs. 3000/- per each additional copy.	1	**3,60,209.75**	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
7.0	**Report Peer Review Charges**	**lumpsum**	**As per EC decision**		**1**	**30,000**	
Total Estimated Cost without GST						**77,45,693**	

Provision for GST (18%)	**13,94,225**	GST will be reimburse as per actual and as per notified prescribed rate
Total Estimated Cost with GST	**91,39,918**	
Say Rs. in Lakhs	**91.40**	
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 execution of the project by EA on its own, a Certificate regarding non outsourcing of any component/project is required.***		



Annexure 6B

Time schedule/ Action Plan for Reconnaissance Survey (G4) for Glauconitic Sandstone in Pindra West Block, Satna District, Madhya Pradesh

S.No.	Activities	MONTHS											
		1	2	3	4	5	6		7	8	9	10	11	12
1	Camp setting													
2	Geological mapping													
3	Core drilling (1 rig)													
4	Geologist days (Field)													
5	Sampling days, core sampling													
6	Camp winding													
7	Laboratory studies													
8	Geologist days (HQ)													
9	Report writing/ Peer review													