Ministry of Mines
National Mineral Exploration Trust
Minutes of the 66th Technical-cum-Cost Committee (TCC) meeting held on 24th, 25th & 26th June, 2024 through video conferencing

The 66th meeting of Technical-cum-Cost Committee [TCC] of National Mineral Exploration Trust [NMET] was held through video conferencing under the chairmanship of Dr. S. Ravi, Dy. Director General (DDG), Geological Survey of India (GSI) and Chairman, TCC, NMET on 24th,25th & 26th June, 2024.

Members of TCC-NMET and representatives from GSI, NGRI, MECL, Karnataka, CMPDI, MPSMC, OMC, Odisha, DMG, Rajasthan; DGM, Karnataka; DMG, Telangana; DGM, Chhattisgarh; DMG, Odisha; DGM, Assam; DGM, Madhya Pradesh, DMM, West Bengal , DMR, Meghalaya, CASG, Panjab University, Chandigarh, CGM, Gujarat; MMPL, GMSPL, Ecomen, Gemcokati, Geovale Services Private Limited, Gemcokati, Novamine, Engeotech, Tata Steel Ltd, United Exploration India Pvt. Ltd, PRBI, GeoMarine & GeoExpore Pvt. Ltd have attended the meeting through their respective VC modes.

The list of participants is at Annexure-1.

Shri C. Parthasarathi, Director, GSI and Member Secretary, TCC-NMET, welcomed Dr. S. Ravi, DDG, GSI and Chairman, TCC, NMET, Smt. Geetika Sharma, IAS, Deputy Secretary & HoD, NMET, Members of the TCC and participants representing various Notified Exploration Agencies [NEAs] and Notified Private Exploration Agencies [NPEAs].

Smt. Geetika Sharma, IAS, Deputy Secretary & HoD of NMET, in her opening remarks succinctly enumerated the details of the proposed items to be presented in the 66th TCC meeting.

Dr. S. Ravi, DDG of GSI and Chairman of TCC, extended a warm welcome to Smt. Geetika Sharma along with all TCC members and participants representing various Notified Exploration Agencies (NEAs) and Notified Private Exploration Agencies (NPEAs). In his opening remarks, the Chairman suggested that all NEAs and NPEAs consult the data available on the NGDR portal to aid in formulating new proposals. He also instructed that all reports generated by NEAs and NPEAs should be NGDR compliant and to be uploaded to the NGDR portal by the concerned agencies. The Chairman of the TCC, along with the members, opined that the Schedule of Charges (SoC) of NMET needs to be revisited. Initially, the SoC was prepared according to the NEAs only, but the scenario has changed with the entry of NPEAs. Therefore, the committee feels that the SoC of NMET should be reconsidered, keeping both government and private parties in consideration. The Chairman also opined that the proposals submitted for NMET funding should also be sent to AMD and MECL so as to avoid duplication as well as quality enhancement.

Subsequently, the proceedings of meeting was initiated as per circulated agenda

Agenda 66.1 Review of Ongoing Projects/Completed Project & Timeline Extension

Agenda 66.1.1. Reconnaissance survey (G4 stage) for REE in Rudrawathi Block, District–Tiruppur, Tamil Nadu.
[Implementing Agency: MECL]

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a) MECL informed that the project was approved in the 28th EC Meeting held on 16th March, 2023. The sanction order was issued on 27th March, 2023 with timeline of 12 months and approved cost was INR 71,82,943/-.
b) Further, the committee had granted time extension for 2 months' up to 31st May 2024 and thereafter 1 month extension upto 30th June 2024 in its 62nd and 64th TCC meetings respectively.
c) MECL informed that the peer review of the GR has been completed and ready for submission to NMET.
d) MECL opined that the LREE concentration within Allanite bearing pegmatite makes it positive for further exploration at G3 level and also look for extension of the same in the eastern side of the proposed potential block.
e) The committee observed that area contains LREE but does not promise HREE. The committee opined that the outcome of the project does not warrant the need for further exploration at G3 stage.

Recommendation TCC:

The Committee recommended for the submission of GR in time.

Agenda 66.1.2. Preliminary Exploration for Basemetal (Cu, Pb, Zn) in Chintakuntala Block, District: Nalgonda, Telangana.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 03rd February, 2023 with timeline of 14 months and approved cost was INR 2,32,18,273/-.
b) MECL informed that the timeline extension up to 30th June 2024 was approved in the 63rd TCC of NMET held on 22nd , 26th & 27th March, 2024 **.**
c) The committee was apprised that exploratory drilling in 5 Bhs (530m) were carried out and only one Borehole i.e. MKCB-03 intersected ore zones at 0.2% Cu cut-off over more than 2.00m true thickness. MECL suggested that block may be auctioned under Composite License (CL).
d) The Summary of Estimated Reconnaissance Resource (UNFC:334) presented by MECL is given below:

Area Name	Borehole No.	Net Resource (Tonnes)	Average Grade (Cu %)	Average Grade (Pb %)	Average Thickness (m)	Ore Zone No.	Total Metal content (Tonnes)
Zone-I	MKCM-03	63924 (0.064 m.t.)	0.22	0.15	2.49	1A & 1B	138 (Cu) & 96 (Pb)

e) The committee noted the outcome of the project and opined that the geophysical data does not support further extension of the ore zone in the block. Further, for auctioning, the dimensions of the block should be clearly demarcated.

Recommendation TCC:

The Committee advised MECL to submit GR with proper interpretation of geophysical survey data and recommending suitable block for composite license.

Agenda 66.1.3. Preliminary Exploration (G–3 Level) for Gold in Kakol Block (29.06 sq. km), Haveri District, Karnataka.
[Implementing Agency: MECL]

a) MECL 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 4,48,27,471/-.
b) The committee was informed that Detailed Geological Mapping (1:2000 scale) over 5.0 sq.km area, Bedrock samples, trenching and associated sampling work has been completed .
c) MECL apprised that out of 142 BR samples 20 samples indicated 0.13 g/t Au (BR/142) to 6.39 g/t Au (BR/135), 4 BR samples shown higher Au values 1.14 g/t Au (BR/148) to 6.39 g/t Au (BR/135).Further, out of 19 channels, 7 Channels C6, C8, C10, C11, C12, C15 & C19 indicated >0.10 g/t Au Value. 10 samples indicated 0.169 g/t Au (BR/30) to 0.968 g/t Au (BR/58).
d) MECL informed that out of 2 trenches (60 cu.m.) , trench T1 indicated anomalous values for Gold. Out of 18 samples, 10 samples indicated >0.20 ppm Au to max. 4.64 ppm Au. Trench T2 indicated 0.03 & 0.04 g/t Au over 1.0m width.
e) Based on the outcome of Phase-I work total 7 sq.km potential area has been demarcated for carrying out Ground Geophysical Survey. MECL proposed to carry out Geophysical Survey (I.P. cum Resistivity, SP, Magnetic)- 25 Lkm at 200 traverse interval and 20m station interval .Subsequently, Electro Magnetic Survey (TDEM) – 100 points will be taken up in the identified anomalous geophysical zone. The outcome of Geophysical work shall be presented in TCC for review.
f) The committee noted the progress of the project and agreed for Geophysical Survey. MECL was advised to present the outcome of GP survey to TCC before commencement of drilling.
g) The committee suggested that trench samples can be converted to channel samples if required but the channel length should not be less than 2m and the sample length should be 1m.

Recommendation TCC:

The Committee recommended to carry out geophysical survey and review of project before bore hole planning.

Agenda 66.1.4. Reconnaissance Survey (G–4 Stage) for Iron, Manganese and Associated Minerals in Tikariya Block (146.0 Sq. Km) Districts– Jabalpur, Katni and Umaria, Madhya Pradesh.
[Implementing Agency: MECL]

a) MECL 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 10 months and approved cost was INR 2,21,83,799/-.
b) The committee was informed that MECL has carried out geological mapping on 1:12,500 scale along with Channel sampling . Further, trenching was carried out and identified mineralization area for Lateritic ore, Bauxite and Manganese.
c) MECL said that 32 channel samples and 12 Trench samples showed >35% Fe content (IBM threshold) , 22 channel samples and 2 Trench samples have >30%

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Al_2O_3 content (IBM threshold) and 2 Channel samples have shown Mn values 29.71% and 31.12%.MECL proposed for drilling in the block.

d) The committee studied the progress of the work and advised MECL to establish the dimension of the zones before drilling.

Recommendation TCC:

The Committee recommended to attend the modifications suggested and present the borehole plans in next TCC meeting.

Agenda 66.1.5. Reconnaissance Survey (G–4 Stage) for Tin in Pokhar–Chhaili Block (90.00 Sq. Km), Tehri Garhwal District, Uttarakhand.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 30th EC Meeting held on 06th June, 2023. The sanction order was issued on 26th June, 2023 with timeline of 08 months and approved cost was INR 1,05,05,247/-.

b) MECL apprised that exploration activities have been completed. Large scale geological mapping (1:12,500 scale) over 90.00 sq.km area with collection of bedrock chip samples (73 Nos), stream (113 Nos) and soil (14 Nos) samples (total 200 Nos) for Tin has been completed.

c) Further, the committee was informed that 9 bedrock sample in Thati Kathur Granite at the northwestern part of the block yielded 100.03 ppm to 15654 ppm of Tin. On the basis of BRS analysis results of Tin, three potential area approx. 2.12 sq km , identified in north-western part of the block.

d) MECL informed that time extension upto 30th June 2024 was approved in the 62nd TCC meeting. MECL requested for time extension upto August 2024.

e) The committee opined that the sampling has not been carried out judiciously in the block.

Recommendation TCC:

MECL was asked to carry out modifications as per the suggestion of TCC. The committee recommended for time extension upto 15th August 2024.

Agenda 66.1.6. Reconnaissance survey (G4) for Polymetals (Cu, Au, Ag) in Miregaon block (40.769 sq. km), Districts: Bhandara and Gondiya, Maharashtra.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 28th EC Meeting held on 16th March, 2023. The sanction order was issued on 27th March, 2023 with timeline of 12 months and approved cost was INR 1,09,56,018/-.

b) MECL informed that the block was reviewed in 58th TCC and 62nd TCC. Thereafter, drilling in two boreholes involving 197m against 200m approved meterage have been completed.

c) MECL informed that time extension upto 30th June 2024 was approved in the 62nd TCC meeting. MECL requested for time extension upto August 2024.

d) The committee noted the progress of work and recommended time extension upto 15th August 2024.

Recommendation TCC:

The Committee recommended time extension up to 15th August 2024.

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Agenda 66.1.7. Preliminary Exploration (G–3 Stage) for Diamond in Angira B Block (4.05 Sq. Km), District: Chhatarpur, Madhya Pradesh.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 30th EC Meeting held on 06th June, 2023. The sanction order was issued on 26th June, 2023 with timeline of 15 months and approved cost was INR 4,94,11,918/-.
b) MECL informed that Geological Mapping (1:2000 Scale) and Geophysical Survey work in the block has been completed .Ground Geophysical Magnetic Survey at 50m Line spacing and 25m station spacing (Total approved Stations 1200), and Time Domain Electromagnetic survey (TDEM Survey) at 100m line spacing and 25m station spacing (Total approved Stations 200) was carried out by MECL.
c) MECL prepared drill hole location and borehole Plan (13 nos.), on the basis of Detailed Geological Mapping and Ground Geophysical Survey,
d) The committee advised MECL to apply for forest permission beforehand in anticipation of the drilling and of agreed for 400m drilling in 4 vertical boreholes. One vertical borehole may be drilled in each anomalous zone. The rest of the boreholes maybe considered on the basis of geophysical study and outcomes of the drilled boreholes in next G2 stage of exploration program.

Recommendation TCC:
The Committee recommended 400m drilling in 4 vertical boreholes.

Agenda 66.1.8. Reconnaissance Survey (G–4 stage) for Manganese and Associated Minerals in Katori–Jhiriya Block (140.22 Sq. Km), District– Balaghat, Madhya Pradesh.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 03rd February, 2023 with timeline of 14 months and approved cost was INR 1,67,81,229/-.
b) MECL informed that the project was reviewed in 58th TCC meeting wherein the committee recommended trenching/pitting and drilling based on the approved quantum of work.
c) It was apprised that three potential areas have been identified and 9 boreholes have been proposed. Geophysical survey has been carried out in the potential area A, B & C where manganese mineralization is observed. Further, it was informed that the approved meterage is 500 m only but on the basis of geochemical, geophysical survey and results of trenching, 11 boreholes have been planned. Out of 11 boreholes 9 are 1st level BHs and 2 are 2nd level Conditional BHs. Hence, MECL requested for additional meterage of 145m. MECL informed that forest permission is awaited and sought 6 months time extension.
d) The committee suggested to complete the first level of drilling and submit the GR with time extension upto 2nd October 2024.

Recommendation TCC:
The Committee recommended to complete first level of drilling (9 bhs) with time extension upto 2nd October 2024.

Agenda 66.1.9. Preliminary Exploration (G–3 Stage) for Diamond (Phase-I) in Tikamgarh Cluster- Comprising of four sub block A to D (total area of Cluster – 109.68 sq.km), District: Tikamgarh, Madhya Pradesh
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 24th EC Meeting held on 18th May, 2022. The sanction order was issued on 01st June, 2022 with timeline of 15 months and approved cost was INR 1,00,91,331/-.
b) MECL informed that the project has been completed and GR submitted on 30th March 2024.However, the final bill has not been generated as the cost of Geological Report and Peer Reviewer charges were not mentioned in the earlier cost sheet.
c) MECL requested for approval of cost of Geological Report and Peer Reviewer charges along with applicable GST (Totaling to Rs. 5,17,547/-).
d) In view of the above, the committee approved additional cost of Rs. 5,17,547/- towards cost for Geological Report and Peer Reviewer charges.

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Recommendation TCC:

The Committee approved Rs. 5,17,547/- towards cost Geological Report and Peer Reviewer charges as per Annexure 2.

Agenda 66.1.10. Time line extension for Geochemical analysis of GGCMP samples.
[Implementing Agency: MECL]

a) MECL informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 18th October, 2023 with timeline 31.12.2023 and approved cost was INR 11,33,68,814/-.
b) Further, time extension up to 31st March 2024 was approved in the 33rd EC meeting held on 19th February 2024.
c) It was apprised that MECL submitted the final analytical report to GSI on 14.03.2024 and final bill was raised on 15.03.2024.The completion certificate from GSI, Western Region was received on 21.06.2024.
d) In view of the above MECL sought time extension upto 30th June 2024.

Recommendation TCC:

The Committee approved time extension upto 30th June 2024 submission completion certificate from GSI.

Agenda 66.1.11. Time line extension for Geochemical analysis of GGCMP samples.
[Implementing Agency: CGM Gujarat]

a) CGM Gujarat informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 18th October, 2023 with timeline 31.12.2023 and approved cost was INR 11,33,68,814/-.
b) Further, time extension up to 31st March 2024 was approved in the 33rd EC of NMET held on 19th February 2024.
c) CGM Gujarat sought time extension for submission of bills and completion certificate from GSI, Western Region

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Recommendation TCC:

The Committee recommended upto 30th June 2024 for submission of completion certificate from GSI.

Agenda 66.1.12. Preliminary Exploration (G–3) of Ion–Adsorption and Laterite Hosted Supergene Enriched REE Deposits in Sung Valley Block (7.1 sq.km.), East Khasi and West Jaintia Hills districts, Meghalaya.
[Implementing Agency: DMR Meghalaya]

a) DMR Meghalaya 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 15 Months and approved cost was INR 3,00,93,518/-.
b) DMR Meghalaya presented the progress of work carried out in the project. The geological mapping was completed and requested permission for drilling. DMR Meghalaya also sought approval for 100 additional samples for XRF analysis.
c) The committee observed that DMR Meghalaya has already completed 503 nos. of samples of the total 500 samples approved in EC. The execution of the item is in the lines of a research project and required to be carried out as per the MEMC Rule 2015 norms and SOP of mineral exploration. The committee informed that additional samples will not be allotted to DMR for completion of the project. The committee advised DMR Meghalaya to seek guidance for DDG, RMH II , NER, GSI for executing the project. Thereafter, the project may be brought for review in next TCC.

Recommendation TCC:

The Committee recommended for review of the project in next TCC after incorporating suggestions from DDG, SU: Meghalaya, NER, GSI.

Agenda 66.1.13. Preliminary exploration (G3) for Manganese Hardatal block (1.38 sq. km), District: Balangir, Odisha
[Implementing Agency: DGM Odisha]

a) DGM Odisha informed that the project was approved in the 25th EC Meeting held on 29th June, 2022. The sanction order was issued on 04th September, 2023 with timeline of 09 Months and approved cost was INR 1,52,36,385/-.
b) DGM Odisha informed time extension was approved until 31st March 2024 in the 32nd EC meeting of NMET and thereafter in the 63rd TCC meeting , the committee had approved timeline upto 30th June 2024. The committee was informed that due to deployment of Officers for various activities related to the General Election 2024 during the month of May & June GR submission is being delayed. Presently, GR is under final stage & will be submitted for peer review by end of June' 24.
c) In view of above DGM Odisha sought 2 months timeline extension up to 31st August 2024.

Recommendation TCC:

The Committee recommended approval for 2 months timeline extension up to 31st August 2024 for GR submission.

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Agenda 66.1.14. Reconnaissance Survey (G-4) for polymetalic mineralization (Au, Cu, Ni, Co) in Dharwar Shimoga Schist Belt of Nagavanda area Dhavangere, Haveri and Shimoga Districts, Karnataka (Block area- 63.62 sq. km)

[Implementing Agency: KIOCL]

a) KIOCL informed that the project was approved in the 28th EC Meeting held on 16th March, 2023. The sanction order was issued on 27th March, 2023 with timeline of 12 months and approved cost was INR 1,47,62,526/-.
b) KIOCL informed that the timeline extension up to 30th June 2024 was approved in the 63rd TCC meeting of NMET.
c) Considering the non-receipt of forest clearance for carrying out exploration in the block, KIOCL sought 6 months' time extension for completion of the project.

Recommendation TCC:

The Committee recommended 6 months' time extension upto 31st December 2024 for completion of the project

Agenda 66.1.15. Preliminary exploration (G3) for coal in North of Saoner (15.16 sq.km), Kamptee Coalfield, District: Nagpur, Maharashtra.

[Implementing Agency: CMPDI]

a) CMPDI informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 03rd February, 2023 with timeline of 14 months and approved cost was INR 2,65,01,074/-.
b) CMPDI informed that the project was reviewed in the 64th TCC and 3 months timeline extension up to 2nd July 2024 was approved. CMPDI requested for time extension upto 31st July 2024 for submission of GR.

Recommendation TCC:

The Committee recommended time extension upto 31st July 2024 for submission of GR.

Agenda 66.1.16. Reconnaissance Survey (G-4) for Zinc and associated minerals in Jamua area District: Giridih, Jharkhand.

[Implementing Agency: CMPDI]

a) CMPDI informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 06th February, 2023 with timeline of 12 months and approved cost was INR 47,39,660/-.
b) CMPDI informed that the project was reviewed in the 63rd TCC and 3.5 months timeline extension up to 31st May 2024 was approved in the 34th EC meeting of NMET due to delay in chemical analysis.
c) CMPDI requested for time extension upto 30th June 2024 for submission of GR.

Recommendation TCC:

The Committee recommended time extension upto 30th June 2024 for submission of GR.

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Agenda 66.1.17. Preliminary Exploration (G–3 Stage) for Coal in North of Rajathari, Pench Kanhan Tawa Valley Coalfield District: Chhindwara, Madhya Pradesh.
[Implementing Agency: CMPDI]

a) CMPDI informed that the project was approved in the 24th EC Meeting held on 18th May, 2022. The sanction order was issued on 02nd June, 2022 with timeline of 20 months and approved cost was INR 13,88,23,254/-.
b) CMPDI informed that timeline extension up to 31st August 2024 was approved in the 33th EC meeting of NMET.
c) The committee was informed that during review of the project in 61st TCC, TCC allowed drilling of 3 boreholes P-5, P-8 & P-9 respectively for completion of the project, Since the coal seams in rest of the area is beyond 1000m depth., P-5 was running at that time and P-9 has to be taken up after outcome of borehole P-8. Currently Borehole number P-5(CMPNR-10) has been closed at the depth of 865m against the targeted depth of 850m. No coal seam was encountered up to this depth. Borehole P-8(CMPNR-3A) is closed at the depth of 1000.90m, One Coal seam has been encountered at the depth of 992.00m. Due to drilling difficulty, drilling progress is very slow. Outcome of Borehole P-8(CMPNR-3A) suggests that Coal seams in Borehole P-9 are expected to encounter beyond 1000m.
d) In view of above, CMPDI requested to close the Exploration Activity after completion of Borehole P-8(CMPNR-3A).
e) Considering the above, the committee agreed for closure of the exploration activity after completion of Borehole P-8(CMPNR-3A).

Recommendation TCC:

The Committee recommended closure of the exploration activity after completion of Borehole P-8 (CMPNR-3A).

Agenda 66.1.18. Preliminary Exploration (G–3 Stage) for Coal in West of Borda and Ghonsa - Parsoda Block Warda Valley Coalfield, District: Chandrapur, Maharashtra.
[Implementing Agency: CMPDI]

a) CMPDI informed that the project was approved in the 24th EC Meeting held on 18th May, 2022. The sanction order was issued on 01st June, 2022 with timeline of 18 months and approved cost was INR 12,01,56,952/-.
b) CMPDI informed that the project received time extension up to 30th September 2024 in the 32nd EC meeting of NMET held on 12th December 2023. The project has been delayed due to non-finalization of tender for out-sourced component in time
c) CMPDI informed that 7 Boreholes have been completed and two Boreholes are running.
d) Details of Seams Encountered in Boreholes is given below:

Sl. No.	BH. No.	Seam Details (visual)		
		Seam IIA	Seam IIB	Seam I

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		Depth from (m)	Depth to (m)	Thickness (m)	Depth from (m)	Depth to (m)	Thickness (m)	Depth from (m)	Depth to (m)	Thickness (m)
1	CMWW B-03	910.62	911.72	1.10	914.70	919.50	4.80	929.08	929.64	0.56
2	CMWW B-04	591.02	merged?			594.30	3.28			Faulted ?
3	CMWW B-05	725.80	727.30	1.50			2.22			
4	CMWW B-06	649.51	651.97	2.46	664.00	665.00	1.00	677.10	677.62	0.52
5	CMWW B-07	709.20	712.20	3.00	721.70	724.45	2.75	732.19	732.70	0.51
MIN		**591.02**	**651.97**	**1.10**	**664.00**	**594.30**	**1.00**	**677.10**	**677.62**	**0.51**
MAX		**910.62**	**911.72**	**3.00**	**914.70**	**919.50**	**4.80**	**929.08**	**929.64**	**0.56**

e) The committee noted the progress of the project.

Recommendation TCC:

The Committee recommended noted the progress of the project and suggested CMPDI to complete the project within stipulated time.

Agenda 66.1.19. Financial assistance from NMET funds to procure machinery/ laboratory equipment/instruments etc. aimed at enhancing the exploration activities.

[Implementing Agency: Directorate of Mines and Minerals (DMM), West Bengal]

a) Directorate of Mines and Minerals (DMM), West Bengal informed that the project was approved in the 29th EC Meeting held on 31st March, 2023. The sanction order was issued on 17th April, 2023 with timeline of 12 months and approved cost was INR 54,50,000/-.

b) Directorate of Mines and Minerals (DMM), West Bengal informed the procurement is in process. Tender was floated twice on GeM Portal for procuring 01 no Binocular Polarizing Microscope with camera & software, however, on both occasions Single Bidder participated, therefore, Bids had to be cancelled. Further, Custom Bid was floated for 02 GIS Softwares on GeM and L-1 Bidder was successfully finalized from a pool of 4 Technically Qualified bidders. However, in order to install the required 02 GIS Softwares, suitable 02 nos of high end desktop Platforms were required, which took an additional time for obtaining their sanction for procurement & installation.

c) Considering the above DMM West Bengal requested for time extension of 6 months. Further, DMM West Bengal requested NMET Secretariat to release ₹ 3, 60, 093/- (Rupees three lakh sixty thousand ninety three only) towards purchase of Arc GIS software.

Recommendation TCC:

The Committee recommended 6 months timeline extension upto 15th October 2024.

Agenda 66.1.20. Target revision and timeline extension for outsourcing of ground gravity–magnetic survey under National Geophysical Mapping (NGPM) programme of GSI [Implementing Agency: Geological Survey of India]

a) The project of National Geophysical Mapping Programme [NGPM] through outsourcing was reviewed and recommended to EC of NMET in the 26th TCC Meeting held on 10th & 11th December, 2020. It was reviewed and approved in the 21st EC meeting of NMET held on 19.07.2021 for a cost of Rs.385.86.00 Crore (including GST) with 36 months' timeline (the OM No. 6/2/2015-NMET/130 was issued on 08.09.2021). Details of the work approved are given below.

Details of the work component for outsourcing approved in the 21st EC meeting of NMET held on 19.7.2021				
Gravity/ magnetic survey	**Phase-I (FS 2021-22)**	**Phase-II (FS 2022-23)**	**Phase-III (FS 2023-24)**	**Total**
Total number of toposheets for outsourcing	500 Nos. (priority)	800 Nos.	799 Nos.	2099 Nos. (13.50 lakh sq. km.)
Budget requirement	Rs. 70 Cr (@ Rs 5000 per data point)	Rs. 123 Cr (@ Rs 5500 per data point)	Rs. 134 Cr (@ Rs 6000 per data point)	Rs. 327 Cr (Rs. 385.86 Cr including GST)

b) Further, the NMET was informed by GSI that it has a capacity of covering an area of 1.12 lakh sq. km per year (i.e about 160 Toposheets per year) in NGPM survey with its existing 33 sets of instruments (Gravimeters, Magnetometers and DGPS).Considering this, in the 25th EC meeting of NMET, held on 29.06.2022, Rs 32.18 Cr was approved for procurement of 11 sets of instruments for data validation of outsourced NGPM (OM dated 15.07.2022). In the 27th EC meeting held on 10.01.2023, Rs 70Cr was again approved for procurement of 24 sets instruments for enhancement of in-house capacity for gravity-magnetic survey (OM dated 09.02.2023).

c) GSI informed that tendering was initiated in February, 2022 after getting the model tender document vetted by Dept. of Legal Affairs (DOLA). Subsequently 6 rounds of tendering were done across GSI's regions and 31 tenders were floated. The tender conditions were relaxed in 3 phases in order to attract vendors even with limited capacity. Till date, GSI has outsourced 102 toposheets through 04 contracts being awarded to 3 vendors. Further, MECL (107 TS for 3 contracts) and NGRI (25 TS for 1 contract) are also engaged on nomination basis. With repeated attempts, out of 2099 toposheets only 234 toposheets have been outsourced (132 TS on nomination to MECL & NGRI and 102 TS through tenders) for Rs. 31.17 Cr till date.

d) In the 56th TCC Meeting held on 31st August & 1st September 2023, GSI had requested for the revised cost of 142.78 Cr (including GST) with time extension up to FY 2027-28. However, the TCC opined that permission may be first sought from Ministry of Mines for the revised cost and timeline extension, before submitting for the proposal to NMET

e) GSI informed that M/o Mines instructed on 20.06.2024 to resubmit the revised proposal.

f) Accordingly, in the 66th TCC meeting, GSI informed that 234 TS have already been outsourced and the remaining 1107 TS will be covered by up-scaling of PSUs, Pvt. Agencies and in-house capacity of GSI. In order to accomplish the task, GSI requested for timeline extension up to March, 2027. The revised plan for completion of NGPM survey is as given below:

Mode of coverage	**No. of TS planned for allotment in 2024-25**	**No. of TS planned for allotment in 2025-26**	**No. of TS planned for covering in 2026-27**	**Total**
Outsourcing (tendering & nomination) (from previous experience and current situation)	300	350	Project completion, report finalisation, and payment completion	650
Revised number of Toposheets to be outsourced			884 (234 already outsourced + 650 projected)	

g) Considering the above, GSI requested for approval of revised fund requirement for outsourcing of NGPM survey in 884 toposheets

- Cost for 234 toposheets allotted till June, 2024 = Rs. 31.17Cr
- Estimated cost for 300 toposheets (@ Rs. 5900 per data point) = Rs 49.58 Cr
- Estimated cost for 350 toposheets (@ Rs. 6490 per data point) = Rs 63.60 Cr

Total estimated cost = Rs. 144.35 Cr (including GST @18%)

h) The 66th TCC of NMET upon review of the project raised concern over the following aspects.

I. The timeline to complete the task was March, 2024.

II. Initial target of outsourcing was 2099 toposheets (i.e 500 in FS 2021-22, 800 in FS 2022-23 and 799 in FS 2023-24) and now has been reduced to just 884 toposheets. Nothing has been discussed about the remaining 1215 (i.e. 2099-884= 1215 toposheets)

III. As per the earlier tender documents, cost for per data point for the FS 2024-25 and 2025-26 should be Rs. 6500/- and Rs. 7000/- respectively. But here it is informed as Rs.5900/- and 6490/- respectively. Costing Policy is not understood.

IV. Further , as per SoC of NMET (3.1b) cost for Gravity - Magnetic Method - Regional / Detailed (0.5 to 200 sq.km depending on the objective) is ₹4500/- only.

V. The original approved project cost was Rs. 385.86 crore and now it is brought down to Rs. 144.35 crore. Total deviation from the original.

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Recommendation of TCC:

The TCC has found that GSI has completely changed the approved target, work plan or strategy, quantum, policy, timeline and budget. Therefore, GSI has been recommended to obtain a fresh approval from the competent authority before submitting the proposal to the TCC.

Agenda 66.1.21. Preliminary Exploration (G3) for vanadium and titanium in Dandi–Onjal–Surwada Block in Navasari and Valsad Districts, Gujarat.

&

Preliminary Exploration (G3) for Vanadium, Titanium and associated minerals in Beach and Dune sands of Talashil block in Sindhudurg district: Maharashtra

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

a) M/s Geo Marine Solutions Private Ltd informed that the project Dandi–Onjal–Surwada Block and Talashil block were approved in the 33rd EC Meeting held on 19th February, 2024 and 34th EC meeting of NMET held on 19th March 2024 respectively.
b) As per the discussion in 65th TCC meeting of NMET M/s Geo Marine Solutions Private Ltd informed the geological mapping in both the block may be modified to 1: 5000 scale.

Recommendation TCC:

The Committee recommended geological mapping in 1: 5000 scale in both the projects without change in approved cost.

Agenda 66.1.22. Reconnaissance Survey (G4 Stage) for Bauxite in Sirmaur –Kevati Block (145 Sq. Km.), District: Rewa, Madhya Pradesh

[Implementing Agency: Maheshwari Mining Pvt. Ltd.]

c) Maheshwari Mining Pvt. Ltd. informed that the project was approved in the 30th EC Meeting held on 06th June, 2023. The sanction order was issued on 26th June, 2023 with timeline of 08 months and approved cost was INR 89,75,255/-.
d) Maheshwari Mining Pvt. Ltd. informed that the project has been completed and the comments of the peer reviewer are being incorporated. Hence, 1 month time extension upto 15th July is being sought from TCC.

Recommendation TCC:

The Committee recommended 1month timeline extension upto 15th July 2024 for GR submission.

Agenda 66.1.23. Reconnaissance Survey (G4 Stage) for Graphite in Darukona Block (119 sq. km), District: Rayagada, Odisha.

[Implementing Agency: Maheshwari Mining Pvt. Ltd.]

a) Maheshwari Mining Pvt. Ltd (MMPL) informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 15th December, 2023 with timeline of 12 Months and approved cost was INR 1,73,81,649/-

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b) MMPL presented the progress of the project. It was informed that geological mapping has been completed and based on the mapping, 3 mineralized zone has been demarcated. The forest permission is still being awaited
c) The committee recommended review of the project after trenching, but before commencement of drilling.

Recommendation TCC:

The Committee suggested to review the project after trenching and chemical analysis.

Agenda 66.1.24. Reconnaissance Survey (G4 Stage) for Graphite in Kanapulisi Block (98.6 sq. km), District: Rayagada, Odisha.
[Implementing Agency: Maheshwari Mining Pvt. Ltd.]

a) Maheshwari Mining Pvt. Ltd. informed that the project was approved in the 32nd EC Meeting held on 06th December, 2023. The sanction order was issued on 15th December, 2023 with timeline of 12 Months and approved cost was INR 1,69,49,726/-
b) MMPL presented the progress of the project. The geological mapping has been completed and 9 zones has been demarcated . MMPL requested to carry out drilling in 5 boreholes.

Recommendation TCC:

The Committee noted the progress of the project agreed to carry out drilling in the block.

Agenda 66.1.25. Reconnaissance Survey (G4 Stage) for REE mineralisation in Kenda, Barpali, Nagpura, Chureli, Manikpur Villages, District Bilaspur, Chhattisgarh.
[Implementing Agency: DGM Chhattisgarh (GeoExpore pvt. Ltd.)]

a) DGM Chhattisgarh (GeoExpore pvt. Ltd.) Informed that the project was approved in the 30th EC Meeting held on 06th June, 2023. The sanction order was issued on 26th June, 2023 with timeline of 06 months and approved cost was INR 47,51,503/-.
b) GeoExpore pvt. Ltd. informed that the project received time extension upto 31st May 2024 in the 35th EC of NMET.
c) It was informed that geological mapping , sampling and petrographic studies have been completed. The surface sample values does not show significant results.
d) GeoExpore informed that the samples of pegmatite show low SiO2 and high concentrations of K2O, leading them to classify the rock as ultrapotassic. However, the committee suggested verifying this classification through chemical analysis before officially naming the rock ultrapotassic.
e) The committee suggested that the study does not warrant further exploration. The project is to be concluded and GR may be submitted by 31st July 2024.

***Recommendation TCC*:**

The Committee recommended to conclude the project and submit the GR to NMET with time extension upto 31st July 2024.

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Agenda 66.1.26. Preliminary Exploration (G3) for Ni–Cr–Cu, PGE, Au, REE in Mafic–Ultramafic Bodies in Hadanur Tagadur Belt, Mandya District, Karnataka [Implementing Agency: GeoExpore Pvt. Ltd.]

a) GeoExpore pvt. Ltd. informed that the project was approved in the 29th EC Meeting held on 31st March, 2023. The sanction order was issued on 17th April, 2023 with timeline of 10 months and approved cost was INR 86,12,385/-.
b) GeoExpore pvt. Ltd. informed the survey has been carried out using the drone technology. The Geophysical survey was completed using magnetic prospecting and Geological Mapping: (1:4000 scale) in 7.00 Sq.Km has been carried out. The analytical results showed limited REE concentration in the area, max. upto 460ppm.
c) The committee raised concerns over the analysis carried out by GeoExpore specially the silica content reported from ultramafics and suggested to recheck the analysis at a different laboratory.
d) The committee opined that the analytical results does not show any encouraging values, hence it is not necessary to proceed with drilling. The committee advised to conclude the exploration and submission of GR and recommended time extension upto 31st August 2024.

Recommendation TCC:

The Committee did not recommend drilling due to lack of encouraging values. The committee agreed for GR submission with timeline extension upto 31st August 2024.

Agenda 66.1.27. Reconnaissance Survey (G4 Stage) for Basemetal in Thal-Didihat-Askot area, Pithoragarh district, Uttarakhand

&

Reconnaissance Survey (G4 Stage) for Mailar Base Metal–Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh [Implementing Agency: Geovale Services Pvt. Ltd]

a) Geovale Services Pvt. Ltd. informed that the projects Reconnaissance Survey (G4 Stage) for Basemetal in Thal Didihat-Askot area, Pithoragarh district, Uttarakhand and Reconnaissance Survey (G4 Stage) for Mailar Base Metal– Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh was approved in the 34th Executive Committee (EC) meeting of NMET held on 13th March, 2024 with approved cost of 137.47 Lakhs and 240.94 lakhs respectively.
b) Geovale requested for modifying the drilling cost in both the projects from ₹4760 (cost for Auger drilling) to ₹ 11,500 (cost of drilling in hard rock).
c) Considering the above, the committee agreed to revision of the approved cost for the projects as given at **Annexure 3A and Annexure 3B**.

Recommendation TCC:

The Committee recommended revised cost of ₹187.08 Lakhs(Annexure 3A) for the project Reconnaissance Survey (G4 Stage) for Basemetal in Thal-Didihat-Askot area, Pithoragarh district, Uttarakhand and ₹322.39 (Annexure 3B) for Reconnaissance Survey (G4 Stage) for Mailar Base Metal–Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh .

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Agenda 66.1.28. Preliminary Exploration (G–3) for REE and associated minerals in Borana Block, Rajsamand District, Rajasthan.
[Implementing Agency: Geo Expore 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 submitted the request for change of district name from "Rajsamand District" to "Bhilwara District" in the approved project. It was informed that the district name was suggested as " Rajasmand" in consultation with the available toposheet, however the Director, Department of Mines and Geology, Rajasthan has confirmed that the present study block falls under "Bhilwara District".
c) In view of the above the committee agreed in change of the title of the project to "Preliminary Exploration (G–3) for REE and associated minerals in Borana Block, Bhilwara district, Rajasthan*"*

Recommendation TCC:

The Committee recommended "Preliminary Exploration (G–3) for REE and associated minerals in Borana Block, Bhilwara District, Rajasthan".

Agenda 66.1.29. The Extension of contract of TS-QC Consultant and releasing of remaining 25% payment of completed three work components for Heliborne Survey project
[Implementing Agency: GSI]

a) GSI, in July 2018 submitted the proposal to NMET for "Engaging a consultant for interpretation of its existing airborne legacy data and data acquired by Govt. of Odisha for follow-up Heliborne Geophysical Survey by GSI"
b) The financial sanction for the project "Interpretation of legacy data and TS-QC consultancy" for four work components was approved in 9th EC meeting held on 8th August, 2018 at an estimated cost of Rs. 3,37,90,251 /-.
c) Further, 22nd EC meeting of NMET held in December 2021 approved the time extension of project without cost overrun for 31 months [from May, 2020 to November, 2022] and correction in the figure of TSQC to 50,000 line km at cost of Rs 1,55,00,000/-
d) Furthermore, in the 28th EC meeting of NMET held on 16th March 2023, approved change in survey area from 50,000 LKM to 24,595 LKM and timeline extension for project contract of TS-QC for 18 months upto 31st May 2024.
e) GSI informed that the first three work components have already been completed. TS-QC of Heliborne surveys could not start as this work component is entirely linked with the PIA's work . Hence, TS-QC work will start after the commencement of Heliborne Surveys by PIA.
f) GSI informed that the PIA is expected to commence the Heliborne TDEM Survey data acquisition during the first week of October; 2024.TS-QC Consultant does not intend to continue the project if 25% amount of the completed three work components is not released.

The details of work components are as stated below:

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Sl. No.	Work Component	Amount in Rs.	Amount paid to the consultant (75%) in Rs.	Remaining amount (25%) in Rs.	Date of Completion
1	Interpretation of Legacy Data	1,16,65,251/-	87,48,938/-	29,16,313/-	23.12.2019
2	Preparation of Detailed Project Report	20,06,000/-	15,04,500/-	5,01,500/-	24.01.2020
3	Tender Management	18,29,000/-	13,71,750/-	4,57,250/-	16.08.2023
	Total	1,55,00,251/-	1,16,25,188/-	38,75,063/-	
4	Technical Supervision & Quality Control	89,96,851/-	Payment will be made as per milestone achievement of revised target.		Not yet initiated.

g) Considering the above, GSI sought approval for the following two points and accordingly the amendment will be made in the MoA of TS-QC Consultant of Heliborne Survey:

- Release of 25% of remaining payment for the completed work components i.e.,

  a) Interpretation of Legacy data,
  b) Preparation of detailed project report and
  c) Tender Management.

- Extension of project timeline of M/s IDPeX Private Limited may be considered from 01.06.2024 to 28.02.2026 i.e. 21 months with effect from the issue of the Extension order without any financial impact for the successful completion of the pilot project by the TS-QC Consultant of Heliborne Survey of Heliborne survey.

h) This has the approval of Director General, Geological Survey of India.

i) The committee opined that release of 25% of remaining payment for the completed work does not fall under the purview of TCC. However, considering the above the committee agreed to recommend 21 months' time extension upto 28th February 2026 without any financial implication

Recommendation TCC:

The Committee recommended 21 months timeline extension upto 28th February 2026 without any financial implication.

Agenda 66.1.30. Extension of contract timeline for PIA for Helinorne surveys:-

i. Heliborne Survey (Phase-I) over 8 mineral target zones identified from interpreted Legacy Aero-geophysical data in parts of Odisha, Chhattisgarh, AP, Telangana and Karnataka.

ii. Heliborne Time Domain Electromagnetic (TDEM) and Magnetic Survey over target mineral areas H1 and H2 as follow up surveys recommended by analysis of Aerogeophysical data over OGP Blocks 1 & 2 (Phase-I).

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[Implementing Agency: GSI]

a) GSI informed that in the 19th EC meeting held on 26th March, 2021 approved the projects for
   I. Heliborne Survey (Phase-I) over 8 mineral target zones identified from interpreted Legacy Aero-geophysical data in parts of Odisha, Chhattisgarh, AP, Telangana and Karnataka with estimated cost of ₹19.00 Cr. (including 18% GST)
   II. Heliborne Time Domain Electromagnetic (TDEM) and Magnetic Survey over target mineral areas H1 and H2 as follow up surveys recommended by analysis of Aerogeophysical data over OGP Blocks 1 & 2 (Phase-I) with estimated cost of ₹7.00 Cr. (including 18% GST)

b) Further, in the 27th EC meeting of NMET held on 10th January 2023, financial sanction for revised cost of ₹26,77,55,531/- (Rupees Twenty Six Crore Seventy Seven Lakhs Fifty Five Thousand Five Hundred and Thirty One Only) inclusive 18% GST for two heliborne survey projects.

c) GSI informed that contract was awarded to the consortium of M/s Xcalibur McPhar Private Limited, M/s Global Vectra Helicorp Limited and M/s Xcalibur Multiphysics Group S.L (Xcalibur Group holding company), Spain for carrying out Heliborne Magnetic and Time-Domain Electromagnetic Aerogeophysical Surveys over 10 identified Mineral Potential areas. The MoA was signed on 28.07.2023 with the contract expiration date as 31.07.2024.

d) GSI apprised that the PIA i.e. M/s Xcalibur McPhar Private Limited submitted a letter on 26.04.2024 to RSAS, GSI, Bengaluru with request for the extension of contract timeline from 01.08.2024 to 31.12.2025 i.e. 17 months due delay in getting permission from various Govt. agencies.

e) GSI mentioned that the aerogeophysical survey includes many regulatory approvals and permissions from multiple Government departments. The surveys can only be taken in a narrow window of 4 to 5 months flying season of the year i.e. October, 2023 to April, 2024. The latest approval received by PIA was on 14.03.2024. The Parliamentary Election started from 19th April, 2024 to 1st June, 2024 and Election Campaigning also started during Mid-March, 2024. By the time, all permissions were obtained, helicopters were not available for survey due to election campaigning by various political parties in India. After the end of parliamentary election, the monsoon has set-in India ruling out possibility of survey operation till end of monsoon i.e. October / November of 2024. The PIA is expected to commence the survey by 15.10.2024 and complete the data acquisition by 15.04.2025.

f) GSI sought time extension upto 31.12.2025 i.e. 17 months for the successful completion of the two heliborne surveys.

g) In view of the above, the committee agreed for time extension upto 31st December 2025 for completion of Heliborne Magnetic and Time - Domain Electromagnetic Surveys over 10 identified Mineral Potential areas.

Recommendation TCC:

The Committee recommended 17 months' time extension upto 31st December 2025 for project completion and asked GSI to submit what is all the permission obtained from various agencies.

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Agenda 66.1.31. Additional line km covered by PIA over Multi-Sensor Aero-geophysical Surveys over Obvious Geological Potential areas of India, Blocks-6 [Implementing Agency: GSI]

a) GSI informed that Multisensor Aero-geophysical Survey over Obvious Geological Potential (OGP) Block 6 was approved in the 19th EC of NMET held on 26th March 2021 for a period of 17 months with approved cost ₹ 39,85,74,529/-

b) In the 27th EC meeting of NMET held on 10th January 2023, time extension was given upto 31st March 2024 without cost escalation. Further, in the 32nd EC of NMET on 6th December 2023, time extension was granted upto 31st December 2024 due to delay in obtaining permissions.

c) GSI informed that the target has 2,78,846 Line km as per MoA (covering parts of Maharashtra, Chhattisgarh, Telangana & Andhra Pradesh). Area falling in toposheet 56M/5 was excluded from the Survey due to restricted no-fly zone area declared by MoD vide Office Memorandum No. 20(03)/2017/D(GS-III), Ministry of Defence, New Delhi dated 20.06.2017.

d) However, as per the Department of Science and Technology (DST), Guidelines for acquiring and producing Geospatial Data and Geospatial Data Services including Maps (DST F. No. SM/25/02/2020 (Part-1) dated 15.02.2021), the PIA was allowed to cover the 850 Sq. Km (3,117 Line Kms) which was earlier declared No-Fly Zone. Hence GSI sought approval for additional area 3117 Line Km. and cost of the additional area amounting to US$ 60,204.8418 .

Block No.	Area as per MoA Sq. Km	Line Km as per MoA	Area & Line Km covered over No-Fly Zone (56M/5)	Area covered as per actual Sq. Km	Line Km covered as per actual
6	76,049	2,78,846	3,117 L.km & 850 Sq. Km	76,899	2,81,963

e) GSI mentioned that the entire Block data will help in tracing the continuity of the anomalous geophysical features. Full coverage of airborne survey minimizes the risk of missing out significant anomalies or features and carrying out modelling with the continuous data set.

f) After detailed deliberations, the committee agreed to recommend the additional 3117 Line Km. with additional cost of US$ 60,204.8418 amounting to Rs. 50,27,104/- (Rupees Fifty Lakhs Twenty Thousand and Hundred Four only) considering *approximate US$ to INR conversation 1US$ = INR 83.50.*

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Recommendation TCC:

The Committee recommended recommend the additional area 850 Sq. Km (3117 Line Km.) with additional cost of US$ 60,204.8418 i.e Rs. Rs. 50,27,104/- (Rupees Fifty Lakhs Twenty Thousand and Hundred Four only)

Agenda 66.1.32. Deep seated mineral prognosis by Geophysical Techniques: Lithospheric structure and relationship with Gold and Kimberlite clusters of Kalyandurg-Timmasamudram-Chigicherla, Ananthapur District, Andhra Pradesh.

[Implementing Agency: GSI]

a) GSI informed that the project was approved in the 25th EC meeting of NMET on 29th June 2022 with a cost of 2.60 Crores for a period of 24 months. The sanction order was issued on 15th July 2022.
b) The committee was apprised the progress of the project.
c) The work progress in the MT Surveys conducted in Timmasamudram block, Profile-1 & 2 in KTC block was presented. The Profile-3 MT survey suggested to take up between Profile-1 and 2 were also completed by the last week of May, 2024. As profile-3 MT data was acquired additionally, NGRI requested for timeline extension up to 31.12.2024 for completion of the MT data processing, geological components and report work. It was informed that the geological work will be taken up shortly based on MT input.
d) In view of completion of the MT data acquisition and for processing of MT data, geological sampling work and report work, CSIR-NGRI requested extension of time line of the NMET project for a period of 6 months upto 31.12.2024.
e) The geological part of the project, which is taken up as a parallel research project by GSI to validate the MT profiles on ground and do further exploration activities was also presented by GSI in detail . In this connection, Project Director, GSI requested for taking close up scale geophysical (IP & Resistivity) survey and some isotope components. In turn, the committee suggested to carry out this relevant work after taking necessary in-house approval from GSI .

Recommendation TCC:

The Committee noted the progress of the work and recommended time extension upto 31st December 2024.

Agenda 66.1.33. Preliminary Exploration (G3) for Bauxite in Majhingamali block in Kashipur Tehsil, District - Rayagada, Odisha.
[Implementing Agency: OMC]

a) OMC informed that the project was approved in the 11th EC Meeting held on 7th February, 2019 with timeline of 10-12 months and approved cost was INR 187.93 Lakhs. Further, in the 20th TCC meeting held on 4th & 5th April 2019, additional cost of 14.31 Lakhs was approved.
b) OMC has proposed G-3 level Exploration in Majhingamali bauxite block through geological mapping (at 1:4000 scale), topographic survey by DGPS, systematic core drilling and drill core sampling.

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c) OMC has ensured that regular liasioning with local villagers & administration will allow for carrying out the job smoothly in the block. Hence , OMC has sought time extension upto 30th June,2025 for completion of the project.

d) The committee expressed concern over the amount of time lapse between the approval of the project and its execution. However, considering the limitations in carrying out the exploration , recommended for time extension upto 30th June 2025 for completion of the project and GR submission. The committee instructed OMC to submit all the documents pertaining to delay in the project , including the chorological order of events from approval to execution of the project.

Recommendation TCC:

The Committee recommended time extension of the project upto 30th June 2025 to EC and suggested to submit the documents pertaing to delay in carrying out the exploration activities.

Agenda 66.1.34. Preliminary Exploration (G3) for Bauxite in Keluamali block, District - Kalahandi, Odisha.
[Implementing Agency: OMC]

a) OMC informed that the project was approved in the 11th EC Meeting held on 7th February, 2019 with timeline of 10-12 months .

b) OMC has proposed G-3 level Exploration in **Keluamali** bauxite block through geological mapping (at 1:4000 scale), topographic survey by DGPS, systematic core drilling and drill core sampling.

c) OMC has informed that the 29th EC of NMET held on 31st March 2023 had approved time extension upto 31st October 2023 due to local law and order issue and further in the 32nd EC of NMET held on 12th December 2023 had approved time extension upto 31st March 2024 due to local law and order issue.

d) OMC apprised that geological mapping, Surface Sampling & chemical analysis has been completed, however, drilling couldn't be initiated due to the local community issues in the area. Meetings with villagers to resolve the issues are in progress.

e) In view of the above , OMC has sought time extension upto 30th June,2025 for completion of the project.

f) Considering the above , the committee agreed to recommend 15 months for time extension upto 30th June 2025 for completion of the project and GR submission. The committee instructed OMC to submit all the documents pertaining to delay in the project , including the chorological order of events from approval to execution of the project.

Recommendation TCC:

The Committee recommended time extension of the project upto 30th June 2025 to EC and suggested to submit the documents pertaining to delay in carrying out the exploration activites

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Agenda 66.2. Project Evaluation for In-Principle Approval

Agenda 66.2.1. Preliminary Exploration (G-3 Stage) of Phosphorite/ Rock Phosphate Block in Devpur–Manakpura area in Chhatarpur District of Madhya Pradesh.

[Implementing Agency: Engeotech Consultant Private Limited]

a) Significant phosphorite deposits have been confirmed by GSI at Hirapur in Sagar District, Madhya Pradesh, associated with the Hirapur Phosphorite Formation of the Bijawar Group of rocks.

b) At Devpur, a phosphatic horizon 1 km east of the village on the western slope of Jugnu Pahar is about 250 meters long and 5 to 10 meters thick. Similarly, the phosphorite bed near Manakpura village is about 150 meters long and 5 to 10 meters thick.

Surface channel samples indicated the following phosphorite zones	Three boreholes were drilled with these intersections
7.50 meters x 2.44% P2O5 3.70 meters x 7.33% P2O5 4.00 meters x 14.99% P2O5 21.15 meters x 6.94% P2O5	DBH-1: 5.50 meters x 5.21% P2O5 DBH-2: 4.00 meters x 11.68% P2O5 DBH-3: Two thin zones (0.65 meters) with poor P2O5 content

c) Initially, the report recommended no further exploration at Manakpura due to poor results and dense forest cover. However, considering the present-day cut-off value of 5% P2O5, many analytical results exceed this threshold.

d) Consequently, the area has been proposed for phosphorite exploration in the Field Season 2025-26, as per the GSI report's recommendations. Thus, the area is feasible for Rock Phosphate exploration given recent recommendations and current cut-off values.

e) The committee noted that within the proposed block, GSI has drilled three boreholes in the southwestern side, and during the field visit, Engeotech collected samples from the same part where boreholes had already been drilled.

f) The committee stated that to carry out G3 stage investigation, it is mandatory to have control of mineralization on the surface within the proposed block. However, Engeotech does not have any data from the central or northeastern parts of the proposed block.

Recommendation of TCC:

The committee advised Engeotech to collect samples from central and NE part of the area and establish the potentiality of the block for upgradation of the and present the item in the upcoming TCC meeting. It is also suggested that DMG, MP will also attend the meeting and give their opinion regarding the proposal.

Agenda 66.2.2. Reconnaissance survey (G4) for Vanadium in Kakaban Block (50 sq km), District: Chandrapur, Maharashtra.

[Implementing Agency: M/S. Gemkokati Pvt Ltd]

a) The Chandrapur district features a range of geological units from Archean to Recent times. The Penganga Group, defined around Adilabad, consists of three formations: Pranhita Sandstone, Chanda Limestone, and Satnala Shale.

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b) Overlying these formations are Deccan basalts, capped by laterite with vanadium oxide (V2O5) values between 0.15% and 0.19%. The laterite capping begins around 487.68 meters and varies in thickness from 5 to 45 meters.
c) Notable features include the Manikgarh Fort, constructed with laterite blocks, and a well within the fort showing a 30-meter vertical laterite section. Nearby, a road section shows the transition from traps to laterites, with an intervening weathered lithomargic trap zone.
d) Recently, Gemcokati visited the area and collected few samples of laterite cover yielding ≥0.15% V_2O_5.

Recommendation of TCC:

The committee finds that the proposed block area overlaps by approximately 90% with an ongoing GSI project. Therefore, the committee does not approve the item.

Agenda 66.2.3. Reconnaissance Survey (G4) for Poly metallic mineralization's in Manpur–Umarvaniyan Block, (110 sq km) District: Udaipur, Rajasthan.
[Implementing Agency: M/S. Gemkokati Pvt Ltd]

a) The proposed area falls under the Sanjela-Manpur-Dugocha Metallogenic Belt (SMDB), which belongs to the Jagpura Formation of the Debari Group, part of the Aravalli Supergroup.
b) Gemcokati is proposing to explore the area for iron ore (base metal bearing) and limestone on the basis of positive chemical analysis results in the area, which was previously explored by GSI for other commodities.
c) Exploration work to estimate the resources of vital industrial commodities such as iron ore and limestone has not been attempted previously by any other agencies. GSI has recommended exploring the area for iron ore in their report.
d) In view of the area's potential, as detailed above, the item has been proposed.
e) The committee finds that the proposed area partially overlaps with MECL's work on Cu, Au, and REE, and the rest overlaps with GSI's work on Au and associated minerals.
f) Gemcokati proposed that the block be considered for iron and limestone, as the area shows encouraging values for Fe and CaO. The committee suggested Gemkokati to submit the proposal with all relevant documents, including the available maps of the area.

Recommendation of TCC:

The committee opined that Gemkokati Pvt Ltd may propose the item for Fe and limestone with suitable justification.

Agenda 66.2.4. Reconnaissance survey (G4) for Copper bearing minerals in Dhobani, East Singhbhum, Jharkhand.
[Implementing Agency: TATA Steel]

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Agenda 66.2.5. Reconnaissance survey (G4) for Copper bearing minerals in Nudaidih East Singhbhum Jharkhand.
[Implementing Agency: TATA Steel]

a) The proposed Dhobani area falls in Survey of India Toposheet No. 73J/6 and 73J/7 in East Singhbhum district, Jharkhand. Similarly Nudaidih area is located in Survey of India Toposheet Nos. 73J/7 and 73J/11 in East Singhbhum district, Jharkhand.
b) The blocks are located adjacent to each other, in proximity to a shear zone, which may be a suitable locale for mineralization.
c) Both Geological Survey of India and Mineral Exploration Corporation Limited have worked around the proposed area and reported presence and copper mineralization.
d) Moreover, the proposal is supported by the area's proximity to known copper mines of HCL, along with mineral occurrences and significant geological potential. The host lithology is continuing to the proposed block.

e) Additionally, Tata Steel has carried out review of data available in NGDR portal and found the area promising for copper mineralization.

Recommendation of TCC:

The committee recommended to combine both the proposed blocks into one including the shear zone and present the proposal in next TCC.

Agenda 66.2.6. Reconnaissance Survey (G4 Stage) for Tin, Hafnium and Zirconium over an area of 75 Sq.km Block at Repari-Ziro area of Lower Subansiri district, Arunachal Pradesh.
[Implementing Agency: M/S Novamine India Pvt Ltd]

a) The proposed area falls within Survey of India T.S. No. 83E/14, located in the Lower Subansiri district of Arunachal Pradesh.
b) This proposal is based on the outcome of STM and NGCM work conducted by the Geological Survey of India.
c) In this toposheet 83E/14, particularly in the eastern and northeastern parts, nine stream sediment sample points displayed anomalous values of tin, ranging from 13.86 ppm to 44.37 ppm, which are significantly higher than the crustal abundance value of tin. Similarly, hafnium showed anomalous values of 55 ppm, 66 ppm, and 116 ppm, far exceeding its crustal abundance value. Zirconium also displayed anomalous values, ranging from 1435 ppm to 2564 ppm.
d) The committee finds that the values presented by Novamine are from stream sediments, and as shown in the map, the surrounding lithology is phyllite, which is very unlikely to host Sn, Hf, or Zr mineralization. Therefore, the committee suggested to acquire more information on mineralization and its source.

Recommendation of TCC:

The committee suggested that Novamine conduct additional preliminary work to gather data necessary for justifiably formulating the proposal. Novamine may seek assistance from DMG, Arunachal Pradesh in this regard.

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Agenda 66.3: Technical evaluation of new project proposals

Agenda 66.3.1. Preliminary Exploration (G–3) for potash in Lakhasar East Extension Block, Lakhasar Sub Basin (Area: 9.50 sq km) Bikaner District, Rajasthan.
[Implementing Agency: MECL]

a. The proposed area belongs to Lakhasar Sub Basin, Nagaur Ganganagar Basin Northwestern Part of Rajasthan
b. The exploration in the Lakhasar block has identified six major potash bands (K1A, K1B, K2A, K2B, K2C, and K2D) along with some local bands. These bands exhibit a rolling dip of 1° to 5° towards the NNW, NW to W, and continue into the adjacent Lakhasar East blocks.
c. In the 12th TCC meeting, MECL proposed an exploration project in Lakhasar block, Bikaner, Rajasthan, for seven boreholes, which was approved by the Executive Committee.
d. Following encouraging results, a new proposal for 40 boreholes over 29.90 sq km was partially approved for 15 boreholes by the TCC on 12-13 February 2020 and by the EC on 25 February 2020, with drilling.
e. Fifteen boreholes covering an area of 18.30 sq km out of total 40 boreholes initially proposed by MECL were selected on plan by the TCC and recommended for approval to EC, NMET and the proposal with 10,040 m drilling was approved in 16th meeting of EC held on 25th February 2020
f. On the basis of encouraging results of boreholes drilled in Lakhasar block, MECL then proposed Lakhasar East Block (16.73 sq km) for preliminary exploration (G-3) with 26 boreholes, recommended in the 39th TCC meeting and after detail deliberation, committee recommended to explore 7.16 Sq km area in the eastern side of Lakhasar block but EC deferred the project and asked for status of auction of explored blocks from state government. The proposal was reconsidered and approved in the 28th EC, with an estimated cost of ₹15.51 crore.
g. Boreholes in the Lakhasar East block have intersected potash zones with thicknesses ranging from 1.00 m to 5.52 m and average grades from 2.08% to 5.30% K (equivalent to 2.51% to 6.41% K2O). A sample with 10.18% K (12.32% K2O) and 0.70 m thickness was also found in borehole MLEP-02. A resource estimation report will be submitted in August 2024.
h. Now, the remaining 9.50 sq km of Lakhasar East Block is proposed for G-3 level exploration

Recommendation of TCC:

Since NMET has already approved a significant number of projects for potash exploration in Rajasthan, the committee recommended to wait for the outcomes of the approved items; if the results are encouraging, then this item will likely be approved smoothly.

Agenda 66.3.2. Preliminary (G–3) Exploration for Tungsten and Tin Ore in Murara Block (1.82 sq km), District– Niwari, Madhya Pradesh.
[Implementing Agency: MECL]

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Agenda 66.3.3. Preliminary (G–3) Exploration for Tungsten and Tin Ore in Devendrapura Block (2.33 sq km), District– Niwari, Madhya Pradesh.
[Implementing Agency: MECL]

a) The areas fall in parts of SOI toposheet no. 54K/15 and belong to Bundelkhand Gneissic Complex being interesting target for the mineral search for various minerals including Tungsten & Tin.
b) The proposed proposal is an upgrade of the G4 stage work by MECL in the Tarichar Khurd area.
c) The Geological Survey of India discovered tungsten (W) in quartz samples and recommended further exploration. MECL then conducted a G4 stage survey funded by NMET and identified the Murara sub-block within the Tarichar Khurd block, where quartz reefs near Murara village showed tungsten values up to 529.28 ppm in bedrock samples. Similarly quartz reef near Devendrapura village has reported tungsten (W) values up to 444.62 ppm in bedrock samples. Additionally, scheelite has been identified under short-wave UV rays near the high-value sample's location.
d) Geological mapping and analytical data of surface samples from the Tarichar Khurd block (G4) were reviewed in the 58th and 64th TCC meetings of NMET, revealing encouraging tungsten values in the area.
e) The committee recommended preparing a G3 stage item for tungsten (W) by conducting a UV lamp survey.
f) Considering the recommendations, the potential of the quartz reef, the geological setup of the area, and the NMET committee's recommendations, these two Preliminary Exploration (G3) proposals for Tungsten and Tin Ore have been prepared and proposed.
g) The committee recommended combining both blocks into one item for execution. However, the committee clarified that the proposed areas for the Murara Block and Devendrapura Block do not need to be merged. These areas will be explored separately but managed as a single item.
h) Accordingly, MECL merged the two items into one and proposed with modified targets.

Recommendation of TCC:

The committee recommends the proposal for the approval of EC for "Preliminary exploration (G-3) of Tungsten and Tin ore in Murara-Devendrapura Block, District-Niwari, Madhya Pradesh." with an estimated cost of Rs. 308.81 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 4A & 4B. The item will be reviewed after 06 months.

Agenda 66.3.4. Preliminary (G-3) Exploration for Copper, Lead, Zinc and Associated Metals in Salaiya Phatak Block, District: Katni, Madhya Pradesh.
[Implementing Agency: MECL]

a) The Salaiya Phatak Block, situated adjacent to the Majhauli and Amoch-Chhapra Blocks within the Mahakoshal Group, is well-known for its rich mineral deposits, including iron, manganese, base metals, and gold.
b) The Imaliya area within this block has been extensively studied by the Geological Survey of India and the DGM, MP since 1952. The mineralization in Imaliya is

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predominantly associated with brecciated quartz veins stained with iron, following a NNW-SSE fracture pattern across the regional rock formations.

c) A similar geological formation, exhibiting surface sulphide mineralization, was discovered about 2 km west of Imaliya near Salaiya Phatak during a reconnaissance survey conducted by the MECL. A sample taken from an iron-stained sheared quartz vein in the Salaiya Phatak area revealed a copper (Cu) content of 0.88%.
d) During FS: 2016-17, arsenopyrite within black chert and jasper bands near the Salaiya Phatak rail track was found to contain 0.4 ppm of gold. Additionally, quartz porphyry located south of Imaliya showed gold values up to 5 ppm.
e) The proposed Salaiya Phatak block is situated further south of the Imaliya auction block.
f) In its G4 reconnaissance survey report of the Salaiya Block, MECL recommended a systematic exploration approach, including drilling activities, to upgrade the block to the G3 level and establish inferred resources.
g) The item was proposed in 65th TCC and the committee recommended MECL to conduct further field visits and sampling to delineate the strike extension of the zone
h) Accordingly, MECL conducted field visits and collected samples from the old workings and the south of the Imaliya area. These samples are showing promising Cu values (300 ppm to 0.32%). Based on these findings, two distinct zones can be delineated. The first zone is the southern extension of the mineralized zone within the Imaliya auction block, spanning approximately 500 meters in length. The second zone is situated in the southern extension of the old workings of Imaliya, covering a length of nearly 600 meters.
i) The committee reviewed the proposed item thoroughly and suggested MECL to change the block boundary extending the area towards north west and reducing the area towards east and south east.
j) The committee also suggested to drill the boreholes at 200m spacing instead of 150m.
k) Accordingly, MECL modified the proposal and presented.

Recommendation of TCC:

The committee recommends the proposal for the approval of EC for "Preliminary Exploration (G-3) for Copper, Lead, Zinc and Associated Metals in Salaiya Phatak Block, District: Katni, Madhya Pradesh." with an estimated cost of Rs. 138.61 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 5A & 5B. The item will be reviewed after 06 months.

Agenda 66.3.5. Preliminary Exploration (G3) for Iron–PGE and associated minerals in Chitrangi Block, Districts: Singrauli, State: Madhya Pradesh.
[Implementing Agency: MECL]

a) The Chitrangi block is situated within the extensively studied Mahakoshal Belt, known for numerous economic mineral occurrences such as Banded Iron Formations (BIF), gold, base metals, Platinum Group Elements (PGE), manganese, and limestone.
b) GeoMysore Services (India) Pvt. Ltd. conducted exploration activities in and around Sidhi, covering an area of 2700 square kilometers and reported platinum and palladium (Pt+Pd) values exceeding 30 ppb in stream sediments, while rock chip

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samples from meta-basalt and volcanoclastics showed Pt+Pd values exceeding 50 ppb within the proposed area.

c) GSI also worked in the proposed area, noting anomalous gold content in chemical analyses of bedrock samples. Ultramafic rock samples around Thapna revealed copper (Cu) content of 0.15%, nickel (Ni) content of 0.20%, and gold (Au) content of 0.56 parts per million (ppm). Additionally, Pt values of up to 200 ppb, Pd values of 8 ppb, and Ir values of 12 ppb were recorded in these ultramafic bodies. Samples from Karhiya showed Pt values of 58 ppb, Pd values of 118 ppb, and Ir values of 1.5 ppb. Further investigation into gold, PGEs, nickel, and associated minerals was recommended, considering that the ultramafics within the proposed block may extend eastward from the Thapna ultramafics.

d) In the Field Season 2021-22, GSI reported the presence of Banded Iron Formations (BIFs) trending ENE-WSW across the block, with Fe2O3 content reaching up to 59.21% and a minimum value of 31.11%. Notably, a quartz vein sample intruding within Banded Magnetite Quartzite (BMQ) yielded 7700 parts per billion (ppb) of gold, indicating significant mineral potential.

e) MECL conducted fieldwork in the block area and identified BIFs and mafic-ultramafic rocks. The ultramafic rocks may extend eastward from the Thapna ultramafics adjacent to the block. Both GSI and GeoMysore have identified the Thapna ultramafics as promising for PGE exploration.

f) The item was proposed in 65th TCC and the committee observed that proposed area overlaps with GSI's working area and suggested that MECL to wait for GSI's report.

g) The committee suggested changing the title and focusing on one commodity, either Fe or PGE, as they belong to entirely different groups. However, analysis for associated mineralization can still be conducted. In response, MECL informed the committee that the exploration title will focus on iron.

Recommendation of TCC:

The committee recommends the proposal for the approval of EC for "Preliminary Exploration (G-3) for Iron and associated minerals in Chitrangi Block, Singrauli District, Madhya Pradesh." with an estimated cost of Rs. 196.12 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 6A & 6B. The item will be reviewed after 05 months.

Agenda 66.3.6. Reconnaissance Survey (G4) for Glauconite and associated mineralization in and around Dhamni, Piparwasi, Simliya area, Sheopur District, Madhya Pradesh.

[Implementing Agency: Maheshwari Mining Private Ltd]

a) The proposed area belongs to Vindhyan Supergroup and falls in part of SOI toposheet no. 54F/8.

b) Sandstone is found in the nala sections west of Basantpura, in Kapeli Nadi south of Kapel Hor, and along Dham Nadi southeast of Damni. This sandstone is fine-grained, light green, thinly bedded, and moderately sorted, containing about 5-10% glauconite (visual estimate).

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c) During the field season of 1989-90, GSI reported glauconite-bearing Rewa sandstone exposed from Dhodha-Burera in the east (toposheet No. 54 G/9) to Bagwani-Piparwas-Surad-Magarda-Dubera in the west (toposheet No. 54 G/5).
d) National Geochemical Mapping in parts of Shivpuri and Morena districts, M.P., reported K2O values ranging from 1.45% to 3.30%.
e) Geologists from Maheshwari Mining Pvt. Ltd. conducted two visits to the area to collect samples from glauconitic sandstone. In the first phase, five samples were analyzed, revealing K2O values of 1.31% and 2.81% in two of the samples. In the second phase, seven samples were analyzed, with four samples showing K2O values of 1.15%, 1.59%, 1.30%, and 1.33%.
f) Expanding upon the above findings and the favorable geological setup, the G4 stage exploration item has been proposed.

Recommendation of TCC:

The committee recommends the proposal for the approval of EC for "Reconnaissance Survey (G4) for Glauconite and associated mineralisation in Dhamni-Piparwasi Simliya area, Sheopur district, Madhya Pradesh" with an estimated cost of Rs. 106.22 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 7A & 7B. The item will be reviewed after 05 months.

Agenda 66.3.7. Reconnaissance survey (G4) for Lithium, Niobium, Tantalum, Titanium & REE Minerals in And Around Bengpal–Ellingnar-Kumakoleng Block, Sukhma, and Bastar District, Chhattisgarh.
[Implementing Agency: United Exploration India Pvt. Ltd]

a) The proposed area belongs to Bastar-Malkanjgiri Belt and falls in part of SOI toposheet nos. 65 F/13 and 65 F/14.
b) The block was chosen based on data from stanniferous pegmatites identified by GSI during 1975-76, considering the potential accumulation of detrital cassiterite in the Pawade belt.
c) The area, initially mapped by Brook Shank (1932-37) and Murti et al. (1976-77), and later detailed mapping conducted by GSI at a scale of 1:5000 in 1978-79 for exploring lithium, tin, niobium, and tantalum in a 3.5 sq. km area.
d) Pegmatites, emplaced along fractures in basic rocks, host primary tin mineralization near Chuirwada. GSI, in collaboration with AMD, analyzed samples from Kudripal and Murgel. Pegmatites showed lithium content of 3100-36000 ppm and cassiterite content of 45.36-74.85% SnO2, with Nb-Ta phases of 4.36-14.45% Ta2O5.
e) Stream sediment samples revealed heavy elements ranging from 0.2% to 3%, with an average of 0.9%. XRF analysis showed tin values from 0.69% to 51.48%, Nb2O5 from 0.16% to 4.3%, and Ta2O5 from 0.15% to 3.71%. The estimated tonnage of Sn in these sediments is approximately 7.5 tonnes within a depth of 1 meter in the stream bed.
f) Expanding upon the above facts, UEIPL proposed to explore the area just north of where AMD has previously conducted work.
g) The committee reviewed the item thoroughly and suggested removing the magnetic survey, as it will not be helpful for this type of lithology and commodity exploration. UEIPL has been advised to consult the gamma ray data of the area available in open

sources. The committee also suggested visiting the areas located south of the proposed block.

Recommendation of TCC:

The committee recommends the proposal for the approval of EC for "Reconnaissance survey (G4) for Lithium, Niobium, Tantalum, Titanium & REE Minerals in and around Bengpal–Ellingnar-Kumakoleng Block, Sukhma, and Bastar Districts, Chhattisgarh." with an estimated cost of Rs. 84.16 lakh (including GST) within time schedule of 12 months and submission of report as per Annexures 8A & 8B. The item will be reviewed after 06 months.

Agenda 66.3.8. Preliminary exploration (G–3 Stage) for graphite in Nawadih Block, Balrampur District, Chhattisgarh.
[Implementing Agency: United Exploration India Pvt. Ltd]

a) The area lies within the graphite schist belt of Chhotanagpur Granite Gneissic Complex which contains graphite mineralization at places and the presence of graphite mineralization has been reported by GSI several times.
b) The graphite-mica schist is typically associated with meta-sedimentary rocks and is often found alongside grey quartzite, quartz-mica schist, and occasionally calc-silicates. Its composition generally includes flaky graphite, mica, and minor quartz.
c) In the proposed area, graphite is present within schistose rocks as bands and lenses formed through metamorphism, giving it a flaky nature. The graphite in these schist samples appears as metallic flakes mixed with quartz and micaceous minerals, exhibiting a metallic luster and leaving a greasy residue on hands due to its softness. The graphite schists range in length from 1 to 25 meters.
d) Graphite is primarily located in three discontinuous bands in the western part of the Nawadih Graphite Block, often associated with quartz-mica schist. Analysis of graphite-bearing samples shows fixed carbon content ranging from 0.7% to 18.52%.
e) The item was proposed in the 63rd TCC, and after a thorough review, the committee noted that the G4 stage work for this block had been completed, but the report was pending submission for TCC review. It was advised to submit the Geological Report (GR) promptly. Once submitted, further planning for the proposal can be initiated.
f) During presentation UEIPL informed the house that the concerned Geological Report (GR) of the G4 stage item has been submitted.
g) After reviewing the detailed report, the committee found that UEIPL has established the dimensions of the mineralized zone based on spot values, which is not justified.
h) The committee stated that the information and justification provided by UEIPL are not sufficient to formulate a G3 stage item.

Recommendation of TCC:

The committee concluded that the proposed item does not meet the requirements to be executed as a G3 stage item at this stage and did not recommend the item.

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Additional Discussion

Procurement of Electron Probe Micro Analysis (EPMA) instruments in Geological Survey of India under NMET

In the 65th TCC meeting of NMET held on 28th, 30th & 31st May 2024, recommended the proposal for approval of EC towards procurement of 04 Electron Probe Micro Analysis (EPMA) for Geological Survey of India (one each at NCEGR, Bangalore, NCEGR, Faridabad, Petrology Division, Southern Region, Hyderabad and Petrology Division, Western Region, Jaipur respectively) estimated cost INR 67,23,18,920./- (Rupees sixty-seven Crore, twenty three lakh eighteen thousand and nine hundred twenty only) and with 2 years timeline.

After further deliberations with the vendor, GSI submitted a revised proposal with the same specifications submitted earlier having 5-year warranty plus 5-year post-warranty CAMC but with the final revised TOTAL Delivery Duty Paid (DDP) Price of USD 7428,000/- that is INR 62,39,52,000/- (Rupees Sixty-two Crore, thirty-nine lakh, fifty-two thousand only) which is inclusive of IGST and Customs Duty.

Total Discounted Package Price For 4 numbers of JEOL EPMA:

Particulars	Qty	Estimated cost	Total Cost For Four Numbers
Part-A: Main Equipment	**Package**	**US$**	**US$**
EPMA JXA-ISP100(5CH) Instrument with the accessories like UPS, Chiller, Pumps, PC, Carbon coater including 5 years warranty and post 5 Years Warranty CMC charges , Onsite Factory training , Laboratory Furniture	4	1,857,000	7,428,000
TOTAL Delivery Duty Paid (DDP) Price			7,428,000

(approximate US$ to INR conversation 1US$ = INR 84 Total US$ 7428000 is equivalent to INR 623,952,000 for Four Numbers of EPMA)

In view of the above, the committee recommended the proposal for approval of EC towards procurement of 04 Electron Probe Micro Analysis (EPMA) for Geological Survey of India (one each at NCEGR, Bangalore, NCEGR, Faridabad, Petrology Division, Southern Region, Hyderabad and Petrology Division, Western Region, Jaipur respectively) estimated cost 62,39,52,000/- (Rupees Sixty-two Crore, thirty-nine lakh, fifty-two thousand only) which is inclusive of IGST and Customs Duty respectively) and the procurement should be completed within 2 years of approval.

Annexure 1

Minutes of the 66th Technical-cum-Cost Committee (TCC) meeting held on 24th,25th and 26st June 2024 through video conferencing

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

List of participants attended 66th Technical-cum-cost Committee (TCC) meeting of NMET held on 24th,25th and 26st June 2024 through videoconferencing

S.No	Name/Designation	Email ID	Contact No	Organization
1.	Dr. S. Ravi, Dy. Director General, SU: Karnataka & Goa, GSI Bangalore	s.ravi1@gsi.gov.in	9441138834	Chairman, TCC
2.	Shri. I.R. Kirmani, ADG (Retd.), GSI	irkirmani@yahoo.com	9414014723	Member TCC
3.	Shri. Hemraj Suryavanshi, Addl. Director General (Retd.), GSI	hemraj.nmet@gmail.com	7477042176	Member TCC
4.	Shri. K. Koteswara Rao, Dy.D.G. (Retd.) GSI.	kkrao1957@gmail.com	9000117969	Member TCC
5.	Dr. S. K. Kulshrestha, DDG-RMH-III, NER, GSI, Shillong	s.kulshrestha@gsi.gov.in	9413330658	Member TCC
6.	Dr.E.V.S.S.K. Babu, Scientist (G), NGRI.	evsskbabu@ngri.res.in	9441535852	Member TCC
7.	Shri. K.L. Mundra, Head-RMRE, AMD, Hyderabad	headrmre.amd@gov.in	9414785663	Member TCC
8.	Shri. S.K. Adhikari, Chief Mining Geologist, IBM, Nagpur.	skadhikari@ibm.gov.in	7588690545	Member TCC
9.	Shri. Geetika Sharma Deputy Secretay ,NMET, Ministry of Mines	geetika.sharma@gov.in	9423284067	Member Ex-office
10.	Shri. P.K. Maharana, DGM (Finance), NALCO, Bhubaneswar	pmaharana@rediffmail.com	8500669500	Member TCC
11.	Shri. Ravi Kumar Gupta General Manager (Finance) HCL, Kolkata	ravi_g@hindustancopper.com	9433274328	Member TCC
12.	Smt. Vandana, Cost Accounts Officer, RSAS, Bangalore, GSI.	vandana@gsi.in	8660939235	Member TCC
13.	Shri. C. Parthsarathi, Director, GSI & Member Secretary, TCC- NMET, GSI, Bengaluru	c.parthasarathi@gsi.gov.in	9483186932	Member Secretary
14.	Shri S.K Kankane, Joint Director,	dgm.cg@gov.in	9826753151	DGM Chhattisgarh
15.	Dr. P.C.Mishra JDG	jointpcmishra66@rediffmail.com	9861465695	DMG, Odisha
16.	Shri K. P. Dinkar, Joint Director	dirgeomn@nic.in	9424701075	DGM, Madhya Pradesh

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17.	Shri Nilabja Roy, Superintending Geologist	nilabjaroy500@gmail.com	82401 24822	DMM, West Bengal
18.	Shri.S.Kharmawlong, Geologist, NMET Nodal Officer	sanborkharmawlong@gmail.com	9077079401	DMR, Meghalaya
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21.	Shri Sumit Chauhan, Senior Geologist	sg-tech-cgm@gujarat.gov.in	91674 09718	CGM, Gujarat
22.	Shri J. D. Vaghela, Chemist (I/C)	-	-	CGM, Gujarat
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Annexure 2

Estimated Cost for Reconnaissance Survey (G-4 level) for Diamond in Tikamgarh Cluster for diamond exploration, Tikamgarh Dist., Madhya Pradesh
Total Area - 109.68 Sq Km; Completion Time - 15Months

Sl. No	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Additional Cost		Remarks
			SoC-Item-S. No.	Rates as per SoC	Qty.	Total Amount (Rs)	Qty.	Total Amount (Rs)	
1	**Geological, Sampling & Survey Days**								
	Large scale (LSM) Geological mapping/ Detailed Mapping/Trenching/ Drilling					-			
1.1	Geologist man days (2 party Field)	days	1.2	11,000	120	13,20,000	-	-	
1.2	Labour Charges for Mapping work Base rate - Rs. 479/ per day	per worker	5.7	437	240	1,04,880	-	-	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
1.3	Geologist man days (HQ)	days	1.3	9,000	40	3,60,000	-	-	(mineral identification days by 2 geologists included)

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1.4	Labour Charges for Drilling/Logging (Field) Base rate - Rs. 479/ per day	per worker	5.7	437	0	-	-	-	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
1.5	Sampling Charges (Geochemical /Trenching/Pitting/Drilling)	day	1.5.2	5,100	30	1,53,000	-	-	
1.6	Labour Charges for Sampling Work Base rate - Rs. 479/ per day	day	5.7	437	120	52,440	-	-	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
	Sub-Total 1					**19,90,320**			
2	**Geophysical Surveys***								
2.1	Magnetic Surveys (10-30 line km)	per station	3.2a	1,800	0	-	-	-	Modification will be done after the review of the work
2.2	Electromagnetic Survey (Profiling/Sounding)	sounding	3.7a	21,197	0	-	-	-	Modification will be done after the review of the work
2.3	Geophysicist man days for Geophysical Survey	days	3.18	11,000	0	-	-	-	Modification will be done after the review of the work
2.4	Surveyor Charges	days	1.6.1.a	8,300	0	-	-	-	Modification will be done after the

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									review of the work
2.5	Llabours Charges for Survey Work Base rate - Rs. 479/ per day	per worker	5.7	437	0	-	-	-	Modification will be done after the review of the work. Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
	Sub-Total 2					**-**			
3	**Mineral Investigation**								
3.1	Trenching/Pitting*								
	a) Excavation of trenches/pits	per cu m	2.1.1	3,330	0	-	-	-	
	Sub-Total 3					**-**			
4	**Drilling****								
4.1	a) Drilling up to 300m Rigs) (Medium Hard Rock)	per m	2.2.1.4 a	10,100	0	-	-	-	
4.2	Borehole deviation survey	per m	2.2.6	330	0	-	-	-	
4.3	Borehole pillaring					-	-	-	
	a) construction of concrete pillar (12"x12"x30")	per bh	2.2.7.a	2,000	0	-	-	-	

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4.4	Transportation of drill rigs & truckassociated per drill (To & Fro from HQ)	per km	2.2.8	36	0	-	-	-	Certification in this regard is required to be provided
4.5	Monthly accommodation charges for drilling camp	monthly	2.2.9	50,000	0	-	-	-	
4.6	a) Drilling camp setting (1 rigs)	per drill	2.2.9a	2,50,000	0	-	-	-	
4.7	b) Drilling camp winding (1 rigs)	per drill	2.2.9b	2,50,000	0	-	-	-	
4.8	Approach road making in rugged- hilly terrain (Flat terrain)	per km	2.2.10	22,020	0	-	-	-	Road Making will be considered as per the requirement and Road Making Charges will be reimbursed for max. 5 km.
4.9	Drill core preservation	per m	5.3	1590	0	-	-	-	This amount will be reimbursed after successful delivery of the cores to concerned libraries/authorities
4.10	Land/crop compensation	per borehole	5.6	20000	0	-	-	-	Amount will be reimburse as per actuals or max. Rs. 20000 per BH with certification from local authorities
4.11	Demarcation Fixation of borehole and determination of co-ordinates & Reduced Level (RL) of the	Per point of observation	1.6.2	19,200	0	-	-	-	

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	boreholes by DGPS (including charges for labours deployed for the work)								
	Sub-Total 4					**-**			
5	**Laboratory Studies**								
5.1	Chemical Analysis								
	i) Surface sampling (Bed Rock Samples)								
	a) Whole rock analysis (Major oxides)	per sample	4.1.15a	4,200	20	84,000	-	-	
	ii) Stream Sample					-			
	a. Separation of heavy minerals from stream sediment samples of -2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820	53+ 215 = 268	37,03,760	-	-	215 follow up samples , will be reimbursed as per actual nos of sample, Max. - 53+215 =268 samples
	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380	53+ 215 = 268	6,37,840	-	-	215 follow up samples , will be reimbursed as per actual nos of sample, Max. - 53+215 =268 samples
	c. EPMA studies for suspected Heavy Mineral grains	Per hour	4.4.1	8,540	200	17,08,000	-	-	As per actual (25% samples around 40 nos to be positve @ 15 grain)
	iii) Soil Sample								

	a. Separation of heavy minerals from soil samples of - 2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820		-	-	-	will be reimbursed as per actual nos of sample; Max. 20 samples
	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380		-	-	-	will be reimbursed as per actual nos of sample; Max. 20 samples
	d. EPMA studies for suspected Heavy Mineral grains	Per hour	4.4.1	8,540		-	-	-	(20-25%% samples around 5nos to be positve @ 15 grain)
5.2	**Pit & Trench**					-	-	-	
	a. Separation of heavy minerals from Pit & Trench samples of - 2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820		-	-	-	will be reimbursed as per actual nos of sample; Max. 100 samples
	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380		-	-	-	will be reimbursed as per actual nos of sample; Max. 100 samples
	c. EPMA studies for suspected Heavy Mineral grains	Per hour	4.4.1	8,540		-	-	-	(20-25% samples around 25nos to be positve @ 15 grain)
5.3	**ii) BH Sampling (Primary)**								
	a. Separation of heavy minerals from drill samples of - 2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820	0	-	-	-	will be reimbursed as per actual nos of sample; Max. 200 samples

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	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380	0	-	-	-	will be reimbursed as per actual nos of sample; Max. 200 samples
	c. EPMA studies for suspected Heavy Mineral grains	Per hour	4.4.1	8,540	0	-	-	-	As per actual (20-25% samples around 30 nos to be positve @ 15 grain)
5.4	**Petrological / Mineralographic studies**					-			
	a) Preparation of thin section (Surface & BH)	per sample	4.3.1	2,353	7	16,471	-	-	
	b) Study of thin section for petrography	per sample	4.3.4	4,232	7	29,624	-	-	
	c) Digital photomicrograph of thin section	per sample	4.3.7	280	7	1,960	-	-	
	Sub-Total 5					**61,81,655**			
6	**Total (1 to 5)**					**81,71,975**			
7	**Geological Report Preparation**	Nos	5.2 (ii)	A Minimum of Rs. 2.5 lakhs or 5% of the work	0		**1**	**4,08,599**	For the projects having cost up to exceeding 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.

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8	**Preparation of Exploration Proposal**	**Nos**	**5.1**	**380000**	**1**	**3,80,000**			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.
9	**Report Peer Review Charges**	**lumpsum**	**As per EC decision**	**10000**	**0**		**1**	**30,000**	
10	**Total Estimated Cost without GST (6+7+8+9)**					**85,51,975**		**4,38,599**	
11	**Provision for GST (18%)**					**15,39,356**		**78,948**	GST will be reimburse as per actual and as per notified prescribed rate
12	**Total Estimated Cost with GST**					**1,00,91,331**		**5,17,547**	
					Say, Rs. in Lakhs	**100.91**		**5.18**	
	Cost Over run							**5.13%**	

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.

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Annexure 3A

Estimated Cost for Reconnaissance Survey (G4 stage) for Basemetal in Thal-Didihat-Askot area, Pithoragarh District, Uttarakhand
Name of the Exploration Agency - Geovale Services Pvt. Ltd.
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					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	
c	Geologist field-days	Man-days	1.2	11,000.00	180	19,80,000.00	11,000.00	180	19,80,000.00	92 sq.km
e	Labor (Field days) (2 workers per geologist)	per labor day	5.7	504.00	360	1,81,440.00	504.00	360	1,81,440.00	Amount will be reimbursed as per the notified rates by the Central Labor Comission or

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										respective State Govt. whichever is higher
B	**Pitting/trenching**	92 sq km								
d	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**			**29,46,440.00**	
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	4.1.15 a	4,200.00	20	84,000.00	4,200.00	20	84,000.00	
b	Check samples for XRF- External 10%	per sample	4.1.15 a	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	
	ICPMS (34 elements)	per sample	4.1.14	7,731.00	50	3,86,550.00	7,731.00	50	3,86,550.00	

	Analysis for gold by fire assay technique	per sample	4.1.5a				2,380.00	0	-	Sample:Both BR and Drill samples
f	Sampler man-days	one sampler per day	1.5.2	5,100.00	36	1,83,600.00	5,100.00	36	1,83,600.00	
g	Labor (Man days) (4 labours per sampler)	per labor day	5.7	504.00	144	72,576.00	504.00	144	72,576.00	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**			**12,86,446.00**	
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	
f	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**	

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4	**Geophysical Survey (After Review)**									
a	IP cum resistivity, S.P., magnetic (8-10 line km)	per kine 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	Expert Charges for Geophysicist (Field)	Geophysicist per day	3.18	9,000.00	20	1,80,000.00	9,000.00	20	1,80,000.00	
	Sub-Total 4					**19,16,693.00**			**19,16,693.00**	
	Review									
5	**Geological Work (After Review,Drilling)- Outsourced**									
c	Core drilling up to 300m depth (2 BH)	per meter	2.2.1.3 a	4,760.00	600	28,56,000.00	10,100.00	600	60,60,000.00	No of samples 300 samples
	Land / Crop Compansation	per BH	5.6				20000	0	-	
	Transportation of Drill Rig & Truck associated per drill (2 rigs)-	km	2.2.8				36	0	-	In house drilling

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	Two way									
	Monthly Accomodation Charges for drilling Camp	month	2.2.9				50000	0	-	
	Drilling Camp Setting Cost	Nos	2.2.9a				250000	0	-	
	Drilling Camp Winding up Cost	Nos	2.2.9b				250000	0	-	
	Approach Road making for rugget/hilly terrain	km	2.2.10 b				32200	0	-	
	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 (OUTSOURCED)					**36,51,000.00**			**68,55,000.00**	**Outsourced cost**
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	
a	ICPMS (34 elements)	per sample	4.1.14	7,731.00	20	1,54,620.00	7,731.00	20	1,54,620.00	

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g	XRD	per sample	4.5.1	4,000.00	10	40,000.00	4,000.00	10	40,000.00	
	EPMA (5 samples, 10 hours)	per hour	4.4.1	8,540.00	10	85,400.00	8,540.00	10	85,400.00	
c	Sampler man-days	per day	1.5.2	5,100.00	19	96,900.00	5,100.00	19	96,900.00	
e	Labor (Man days) (4 labours per sampler)	per labor day	5.7	504.00	76	38,304.00	504.00	76	38,304.00	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**			**6,90,884.00**	
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**	

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	Total (Sub-Total 1-7)					**1,08,59,813.00**			**1,40,63,813**	
7	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	2,17,196.26	2% of the cost subject to a maximum of 5 lakhs	1	2,81,276	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.

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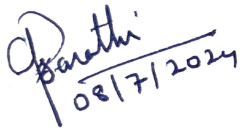
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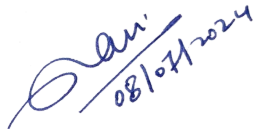
8	Final report preparation	3% of project cost or 7.5 lakh whichever is higher	5.2	For the projects having cost exceeding 300 lakhs- A minimum of 9 lakhs or 3% of the value of work whichever is more	1	5,42,990.65	Reconnaissance Survey/ Preliminary exploration/General exploration/Detailed exploration exceeding ₹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	7,03,190.65	Final report submission, peer review and project conclusion
9	Tendering Cost		2.3						1,37,100.00	
10	Operational Charges		6		ii				6,39,125.00	
11	Report Peer Review	Lump sum	As per EC	30,000.00	1	30,000.00	30,000.00	1	30,000.00	
12	**Project Cost without GST**					**1,16,49,999.91**			**1,58,54,504.91**	
13	18% GST					**20,96,999.98**			**28,53,810.88**	GST will be reimbursed as per actual and as per the applicable notified rate
14	Total Project Cost					**1,37,46,999.89**			**1,87,08,315.79**	

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15	**Rs. In lacs**	187.08	
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.**		





Annexure 3B

Estimated Cost for Reconnaissance Survey (G4 stage) for Mailar Base Metal - Gold Prospect Block in Mailar area, Lalitpur district, UP
Name of the Exploration Agency - Geovale Services Pvt. Ltd.
Total Area - 206 sq. km; Nos. of Borehole - Auger drilling: 10, Core drilling: 2; Completion Time -12 Months, Review: 6 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 labour 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

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B	**Auger Drilling and pitting (outsourced)**									
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
b	Auger Drilling for soft strata up to 30m depth (5 BH) (Outsource)	per m	2.2.2	4,760.00	100	4,76,000.00	4,760.00	100	4,76,000.00	1 sample per meter
	Sub-Total 1					**45,09,940.00**			**45,09,940.00**	
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	30	1,26,000.00	10% of total sample
b	Check samples for XRF	per sample		4,200.00	3	12,600.00	4,200.00	3	12,600.00	
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
e	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
f	Check samples	per sample	4.1.5a	2,380.00	5	11,900.00	2,380.00	5	11,900.00	
g	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
i	Sampler man-days	one sampler per day	1.5.2	5,100.00	42	2,14,200.00	5,100.00	42	2,14,200.00	
j	Labor(4 workers per sampler)	per labor day	5.7	504.00	168	84,672.00	504.00	168	84,672.00	Amount will be

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										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**			**23,14,572.00**	
3	**Petrological studies**									
a	Thin section preparation	per sample	4.3.1	2,353.00	25	58,825.00	2,353.00	25	58,825.00	
b	Microscopic study	per sample	4.3.4	4,232.00	25	1,05,800.00	4,232.00	25	1,05,800.00	
	Sub-Total 3					**1,64,625.00**			**1,64,625.00**	
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	
d	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)-Outsourced**						**Drilling (outsourced)**			
c	Core drilling up to	per meter	2.2.1.4a	4,760.00	800	38,08,000.00	11,500.00	600	69,00,000.00	No of

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	300m depth (2 BH)									samples 200 samples
	Core drilling between 301-400 m depth (2 BH)	per meter	2.2.1.4b				12,420.00	200	24,84,000.00	
	Land / Crop Compansation	per BH	5.6				20,000.00	-	-	In house drilling 1250 km from Kolktata to Lalitpur (2 rigs, 2 trucks to and fro)
	Transportation of Drill Rig & Truck associated per drill (2 rigs)-Two way	km	2.2.8				36.00	-	-	
	Monthly Accomodation Charges for drilling Camp	month	2.2.9				50,000.00	-	-	
	Drilling Camp Setting Cost	Nos	2.2.9a				2,50,000.00	-	-	
	Drilling Camp Winding up Cost	Nos	2.2.9b				2,50,000.00	-	-	
	Approach Road making for rugget/hilly terrain	km	2.2.10b				32,200.00	-	-	
	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 (OUTSOURCED)					**46,03,000.00**			**1,01,79,000.00**	
	TOTAL OUTSOURCED COST (1B + 5)								**1,19,87,500.00**	
6	**Laboratory Studies**									
7	**Geochemical Analysis (BH**									(200BHS)

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	samples)									
a	XRF (major oxides)	per sample	4.1.15a	4,200.00	30	1,26,000.00	4,200.00	30	1,26,000.00	10% of total sample
b	Check samples for XRF	per sample		4,200.00	3	12,600.00	4,200.00	3	12,600.00	
a	ICPMS (34 elements)	per sample	4.1.14	7,731.00	200	15,46,200.00	7,731.00	200	15,46,200.00	
e	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
f	Check samples	per sample	4.1.5a	2,380.00	5	11,900.00	2,380.00	5	11,900.00	
g	XRD	per sample	4.5.1	4,000.00	20	80,000.00	4,000.00	20	80,000.00	10% of total samples
c	Sampler man-days	per day	1.5.2	5,100.00	39	1,98,900.00	5,100.00	39	1,98,900.00	
d	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**			**21,73,224.00**	
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	

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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)					**1,92,54,611.00**			**2,48,30,611.00**	
7	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	3,85,092.22	2% of the cost subject to a maximum of 5 lakhs	1	4,96,612.22	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.
8	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	1	7,50,000.00	For the projects having cost exceeding 150 lakhs but less than 300 lakhs-A	1	7,50,000.00	Final report submission, peer review and project conclusion

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				than 300 lakhs-A minimum of 7.5 lakhs or 3% of the value of work whichever is more			minimum of 7.5 lakhs or 3% of the value of work whichever is more			
9	Operational Cost		6						9,74,375.00	
10	Tendering Cost		2.3						2,39,750.00	
11	Report Peer Review	Lump sum	As per EC	30,000.00	1	30,000.00	30,000.00	1	30,000.00	
12	**Project Cost without GST**					**2,04,19,703.22**	**Project Cost without GST**		**2,73,21,348.22**	
13	**18% GST**					**36,75,546.58**	**18% GST**		**49,17,842.68**	GST will be reimbursed as per actual and as per the applicable notified rate
14	**Total Project Cost**					**2,40,95,249.80**	**Total Project Cost**		**3,22,39,190.90**	
15	**Rs. In Lacs**								**322.39**	
Note:										
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**									
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**									
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of 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.**									

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Annexure 4A

Estimated cost for Preliminary exploration (G-3) of Tungsten and Tin ore in Murara - Devendrapura Block, District-Niwari, Madhya Pradesh Total Area - 4.16 Sq. Km; Drilling-11(7 Murara+ 4 Devendrapura) boreholes, 1250 m , Completion Time - 12 Months, Review - 6 months

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- GM 1:2000**						
1.1	Geologist (Field) man days for core logging/mapping/ Sampling/topographic survey	days	1.3	11,000	180	19,80,000	
1.2	Unskilled Labour (Field) (2 workers per geologist)	per worker	5.7	522	360	1,87,920	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
1.3	Survey Party Days for topographic survey	days	1.6.1a	8300	40	3,32,000	
1.4	Unskilled Labour (Survey) (4 workers per Surveyer)	Days	5.7	522	160	83,520	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt.

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							whichever is higher
1.5	Sampling man days - Sampler (core sample,) Labour charge not included	day	1.5.2	5,100	81	4,13,100	
1.6	4 labours/ party (Rs 431/day/labour) (As per rates of Central Labour Commissioner) for sampling work	day	5.7	522	324	1,69,128	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
1.7	Determination of co-ordinates and Reduced Level (RL) of boreholes by DGPS including boundary corner points.	Nos.	1.6.2	19200	19	3,64,800	Boreholes 11 Nos. + Block Boundary 08 Nos.
Sub-Total 1						**35,30,468**	
2.0	**Excavation**						
2.1	Pitting/Trenching (upto 2m)	Cu.m	2.1.1	3,330	180	5,99,400	
Sub-Total 2						**5,99,400**	
3.0	**Drilling**						
3.1	Drilling -Very hard rock (up to	m	2.2.1.5a	12,650	1250	1,58,12,500	

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	300m)						
3.2	Land / Crop Compansation (in case the BH falls in agreecultural Land)	per BH	5.6	20,000	11	2,20,000	As per actual
3.3	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	11	22,000	
3.4	Transportation of Drill Rig & Truck associated per drill (for 2 rig)	Km	2.2.8	36	3200	1,15,200	1600 Km to and fro for one rig Nagpur to Murara-Devendrapura
3.5	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	4	2,00,000	
3.6	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	2	5,00,000	
3.7	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	2	5,00,000	
3.8	Road Making (Rugged-Hilly Terrain)	Km	2.2.10b	32,200	5	1,61,000	
3.9	Drill Core Preservation	per m	5.3	1,590	650	10,33,500	
Sub-Total 2						**1,85,64,200**	
4.0	**Laboratory Studies**						
4.1	Primary + Check Sample - 5 radicals viz. (Sn, W, Cu, Pb & Zn) by AAS method	per sample	4.1.7a	2,506	649	16,26,394	Borehole samples-500, Trench samples-90, check samples-59

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4.2	Preparation of thin section	per sample	4.3.1	2,353	10	23,530	
4.3	Complete petrographic study report	per sample	4.3.4	4,232	10	42,320	
4.4	Preparation of polish section	per sample	4.3.2	1,549	10	15,490	
4.5	Complete mineragraphic study report	per sample	4.3.4	4,232	10	42,320	
4.6	XRD	per sample	4.5.1	4,000	20	80,000	
4.7	Specific gravity of rock	per sample	4.8.1	1,605	5	8,025	
Sub-Total 3						**18,38,079**	
5.0	**Geologist man days (1 No.) for geological map & Report (HQ)**	days	1.2	9,000	40	**3,60,000**	
Total (1.0 to 5.0)						**2,48,92,147**	
5.0	**Preparation of Exploration Proposal**	Nos	5.1	2% of the cost or Rs. 5.0 lakh - whichever is lower	1	**4,97,843**	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		iii	**7,50,000**	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.

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7.0	**Report Peer Review Charges**	**lumpsum**	**As per EC decision**		**1**	**30,000**	
Total Estimated Cost without GST						**2,61,69,990**	
Provision for GST (18%)						**47,10,598**	GST will be reimburse as per actual and as per notified prescribed rate
Total Estimated Cost with GST						**3,08,80,588**	
Rs. in Lakhs						**308.81**	

Note:	
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of 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.**

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Annexure 4B

Time Schedule/ Action Plan for Preliminary (G–3) Exploration for Tungsten and Tin Ore in Murara Block (1.82 sq km), District– Niwari, Madhya Pradesh

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

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Annexure 5A

Estimated Cost For Preliminary (G–3) Exploration for Copper, Lead, Zinc and Associated Metals in Salaiya Phatak Block (2.00 sq km), District– Katni, Madhya Pradesh
Total Area - 1.50 Sq. Km; Drilling- 500m, 6 BHs, Completion Time - 12 Months, Review: after 6 months

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 (Field) man days for core logging/mapping (1:2000)/Trenching/ Sampling/topographic survey	days	1.3	11,000	120	13,20,000	
1.2	Unskilled Labour (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 or respective State Govt. whichever is higher
1.3	Survey Party Days for topographic survey	days	1.6.1a	8300	30	2,49,000	
1.4	Unskilled Labour (Survey) (4 workers per Surveyer)	Days	5.7	522	120	62,640	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
1.5	Sampling man days - Sampler (core sample,) Labour charge not included	day	1.5.2	5,100	32	1,63,200	

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1.6	4 labours/ party (Rs 431/day/labour) (As per rates of Central Labour Commissioner) for sampling work	day	5.7	522	128	66,816	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
1.7	Determination of co-ordinates and Reduced Level (RL) of boreholes by DGPS including boundary corner points.	Nos.	1.6.2	19200	12	2,30,400	Boreholes 6 Nos. + Block Boundary 6 Nos.
Sub-Total 1						**22,17,336**	
2.0	**Excavation**						
2.1	Trenching	Cu.m	2.1.1	3,330	80	2,66,400	
Sub-Total 2						**2,66,400**	
3.0	**Drilling**						
3.1	Drilling -Hard rock (up to 300m)	m	2.2.1.4a	11,500	500	57,50,000	
3.2	Borehole deviation survey	m	2.2.6	330	500	1,65,000	
3.3	Land / Crop Compansation (in case the BH falls in agreecultural Land)	per BH	5.6	20,000	6	1,20,000	Asper actual
3.4	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	6	12,000	
3.5	Transportation of Drill Rig & Truck associated per drill	Km	2.2.8	36	700	25,200	700 Km to and fro for one rig
3.6	Monthly Accomodation Charges for drilling Camp (1Rig)	month	2.2.9	50,000	4	2,00,000	
3.7	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	

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3.8	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
3.9	Road Making (Rugged-Hilly Terrain)	Km	2.2.10b	32,020	2	64,040	
3.10	Drill Core Preservation	per m	5.3	1,590	150	2,38,500	
Sub-Total 2						**70,74,740**	
4.0	**Laboratory Studies**						
4.1	Primary + Check Sample (Channel & Core) for Cu, Pb, Zn, Ag, Sn, Cd, Co, Ni & Mo by AAS method	per sample	4.1.7a & b	3,846	200	7,69,200	Bedrock/Trench-100, Core samples-80 +Check samples
4.2	Primary + Check Sample for Au by fire assay method	per sample	4.1.5a	2,380	55	1,30,900	
4.3	Ore microscopy	per sample	4.3.4	4,232	10	42,320	
4.4	Petrographic Study	per sample	4.3.5	4,232	10	42,320	
4.5	Preparation of thin section	per sample	4.3.1	2,353	10	23,530	
4.6	Preparation of polished thin section	per sample	4.3.2	1,549	10	15,490	
4.7	Specific gravity determination	per sample	4.8.1	1,605	5	8,025	
Sub-Total 3						**10,31,785**	
5.0	**Geologist man days (1 No.) for geological map & Report (HQ)**	days	1.2	9,000	40	**3,60,000**	
Total (1.0 to 5.0)						**1,09,50,261**	

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5.0	**Preparation of Exploration Proposal**	Nos	5.1	2% of the cost or Rs. 5.0 lakh - whichever is lower	1	**2,19,005**	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	ii	1	**5,47,513**	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						**1,17,46,779**	
Provision for GST (18%)						**21,14,420**	GST will be reimburse as per actual and as per notified prescribed rate
Total Estimated Cost with GST						**1,38,61,200**	
Rs. in Lakhs						**138.61**	
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.**						

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Annexure 5B

Time Schedule/ Action Plan for Preliminary (G–3) Exploration for Copper, Lead, Zinc and Associated Metals in Salaiya Phatak Block (2.00 sq km), District– Katni, Madhya Pradesh

S.No.	Activities	MONTHS											
		1	2	3	4	5	6	Review	7	8	9	10	11	12
1	Camp setting													
2	Geological Mapping (1:2000)													
3	Channel sampling													
4	Trenching													
5	Laboratory studies													
6	Core drilling													
7	Geologist days (Field)													
8	Core sampling													
9	Camp winding													
10	Geologist days (HQ)													
11	Report writing/ Peer review													

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Annexure 6A

Estimated cost for Preliminary Exploration (G–3) for Iron– PGE and associated minerals in Chitrangi Block (5.00 sq. km), Districts: Singrauli district, Madhya Pradesh.
[Block area- 5.00 sq. km; Schedule timeline- 12 months; BH-10 nos; Drilling- 600m; 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.	Amount (Rs)	
A	**GEOLOGICAL WORK (1:4000 scale) & TOPOGRAPHICAL SURVEY (1:4000 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	40	3,60,000	
iii	2 labours/ party (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 Samplers Labour charge not included	day	1.5.2	5,100	62	3,16,200	
v	4 labours/ party (As per rates of Central Labour Commissioner)	day	5.7	522	248	1,29,456	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher
vi	Survey Party Days for topographical contour survey, block boundary and borehole points fixation	day	1.6. 1a	8,300	40	3,32,000	

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vii	4 labours for surveyor	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					**30,27,776**	
B	**PITTING AND TRENCHING**						
i	Trenching	Cu m	2.1.1	3330	-	-	
	Sub Total- B					**-**	
C	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i	**Primary & Check samples for Iron-PGE & associated minerals BRS/Chip/Channel/Trench/BH samples)**						
	a. Primary Samples for PGE (ICP-MS, Ni-S fire Assay)	Nos	4.1.5d	11,800	25	2,95,000	
	b.External (10%) Check samples for PGE	Nos	4.1.5d	11,800	3	29,500	
	e. Primary Samples for Iron	No.	4.1.15a	4,200	400	16,80,000	Surface Samples-100, BH Samples-300
	f.External (10%) Check samples for Iron	No.	4.1.15a	4,200	40	1,68,000	
ii	**Primary & Check samples for gold (BRS/Channel/Core)**						
	a. Primary Samples for Au by Fire Assay	Nos	4.1.5a	2,380	25	59,500	
	b.External (10%) Check samples for Au by Fire Assay	Nos	4.1.5a	2,380	3	5,950	
2	**Physical,Petrological, Mineralogical Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
ii	Complete petrographic study report	Nos	4.3.4	4,232	10	42,320	

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iii	Preparation of polished section	Nos	4.3.2	1,549	10	15,490	
iv	Complete mineragraphic study report	Nos	4.3.4	4,232	10	42,320	
v	Digital Photographs	Nos	4.3.7	280	10	2,800	
vi	Estimation of Major oxides by XRF technique (Whole Rock Analysis)	Nos	4.1.15a	4,200	-	-	
vii	Analysis of rock sample for determination of a package by 34 elements by ICPMS (Trace element vstudies)	Nos	4.1.14	7,731	-	-	
xi	Bulk Density	Nos	4.10	3540	5	17,700	
	Sub Total- C					**23,82,110**	
D	**DRILLING**						
i	Drilling upto 300m (Very Hard Rock) (1 rigs)	m	2.2.1.4b	12,420	600	74,52,000	
ii	Land / Crop Compansation	per BH	5.6	20,000	10	2,00,000	
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 (2 rigs)	Km	2.2.8	36	2,600	93,600	Certification in this regard is required to be provided
v	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	4	2,00,000	
vi	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	2	5,00,000	
vii	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	2	5,00,000	
viii	Approach Road Making (Hilly Terrain)	Km	2.2.10b	32,200	10	3,22,000	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 by DGPS	Nos	1.6.2	19,200	16	3,07,200	10 Boreholes+ 6 Block Boundary points
x	One complete borehole plus mineralised cores of all the remaining Bhs	m	5.3	1,590	330	5,24,700	This amount will be reimbursed after successful delivery of the

							cores to concerned libraries/authorities
	Sub Total- D					**1,01,19,500**	
E	**Total A to D**					**1,55,29,386**	
F	**Geological Report Preparation**		**5.2**	iii		**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**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is lower		**3,10,588**	EA has to submit the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
I	**Total Estimated Cost without GST**					**1,66,19,974**	
J	**Provision for GST (18% of I)**					**29,91,595.27**	GST will be reimburse as per actual and as per notified prescribed rate
K	**Total Estimated Cost with GST**					**1,96,11,568.99**	
	Rs. In Lakhs					**196.12**	
1	**hmc**						
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.**						

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Annexure 6B

Time Schedule /Action Plan for Preliminary Exploration (G-3) for Iron and associated minerals in Chitrangi Block, Districts: Singrauli, State: Madhya Pradesh

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

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Annexure 7A

Estimated cost for Reconnaissance Survey (G4) for Glauconite and associated mineralization in and around Dhamni, Piparwasi, Simliya area, Sheopur District, Madhya Pradesh
Total area: 116 sq km, Period of Completion: 12 months BH: 5 nos., 150m , 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 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	1.2. b	11,000	150	16,50,000	1:12,500 scale mapping of 116 sq km
ii	b. Labours Charges; Base rate	day	5.7	522	240	1,25,280	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. a	9,000	40	3,60,000	
	Sub Total- A					**21,35,280**	
B	**Survey work**						
a	DGPS Survey for BH fixation & RL determination	Per Point of observation	1.6.2	19,200	5	96000	
b	Labours Charges for survey work;	day	5.7	522	-	0	4 labours per day
	Sub-Total B					**96,000**	
C	**Trenching/Pitting**						
	a) Pitting (up to 2 m)	per cu.m	2.1.2	3,800	50	190000	
	Sub Total C					**190000**	

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D	**DRILLING (after review)- In -house**						
1	Drilling up to 150 m (Hard rock)	m	2.2.1.4a	11,500	150	17,25,000	
2	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	5	1,00,000	As per actuals
3	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	2,000	5	10,000	
4	Transportation of Drill Rig & Truck associated per drill (1 rig)	Km	2.2.8	36	2,400	86,400	Raniganj to Sheopur to and fro
5	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	2	1,00,000	
6	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
7	Drilling Camp Winding up Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
8	Road Making (Flat Terrain)	Km	2.2.10a	22,020	5	1,10,100	As per actuals
9	Drill Core Preservation	per m	5.3	1,590	100	1,59,000	
10a	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5,100	62	3,16,200	
10b	Labours (4 Nos)	day	5.7	522	248	1,29,456	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
	Sub Total D					**32,36,156**	
E	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)**						
	a. Analysis of major oxides and trace samples by XRF	Nos	4.1.15a	4,200	150	6,30,000	
	b. Trace elements -ICPMS		4.1.14	7,731	75	5,79,825	
ii)	**Surface Check samples (10% External)**						

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	a. Analysis of major oxides samples by XRF	Nos	4.1.15a	4,200	15	63,000	
	b. Trace elements -ICPMS		4.1.14	7,731	7	54,117	
iii)	**Trench & Check Samples from Trench**						
	a. Analysis of major oxides samples by XRF	Nos	4.1.15a	4,200	50	2,10,000	
	Trench samples						
iv)	**Trench Check samples (10% External)**						
	a. Analysis of major oxides samples by XRF	Nos	4.1.15a	4,200	5	21,000	
v)	**BH Core samples**						
	a. Analysis of major oxides samples by XRF	Nos	4.1.15a	4,200	100	4,20,000	
	b. Trace elements -ICPMS		4.1.14	7,731	75	5,79,825	
vi)	**BH Core samples (10%External)**						
	a. Analysis of major oxides samples by XRF	Nos	4.1.15a	4,200	10	42,000	
	b. Trace elements -ICPMS		4.1.14	7,731	7	54,117	
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	
vii	Bulk density analysis	Nos	4.8.1	1,605	3	4,815	
	SEM Studies	per hour					
viii	EPMA studies	per hour					
	Total E					**27,27,349**	
F	**Total A to E**					**83,84,785**	

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G	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	**ii**		**4,19,239**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
H	**Peer review Charges**		**As per EC decision**	30,000	**1**	**30,000**	
I	**Preparation of Exploration Proposal (5 Hard copies with a soft copy)**	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5.0 Lakhs whichever is less		**1,67,696**	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	**Total Estimated Cost without GST**					**90,01,720**	
K	**Provision for GST (18% of J)**					**16,20,310**	GST will be reimburse as per actual and as per notified prescribed rate
L	**Total Estimated Cost with GST**					**1,06,22,030**	
				Rs. In Lakhs		**106.22**	
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.**						

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Annexure 7B

Time Schedule/ Action Plan for Reconnaissance Survey (G4) for Glauconite and associated mineralization in and around Dhamni, Piparwasi, Simliya area, Sheopur District, Madhya Pradesh

	Months												
Item of work	**1**	**2**	**3**	**4**	**5**	**REVIEW**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Camp Setup													
Large Scale Mapping (1:12,500													
Bed Rock Sampling													
Geochemical Survey													
Pitting and sampling													
Chemical analysis of surface samples													
Scout Drilling / systematic drilling													
Core sampling and its preparation													
Chemical analysis of Core Samples													
Processing of Analytical data													
Preparation of geologcial report													

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Annexure 8A

Estimate Cost for Reconnaissance survey (G4) for Lithium, Niobium, Tantalum, Titanium & REE Minerals in And Around Bengpal–Ellingnar Block, Sukhma, Baster and Dakshin Bastar Dantewada District, Chhattisgarh
[Area 112.00 sq. km, Schedule timeline- 12months Review: After 6 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)	
1	**Geological Mapping Other Geological Work & Surveying**						
	Satellite Imagery Studies (Aster)						
	Geological mapping over 112 Sq.Km Area, (1:12,500 scale) & Trenching , drilling work						
i	a. Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work	day	1.2b	11,000	180	19,80,000	
ii	b. Labours Charges; Base rate	day		522	360	1,87,920	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		9,000	50	4,50,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day		5,100	52	2,65,200	
	e. Labours (4 Nos)	day		522	208	1,08,576	
	Sub Total- 1					**29,91,696**	
2	**Pitting/Trenching**						
	Pitting (up to 2m)	Per Cum	2.1.2	3,800	100	3,80,000	
	Sub Total- 2					**3,80,000**	

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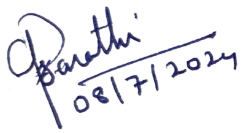
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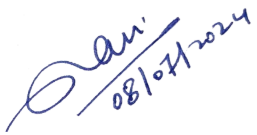
	TOTAL FIELD EXPLORATION COST					**33,71,696**	
3	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment/Pit)**						
	a. ICPMS	Nos	4.1.14	7,731	350	27,05,850	BRS-250 (channel), Pit samples -100
	10% Check Samples	Nos	4.1.14	7,731	35	2,70,585	
	b. XRF	Nos	4.1.15a	4,200	25	1,05,000	
	10% Check Samples	Nos	4.1.15a	4,200	3	12,600	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	25	58,825	
ii	Study of thin section	Nos	4.3.4	4,232	25	1,05,800	
v	Digital Photographs	Nos	4.3.7	280	25	7,000	
						32,65,660	
4	**Total Cost**	**1 to 3**				**66,37,356**	
5	**Geological Report Preparation**	**5 Hard copies with a soft copy**	**5.2**	**ii**		**3,31,868**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
6	**Peer review Charges**		**As per EC decision**			**30,000**	
7	**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		**1,32,747**	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.
8	**Total Estimated Cost without GST**					**71,31,971**	

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9	**Provision for GST (18% of 8)**	**12,83,755**	GST will be reimburse as per actual and as per notified prescribed rate
10	**Total Estimated Cost with GST**	**84,15,726**	
11	**Rs. In Lakhs**	**84.16**	
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.**		





Annexure 8B

Time Schedule/ Action Plan For Proposal For Reconnaissance Survey In And Around Bengpal-Ellingnar-Kumakoleng Block , Sukhma And Baster District, Chhattisgarh For (G-4 Level) Area 112.00 Sq. Km, Schedule Timeline- 12months Review: After 8 Months]

S. No.			1	2	3	4	5	6	Review	7	8	9	10	11	12
1	Camp Setting	Months/Days													
2	Geological Mapping & Sampling	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													

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