Ministry of Mines

National Mineral Exploration Trust

1st Joint meeting of TCC-I & TCC-II for assessment of allotted Regional Mineral Targeting (RMT) blocks held on 7th & 8th July 2025

A joint meeting of TCC - I & TCC - II of National Mineral Exploration Trust (NMET) was held through video conferencing on 7th & 8th July 2025, for review of allotted Regional Mineral Targeting (RMT) blocks to Notified Private Exploration Agencies (NPEAs).

Shri S. Ravi, Deputy Director General (DDG), Geological Survey of India (GSI) and Chairman, TCC-I, NMET extended a warm welcome to all members of TCC-I & TCC-II, NMET and every participant representing various NPEAs. In his opening remarks Shri Pradeep Singh, DDG, GSI and Chairman, TCC-II, NMET informed that the objective of RMT projects is to strategically identify high-potential zones for mineral prospecting across large geological terrains by integrating geological, geophysical, geochemical, and remote sensing data to precisely identify the promising areas for exploration.

General Guidelines for RMT Projects funded by NMET

i. The RMT activities are planned to be executed in four phases over a two-year timeframe.
ii. In Phase-I, the agency is to collate all the baseline data like Systematic Geologic Mapping (SGM), Systematic Thematic Mapping (STM), National Geochemical Mapping (NGCM), National Geophyiscal Mapping (NGPM), National Aerogeophysical Mapping (NAGPM), Remote Sensing Data including ASTER and all the existing exploration data including mining in the area. Key deliverables in this phase will be preparation of predictive geological maps, narrowing down areas with potential mineral systems, alteration zone mapping and major mineral systems in the area.
iii. In Phase-II, the agency may have to take up traverse mapping on 1:50k, 25K and 12.5K scales over the areas identified through Phase-1 along with collection of surface samples like bedrock, pit/trench, regolith, stream sediments and heavy minerals. Besides, intensive petrographic and mineragraphic studies (PS, PCS, EPMA/SEM, geochronology) to characterize the major rock types will also be carried out in the area.
iv. In Phase-III, the area with potentiality identified through integration in Phase-I and ratified through field checks in Pahe-II will have to be further probed through mapping on large scale, systematic sampling [BRS (Channel, Groove), trench, soil sampling in grid pattern], geophysical surveying (IP, SP, resistivity, magnetic, gravity etc.) and scout drilling for various mineral commodities. Besides, petrographic and mineragraphic studies (PS, PCS, EPMA/SEM, fluid inclusion) will also be adopted to characterize the ores and rock types hosting the ores delineated.
v. In phase-4, the agency has to integrate all the legacy data and the data generated through three phases and indicate the target areas for further exploration either at G4 or G3 orG2 stage(s) with suitable recommendation for deep drilling
vi. All the items will be reviewed quarterly /periodically and report will have to be submitted at the end of each phase.
vii. All the targets given in each item under each phase is dynamic and may be altered according to the outcome and review.
viii. Cost given against each component may be modified as per the revised SOC of NMET once approved.

Agenda: Technical-cum-cost Evaluation of New RMT projects

Agenda 1: Regional Mineral Targeting in Taka-Chimur-Shegaon Buzurg area in Chandrapur, Wardha and Nagpur districts of Maharashtra to evaluate the aero-geophysical anomalies, interpretation of Remote Sensing data and integration with baseline geoscience data for base-metals, REE, RM and other associated mineralization (Block Area: 2000 sq.km)

Implementing Agency : M/s Mining Tech Consultancy Services Limited (MTCS)

Agency offered to present the proposal in the next meeting

Agenda 2 : Regional Mineral Targeting and integrated mineral system studies to target potential mineralization in Proterozoic rocks of Amgaon Gneissic Complex, Dongargarh Granites, Dongargarh Supergroup, Bijli Rhyolite, Bailadila Group, in parts of Kanker, Rajnandgaon Narayanpur Districts, Chhattisgarh (Block Area: 1560 sq.km)

Implementing Agency : United Exploration India Private Limited (UEIPL)

a) The allotted project area forms a part of the Bastar Craton & falls in parts of Toposheet nos. 64D10,11,12,14,15 and 16 in Uttar Bastar Kanker and Mohla-Manpur-Chowki Districts, Chhattisgarh.
b) UEIPL informed that as per the existing data there are REE, RM and Critical Minerals (Bimodal Volcanics and unclassified granitic area), Iron Ore (Iron ore formations of Bailadila Group) and Copper & Gold (Bimodal Volcanics bearing area) are present in the proposed block.
c) UEIPL proposed to execute the item in three years. i.e first year for data collation, followed by field mapping on 1:12500 scale and 3rd year drilling and identification for G4 blocks. However, committee opined that the item has to be executed in 2 years in phases. Further, the proposed 12500 scale mapping in the second year is to be executed on 1:25000 scale as traverse mapping. The committee advised to prepare different layers and high resolution data in the areas narrowed down with some potentiality.
d) The committee opined that apart from 1:50,000 scale geological map, the implementing agency needs to consult 1:25,000 scale map, reports & maps of G4 stage exploration. Reports of Atomic Mineral Division may also be consulted if available. Existing pit/trench & BRS data are to be plotted for getting primary geochemical map. Based on which further sampling will be decided. Collation of all available dataset viz. geological, geochemical, geophysical, aero geophysical data etc. to be done (i.e., Overlay analysis). Geochronology may be done at last stage after drilling outcomes

Recommendations:

The committee recommended the proposal for approval of EC for "Regional Mineral Targeting and integrated mineral system studies to target potential mineralization in Proterozoic rocks of Amgaon Gneissic Complex, Dongargarh Granites, Dongargarh Supergroup, Bijli Rhyolite, Bailadila Group, in parts of Kanker, Rajnandgaon Narayanpur Districts, Chhattisgarh" with an estimated cost of ₹543.58 lakh (including GST) within time schedule of 24 months for carrying

out the proposed work and submission of report as per Annexure - 2A & 2B. The item will be reviewed after completion of each phase of exploration.

Agenda 3: Regional Mineral Targeting in Madanpur-Rampur-Kankatru area through geoscience data integration and spatial modelling to identify prospective zones of REE and base metal mineralisation in Kalahandi district, Odisha

Implementing agency: Natural Resource Division, Tata Steel Limited

a) The proposed RMT block of 1087 sq. km area falls in parts of Toposheet nos. 64P/7, P/8, P/11, P/12 and 65 M/5 in Kalahandi district, Odisha.
b) NRD Tata Steel Limited informed that so far, reported mineralisation within the proposed block are graphite, manganese and copper. Maximum 10400 ppm of TREE were analysed in the stream sediment samples from the area during NGCM project.
c) The committee opined that Graphite sampling is to be included for analysis. Traverse mapping should be carried out in place of large-scale mapping. Geophysical survey has to be done with broader spacing.

Recommendations:

The committee recommended the proposal for approval of EC for "Regional Mineral Targeting in Madanpur-Rampur-Kankatru areas to identify prospective blocks of REE, Base Metal & other mineralization in Kalahandi District, Odisha " with an estimated cost of ₹523.76 lakh (including GST) within time schedule of 24 months for carrying out the proposed work and submission of report as per Annexure - 3A & 3B. The item will be reviewed after completion of each phase of exploration.

Agenda 4: Regional Mineral Targeting in parts of AMGC and associated granites West Khasi Hill and East Garo Hill Districts, Meghalaya

Implementing agency: Maheshwari Mining Private Limited (MMPL)

a) The proposed RMT block of 2174.95 sq. Km. falls in parts of Toposheet nos. 78K/14, 78O/2, 78O/3, 78O/7 in West Khasi Hills, South West Khasi Hills, East Khasi Hills, East Garo Hills, South Garo Hills, Kamrup districts, Assam.
b) MMPL informed that there is presence of Sillimanite, REE, Tungsten, Molybdenum, and Lithium in the proposed block.
c) The committee opined that The implementing agency needs to study the aeromagnetic data of the proposed RMT block and also include Uranium in in the study.

Recommendations:

The committee recommended the proposal for approval of EC for "Regional Mineral Targeting in parts of AMGC and associated granites for identification of prospecting blocks in West Khasi Hill and East Garo Hill Districts, Meghalaya " with an estimated cost of ₹1781.90 lakh (including GST) within time schedule of 24 months for carrying out the proposed work and submission of report as per Annexure - 4A & 4B. The item will be reviewed after completion of each phase of exploration.

The recommendations are for purpose of initiating the project. The final costing will be done after the revised SoC of NMET is issued.

Agenda 5: Regional Mineral Targeting for Manganese, Graphite, Tungsten, Cobalt, REE and associated critical minerals in parts of Alluri Sitharama Raju District, Andhra Pradesh

Implementing Agency : Critical Mineral Trackers (CMT)

a) The proposed RMT block of 1450 sq. km area falls in parts of Toposheet nos. 65K/1 & 65K/5 in Alluri Sitharama Raju District, Andhra Pradesh.

b) CMT informed that Manganese & Graphite within Garnet Sillimanite Gneiss (Khondalite); REE within the Leptynites; Gallium & Vanadium within the already established Chintapalli-Gurtedu Bauxite belt; Iron, Titanium & Vanadium within the Laterites; pegmatites; Lithium within the reported clay zones etc. are present in the proposed block.

c) The committee asked CMT to present the that earlier work pertaining to G4, G3 & G2 stage of exploration & mining leases in the proposed block. Further, agency was advised to consult NGCM & NGPM data during the 1st phase of the project.

Recommendations:

The committee recommended the proposal for approval of EC for "Regional Mineral Targeting for Manganese, Graphite, Tungsten, Cobalt, REE and associated critical minerals in parts of Alluri Sitharama Raju District, Andhra Pradesh" with an estimated cost of ₹ 621.17 lakh (including GST) within time schedule of 24 months for carrying out the proposed work and submission of report as per Annexure - 5A & 5B. The item will be reviewed after completion of each phase of exploration

Agenda 6: Regional Mineral Targeting for graphite, niobium, REE and associated mineralisation in Vellikod-Azhikod areas, near Achankovil shear zone, Southern Granulite Terrain, Kerala and Tamil Nadu States.

Implementing Agency : Geomarine Solutions Private Limited

a) The proposed RMT block of 999 sq. km area falls in parts of Toposheet nos. 58D/14, 58H/2, 58H/3, 58H/4, 58H/6, 58H/7 & 58H/8 in Kerala and Tamil Nadu States.

b) The implementing agency informed that five mineral systems are expected in this area - Graphite mineralization mainly within Khondalites; REE, Niobium and associated mineralisation associated with syenites and pegmatites; Cu, Au, Ni, Co mineralisation – associated with two pyroxene granulite; Chrysoberyl- occurring in pegmatites and Phlogopites- occurring in the contact zone of calc silicates with charnockites and khondalites.

c) The commiitte did not recommend the proposed extended area, the total area is restricted to 999 sq.km. Further, the agency was advised characterization of pegmatite & granite is required to be done to know their importance as sources of valuable minerals & to understand geological processes in the proposed block.

Recommendations:

The committee recommended the proposal for approval of EC for "Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks for Graphite, Niobium, REE and associated mineralisation in Yellikod-Azhikod areas, near Achankovil shear zone, Southern Granulite Terrain,

Kerala and Tamil Nadu" with area of 999 sq km and an estimated cost of ₹492.50 lakh (including GST) within time schedule of 24 months for carrying out the proposed work and submission of report as per Annexure - 6A & 6B. The item will be reviewed after completion of each phase of exploration

Annexure 1

1st Joint meeting of TCC-I & TCC-II for assessment of of allotted Regional Mineral Targeting (RMT) blocks held on 7th & 8th July 2025 through video conferencing mode

S.no	Name	Designation	Email ID	Contact No	Organization
Technical- cum-cost committee- I (TCC I)					
1	Dr. S. Ravi	Dy. Director General, GSITI, GSI Hyderabad	s.ravi1@gsi.gov.in	9441138834	Chairman, TCC-1
2	Sh. I.R. Kirmani ADG	ADG (Retd.), GSI	irkirmani@yahoo.com	9414014723	Member TCC-1
3	Shri. Hemraj Suryavanshi	Addl. Director General (Retd.), GSI	hemraj.nmet@gmail.com	9425603674 7477042176	Member TCC-1
4	Shri. K. Koteswara Rao	Dy.D.G. (Retd.) GSI	kkrao1957@gmail.com	9000117969	Member TCC-1
5	Dr. S. K. Kulshrestha	DDG-RMH-III, NER, GSI, Shillong	s.kulshrestha@gsi.gov.in	9413330658	Member TCC-1
6	Dr.E.V.S.S.K. Babu	Scientist (G), NGRI	evsskbabu@ngri.res.in	9441535852	Member TCC-1
7	Shri. K.L. Mundra	Additional Director, AMD,Hyderabad	klmundra.amd@gov.in	9414785663	Member TCC-1
8	Shri. S.K. Adhikari	Chief Mining Geologist, IBM, Nagpur	skadhikari@ibm.gov.in	7588690545	Member TCC-1
9	Shri. P.K. Maharana	DGM (Finance), NALCO, Bhubaneswar	pmaharana@rediffmail.com	8500669500	Member TCC-1
10	Smt. Vandana	Cost Accounts Officer, RSAS, Bangalore, GSI	vandana@gsi.in	8660939235	Member TCC-1
11	Shri. C. Parthsarathi	Director, GSI & Member Secretary, TCC- NMET, GSI, Bengaluru	c.parthasarathi@gsi.gov.in	9483186932	Member Secretary TCC-1
Technical- cum-cost committee- II (TCC II)					
12	Shri. Pradeep Singh	Dy. Director General, GSI, Kolkata	ddg.it@gsi.gov.in	9810233957	Chairman, TCC -II
13	Shri. Sanjay Singh	Director, GSI, Western Region, Jaipur	sanjay.singh3@gsi.gov.i n	9928860884	Member Secretary TCC-II
14	Shri. B S Jodha	Dy. Director General (Retired), GSI	jodha1961@gmail.com	9414023478	Member TCC-II
15	Shri. Sunil Kumar Vashisth	GM (Retired), Hindustan Zinc Limited, Udaipur	sunilhzl@gmail.com	982905923 6	Member TCC-II
16	Shri. D.S.Jeere	Director, GSI, RSAS Bengaluru.	dattatreya.jeere@gsi.gov.in	-	Member TCC-II
17	Shri M.K.Patel	Dy. Director General (Retired), GSI	patelmk27@gmail.com	904001123 1	Member TCC-II
18	Dr. T.S.Sunil Kumar	Addl. Director (Retired), AMD	ts.sunilkumar@gmail.com	9502560153	Member TCC-II
19	Shri. P.K. Maharana	GM (Finance), NALCO	pmaharana@rediffmail.com	850066950 0	Member TCC-II

20	Shri. Anoop Kumar	CAO, GSI, CHQ GSI	Anoop.kumar2@gsi.gov.in	-	Member TCC-II
21	Shri Sudeep Manish Toppo,	Director	sudeep.toppo@gsi.gov.in	9065146048	GSI
Implementing Agencies					
22	Dr. Suman Krishna Sit	Vice-President & HOD Strateg	hod.strategy@maheshwaree.com	9651143638	Maheshwari Mining Pvt Ltd
23	Dr. Subhendu Mondal	Deputy General Manager	subhendu.mondal@maheshwaree.com	-	
24	Shri Moulipriya Bhakta	Deputy Manager Geology	moulipriya.bhakta@maheshwree.com	-	
25	Sgri Rajib Deb	Chief Geologist, Ferrous Minerals	rajib.deb@tatasteel.com	9238005230	Tata Steel Limited
26	Shri Deepak Rathod	Principle Consultant	deepak.rathod@mtcspl.com	6358935667	Mining Tech Consultancy Services Ltd
27	Shri .P. Praveen Kumar	Director	praveen@geomarinesolutions.in	8277363919	Geo Marine Solutions Pvt. Ltd., Mangalore
28	Shri. A.C. Dinesh	Chief Technology Officer	oed@geomarinesolutions.in	9038534560	
29	Dr. Fareeduddin	-	-	-	
30	Dr. A.V. Keshava Prasad	Chief Geologist (Exploration)	keshava@geomarinesolutions.in	8595914877	
31	Dr. Sanjay Das	-	-	-	
32	Dr. B.K. Sahu	-	-	-	
33	Shri. Vikram KY	Director - Operations & Technology	criticalmineraltrackers@gmail.com		Critical Mineral trackers
34	Shri. Indraneil Mukherjee		imukherjee@unitedexpl	738178563	United Exploration Pvt LtD
NMET Secretariat					
35	Smt. Anju C.S	Superintending Geologist	nmet-mines @gov.in	8588836933	NMET Sectt.
36	Shri. Monu Tomer	Senior Geophysicist	nmet.mines@gov.in	9467728411	NMET Sectt.
37	Sh. Manish Kumar	Geophysicist	nmet.mines@gov.in	9652258670	NMET Sectt.

Annexure 2A

Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks in Proterozoic rocks of Amgaon Gneissic Complex, Dongargarh Granites, Dongargarh Supergroup, Bijli Rhyolite, Bailadila Group, in parts of Uttar Baster Kanker, Mohalla- Manpur Chowki Districts, Chhattisgarh.
(Area: 1560 sq.km)
Timelines : 24 months, Review: after completion of each phase

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)	LWE charges	Total Amount (Rs) (a*b)	
First Phase **Timeline: 4 months , Review : after completion of Phase I, Review Report**								
1	Collation, Integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, ASTER alterations etc. and preparation of thematic maps. Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS	day	1.5.1b	9000	120		1080000	
	SUB TOTAL						**10,80,000.00**	
2nd Phase- Traverse Mapping on 1: 50000/25000 Scale **Timeline: 8 months , Review : after completion of Phase II, Review Report**								

2	**Traverse mapping**							
	Charges for Geologist per day (Field)	day	1.5.1a	11000	120	1.25	1650000	
	Labours Charges; Base rate	day	1.2	541	240		129840	
	Headquarter Geologist	day	1.5.1a	9000	30		270000	
3	**Sample Preparation**							(200 BRS, 150 SS, 150 SSS)
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	62	1.25	395250	
	e. Labours (4 Nos)	day		541	248		134168	
	Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)							BRS/ Channel: 100 Soil/ SSS- 200
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	100		4,20,000	BRS/ Channel: 100
	10% Check Samples	Nos	4.1.15a	4,200	10		42,000	
	ICPMS	Nos	4.1.14	7,731	300		23,19,300	BRS/ Channel: 100 Soil/ SSS/ Water samples - 200
	10% Check Samples	Nos	4.1.14	7,731	30		2,31,930	
	ICPMS-PGE	Nos	4.1.5d	11,800	-		-	
	10% Check Samples	Nos	4.1.5d	11,800	-		-	
	ICPMS-Fire Assay for Au	Nos	4.1.5a	2,380	50		1,19,000	
	10% Check Samples	Nos	4.1.5a	2,380	5		11,900	
	Water Sample analysis	Nos	4.1.8a	3,680	-		-	
6	**<u>Physical & Petrological Studies</u>**							
	Preparation of polished thin section of rock		4.3.2	1,549	30		46470	

	Ore Micrographic study	Nos	4.3.4	4,232	30		1,26,960	
	Digital Photographs	Nos	4.3.7	280	30		8,400	
	EMPA	Hrs	4.4.1	8,540	10		85,400	
	SUB TOTAL						**59,90,618**	
	PHASE III **Timeline: 6 months , Review : after completion of Phase III, Review Report**							
7	**Pitting/ Trenching**							
	Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work over 300 Sq.km	day	1.2b	11,000	120	1.25	16,50,000	
	Labours Charges; Base rate	day		541	240		1,29,840	
	Headquater Geologist	day	1.5.1a	9000	45		405000	
	Trenching	Cum	2.1.1	3330	50		166500	
	Pitting			3800	50		190000	
	Charges for one Sampler per day (1 Party) for sample preparation	one sampler per day	1.5.2	5,100	23	1.25	1,46,625	100 Samples
	Labours (4 Nos)	day		541	92		49,772	
8	**Geophysical Studies- Outsource**							
	Gravity - Magnetic Method - Regional / Detailed (0.5 to 200 sq.km depending on the objective)	**Per station**	3.1b	4,500	600	1.25	**3375000**	
	Geophysicst - Field	day	3.19b	11000	0		0	1 Field GeoP
	HQ Expert Geophysicst	day	3.18b	9000	15		135000	1 HQ GeoP
	Geophysical Studies- Oursource							
	Monitoring Geophysicst for outsourcing	day	3.19b	11000	0			1 Field GeoP
	HQ Expert Geophysicst	day	3.18b	9000	0			1 HQ GeoP

	Geochemical mapping							
	Charges for Geologist per day (Field) for geological mapping	day	1.5.1a	11000	0			4 Field GEO
	Labours Charges; Base rate	day	1.2	522	0			8 LABOUR
	Headquater Geologist	day	1.5.1a	9000	0			1 HQ GEO and 1 GIS
	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	23	1.25	146625	
	Labours (4 Nos)	day		541	92		49772	
9	**Chemical Analysis**							
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	50		2,10,000	BRS/ Channel-50
	10% Check Samples	Nos	4.1.15a	4,200	10		42,000	
	ICPMS	Nos	4.1.14	7,731	100		7,73,100	BRS/ Channel-100
	10% Check Samples	Nos	4.1.14	7,731	10		77,310	
	For PGE (ICP-MS Ni-S Fire assay technique)	Nos	4.1.5d	11,800	10		1,18,000	
	10% Check Samples	Nos	4.1.5d	11,800	5		59,000	
10	**Physical & Petrological Studies**						-	
	Preparation of thin section	Nos	4.3.1	2,353	30		70,590	
	Ore Micrographic study	Nos	4.3.4	4,232	30		1,26,960	
	Digital Photographs	Nos	4.3.7	280	30		8,400	
	XRD	Nos	4.5.1	4,000	30		1,20,000	
	Geochronology	Nos	4.6.3	8,540	10		85,400	
	SUB TOTAL						**81,34,894**	
	PHASE IV **Timeline: 6 months , Review : after completion of Phase I**							
11	**Drilling- In House**							

	Drilling Hard Rock	m	2.2.1.4a	11500	1500	1.25	2,15,62,500	BH-10
	Land/Crop Compensation	Per BH	5.6	20000	10	1.25	2,50,000	
	Construction of Concrete Pillar	Per BH	2.2.7a	2000	10	1.25	25,000	
	Transportation of Drill rig and Truck	km	2.2.8	36	2500	1.25	1,12,500	As per actuals- From Kolkata to Uttar Baster Kanker, Mohalla- Manpur Chowki Districts and Back
	Monthly accomodation charges for Drilling Camp	month	2.2.9	50000	4	1.25	2,50,000	
	Drilling Camp setting cost	Nos	2.2.9a	250000	1	1.25	3,12,500	
	Drilling camp winding up cost	Nos	2.2.9b	250000	1	1.25	3,12,500	
	Road making	km	2.2.10b	32200	10	1.25	4,02,500	
	Drilling core Preservation	per m	5.3	1590	500	1.25	9,93,750	
	Charges for Geologist per day (Field) for Drilling monitoring	day	1.5.1a	11000	120	1.25	16,50,000	2Field GEO
	HQ Geophysicst	day	3.18b	9000	10		90000	1 HQ GeoP
	Headquater Geologist	day	1.5.1a	9000	30		270000	1 HQ GEO
	Labours (4 Nos)	day		541	240		1,29,840	
	Sampler			5,100	33		1,68,300	
	Labours (4 Nos)			541	132		71,412	
12	**Chemical Analysis**							
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	20		84,000	
	10% Check Samples	Nos	4.1.15a	4,200	2		8,400	
	ICPMS	Nos	4.1.14	7,731	200		15,46,200	
	10% Check Samples	Nos	4.1.14	7,731	20		1,54,620	

	Preparation of thin section	Nos	4.3.1	2,353	20		47,060	
	Ore Micrographic study	Nos	4.3.4	4,232	20		84,640	
	Digital Photographs	Nos	4.3.7	280	20		5,600	
	XRD	Nos	4.5.1	4,000	20		80,000	
	SUB TOTAL						**2,86,11,322**	
	TOTAL WORK VALUE						**4,38,16,834**	
13	**Report**							
	Peer Review	Nos		30,000	1		30,000	
	Exploration Plan Preparation	Nos					5,00,000	
	Geological Report Preparation	Nos					13,14,505	
	Tendering cost						67,500	
	Operational Charges						3,37,500	
	Sub total of Report work						**22,49,505**	
	Total (including all phase) without GST						4,60,66,339	
	GST						82,91,941	
	Total Cost including GST						**5,43,58,280**	
	Rs. In Lacs						**543.58**	

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

Annexure 2B

Time Schedule/ Action Plan for Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks in Proterozoic rocks of Amgaon Gneissic Complex, Dongargarh Granites, Dongargarh Supergroup, Bijli Rhyolite, Bailadila Group, in parts of Uttar Baster Kanker, Mohalla- Manpur Chowki Districts, Chhattisgarh.

S. No.	TASK	1	2	3	4	5	6		7	8	9	10	11	12		13	14	15	16	17	18		19	20	21	22	23	24
	PHASE-I																											
1	Collation, Integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, ASTER alterations etc. and preparation of thematic maps.							Review																				
2	Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS																											
3	Traverse mapping																											
	PHASE-II																											
4	Geo-chemical mapping																											
5	Geo-physical mapping														Review													
6	Sampling																											
7	Chemical Analysis@																											
8	Data interpretation for Phase III work.																											
	PHASE-III																											
9	Potential zone mapping																											
10	Pitting/Trenching																											
11	Geo-physical mapping																					Review						
12	Sampling																											
13	Chemical Analysis@																											
14	Data interpretation and locating drilling points for Phase IV work.																											
	PHASE-IV																											
15	Scout Drilling (10 drilling of average 200m depth)																											
16	Sampling																											
17	Chemical Analysis@																											
18	Data interpretation and Prospectivity Analysis, Identification of mineral systems and potential areas for G4 investigations																											

Annexure 3A

Regional Mineral Targeting in Madanpur-Rampur-Kankatru areas to identify prospective blocks of REE , Base Metal & other mineralization in Kalahandi District, Odisha
Name of the Exploration Agency - Natural Resources Division, Tata Steel Limited
Total Area - 1087 Sq. Km; Completion Time - 24 Months; Reviews: Completion of each Phase

Sl. No	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal			Remarks
			SoC-Item-S. No.	Rates as per SoC	Qty.	LWE charges	Total Amount (Rs)	
PHASE 1- Time line : 4 months , Review : after 4 months (after completion of Phase 1)								
1								
1.1	Remote Sensing study and interpretation, collation, integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, and preparation of thematic maps. Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS. Predictive geological mapping and prepare thematic maps.	Mandays	1.1b	9000	120		1080000	Geologist / Geophysicist/ GIS&AIML Experts - As necessary
	Sub Total						**1080000**	
	Progress Report / Outcome delineating potential and gap area to be submitted after Phase 1 for Review							
PHASE II - Traverse Mapping on 1: 50000/25000 Scale along with Collection of few BRS / Chip/ Channel Samples- 100 nos., S /SSS/ Regolith samples- 25 each nos., Petrological samples-/ Whole Rock Timeline : 8 months , Review : after completion of Phase II								
1.2	Geologist: (Field work and related)	Mandays	1.2	11000	90	1.25	1237500	Mandays

1.3	Labour charges (for sample collection, packaging, carrying)	Mandays	5.7	541	180		97380	2 labour per Geologist; Amount will be reimbursed as per the notified rates by the Central Labour Commission or respective State Govt. whichever is higher.
1.2	Geologist: HQ- For Prepartion of Interim Progress Report	Mandays	1.2	9000	30		270000	
1.4	Charges for one sampler per day (for sample preparation)	Mandays	1.5.2	5100	33	1.25	210375	Avg. 10 samples to be prepared in a day
1.5	Labour charges (for sample preparation)	Mandays	5.7	541	132		71412	1. 4 persons per day 2. Minimum 10 samples to be prepared in a day
Sample Analysis								
	BRS / Chip/ Channel Samples	Per Sample	4.1.14	7,731	100		773100	ICPMS
	Stream Sediment/ Soil /Regolith	Per Sample	4.1.14	7,731	90		695790	
	Complete analysis of manganese ore/bauxite/iron ore etc.,	Per sample	4.1.15a	4,200	30		126000	
	Proximate analysis for graphite	Per sample	4.1.16	3000	10		30000	For graphite
	Whole Rock Analysis - XRF	Per sample	4.1.15a	4,200	30		126000	
	Preparation of polished thin section of rock		4.3.2	1,549	50		77450	
	Complete mineragraphic study		4.3.4	4,232	50		211600	
Sub Total							**3926607**	
PHASE III **Timeline : 6 months , Review : after completion of Phase III**								
	Geologist: Field	Mandays	1.2	11000	90	1.25	1237500	

	Labour charges (for sample collection, packaging, carrying)	Mandays	5.7	541	180		97380	2 labour per Geologist; Amount will be reimbursed as per the notified rates by the Central Labour Commission or respective State Govt. whichever is higher.
	Geologist: HQ- For Prepartion of Interim Progress Report	Mandays	1.2	9000	30		270000	
	Charges for one sampler per day (for sample preparation)	Mandays	1.5.2	5100	30	1.25	191250	Avg. 10 samples to be prepared in a day
	Labour charges (for sample preparation)	Mandays	5.7	541	120		64920	1. 4 persons per day 2. Minimum 10 samples to be prepared in a day
3.1	**Geophysical Survey- Outsourced**							
3.1	Gravity - magnetic method	per station	3.1b	4500	400	1.25	**2250000**	(500 x 500 grid); 100 Sq. Km.
3.2	IP cum-resistivity, SP, magnetic (50 line Km)	8-10 Line Km	3.4.b	1448693	5	1.25	**9054331**	Over most potential target areas
2.1	Pitting	per cu m	2.1.2	3800	50	1.25	**237500**	1.0m x 1.0m x 1.0m
	Trenching	per cu m	2.1.1	3330	100	1.25	**416250**	
	Bed Rock, Channel, pit-trench samples				200			Collection of samples
	BRS / Chip/ Channel Samples/ Trench/ Pit	Per Sample	4.1.14	7,731	200		1546200	ICPMS
	Complete analysis of manganese ore/bauxite/iron ore etc.,	Per sample	4.1.15a	4,200	30		126000	
	Proximate analysis for graphite	Per sample	4.1.16	3000	10		30000	For graphite
	Preparation of polished thin section of rock		4.3.2	1,549	10		15490	
	Complete mineragraphic study		4.3.4	4,232	50		211600	
Sub Total							**15748421.25**	
PHASE IV **Timeline : 6 months , Review : after completion of Phase IV**								

	Geologist: Field	Mandays	1.2	11000	90	1.25	1237500	
	Labour charges (for sample collection, packaging, carrying)	Mandays	5.7	541	180		97380	2 labour per Geologist; Amount will be reimbursed as per the notified rates by the Central Labour Commission or respective State Govt. whichever is higher.
	Geologist: HQ- For Prepartion of Interim Progress Report	Mandays	1.2	9000	30		270000	
	Charges for one sampler per day (for sample preparation)	Mandays	1.5.2	5100	38	1.25	242250	Avg. 10 samples to be prepared in a day
	Labour charges (for sample preparation)	Mandays	5.7	541	152		82232	1. 4 persons per day 2. Minimum 10 samples to be prepared in a day
	Drilling- Outsourced							
	Scout Drilling in hard rock- 10 BHS		2.2.1.3a	11500	1000	1.25	**14375000**	
	Core Samples	Per Sample	4.1.14	7,731	200		1546200	ICPMS
	Complete analysis of manganese ore/bauxite/iron ore etc.,	Per sample	4.1.15a	4200	50		210000	
	Proximate analysis for graphite	Per sample	4.1.16	3000	50		150000	For graphite
	Preparation of polished thin section of rock		4.3.2	1,549	10		15490	
	Complete mineragraphic study		4.3.4	4,232	50		211600	
	Drill core Preservation		5.3	1590	500	1.25	993750	
4.9	PGE (ICP-MS- Ni-S Fire Assay technique)	Per sample	4.1.5d	11800	10		118000	
4.12	EPMA studies	per hour	4.4.1	8540	10		85400	
4.14	XRD analysis for identification of minerals (Random)	Per sample	4.5.1	4000	20		80000	

Sub Total							**19714802**	
Total							**40469830**	
5	**Project Cost without GST**							
6	Total Outsourced Cost						25679331	
7	Tendering process cost for outsourced activities		2.3				513587	
8	Operational Charges against outsourced activities		6(ii)				1658967	
9	Peer review by external expert		As per EC decision				30000	
10	Preparation of exploration proposal		5.1				500000	
11	Geological Report Preparation		5.2				1214095	MAP to be represented in 1: 25000/ 1: 50000
13	**Total Project cost (without GST)**						**44386478**	
14	**Total Project Cost with GST**	%		18			**52376044**	
15	**Rs. In Lacs**						**523.76**	
Note:								
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**							
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**							
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.**							
4	**Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.**							
5	**Any item of work not mentioned above shall be added as per SoC.**							
6	**All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency.**							

Annexure 3B

Time Schedule/ Action Plan for Regional Mineral Targeting in Madanpur-Rampur-Kankatru areas to identify prospective blocks of REE , Base Metal & other mineralization in Kalahandi District, Odisha

Sl. No.	Activity Plan	Phases	1	2	3	4		5	6	7	8	9	10		11	12	13	14		15	16	17	18	19	20	11	22	23	24
1	Study of Baseline Geoscience data and Interpretation - Remote Sensing study and interpretation, Collation, integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, and preparation of thematic maps	**Phase-1**																										
2	Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS.																										
3	Potential mapping of the block area 1087 sq.km (Predictive thematic mapping for the total target areas and selected field valiation)																										
4	Traverse mapping and sample collection over potential target area	**Phase-2**					**Review-1**							**Review-2**					**Review-3**									
5	Sample Preparation for Chemical Analysis																										
6	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES/ ICP-MS (REE analysis)																										
7	Petrographic study, EPMA/SEM Lab, XRD etc																										
8	Data Interpretation acquired field data and chemical data																										
9	Geophysical Survey over potential area	**Phase-3**																									
10	Interpretation of Geophysical survey data																										
11	Exploratory drilling	**Phase-4**																									
12	Drill core sample preparation, analysis																										
13	Synthesis of all data, interpretation and review																										
14	Data interpretation, Identification of Mineral systems and recommendation of potential G4 areas (if any)																										
15	Peer Review																										
16	Final Report preparation and Submission																										

Annexure 4A

Estimated cost for Regional Mineral Targeting in parts of AMGC and associated granites for identification of prospecting blocks in West Khasi Hill and East Garo Hill Districts, Meghalaya

Total area 2175 sq km, Period of Completion: 24 months Drilling 2000m, Review: Quarterly/ after completion of Each Phase

			Rates as per NMET		Estimated Cost of the		
			SoC 2020-21		Proposal		
S. No.	Item of Work *	Unit *	SoC- Item No.	Rates as per SoC * (a)	Qty. (b)	Total Amount (Rs) (a*b)	Remarks
	Data integration and interpretation						
a	Charges for procurement of Satellite imageries	Satellite imagery	1.1 a	₹ 0.00	0	₹ 0.00	As per actual cost incurred on procurement from NRSA. No charges will be paid for data freely available from website
b	Cost of interpretation in terms of geologist mandays (HQ)	day	1.1 b	₹ 9,000.00	120	₹ 10,80,000.00	Involvement of 2 geologist
C	Procurement of gravity & magnetic data from DGH						As per actual cost incurred on procurement from DGH
D	Cost of interpretation in terms of Geophysicist mandays (HQ)	day	3.18	₹ 9,000.00	30	₹ 2,70,000.00	Involvement of 1 geophysicist
	Sub Total- A					**₹ 13,50,000.00**	
	Generation of Review Report after completion of Phase I						
	Phase-II Traverse Mapping on 1: 25,000/1:50000 Scale Timeline: 8 months , Review : after completion of Phase II, Review Report						
B	**Traverse Mapping Other Geological Work & Surveying**						

	Geological mapping, (1:25,000/50000 scale)						
i	a. Charges for Geologist per day (Field) for Traverse mapping & trenching work (@ selective places), (without labour)	day	1.2. b	₹ 11,000.00	150	₹ 55,27,500.00	Field Reconnaitory survey and Geological mapping (1:25,000/50,000 scale) with revisit of previous work
ii	b. Labours Charges; Base rate	day	5.7	₹ 541.00	300	₹ 1,62,300.00	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
iii	c. Charges for Geologist per day (HQ)	day	1.2. a	₹ 9,000.00	45	₹ 4,05,000.00	
	Sub Total- B					**₹ 60,94,800.00**	
C	**Trenching/Pitting**						
a	Trenching	per cu.m	2.1.1	₹ 3,330.00	300	₹ 33,46,650.00	150 trench (2cu.m)
b	Pitting	per cu.m	2.1.2	₹ 3,800.00	100	₹ 12,73,000.00	50 pit (2cu.m) (for secondary REE enrichment study)
	Sub Total C					**₹ 46,19,650.00**	
D	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)**						BRS 200
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	200	₹ 8,40,000.00	

b	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.) and U	Nos	4.1.14	₹ 7,731.00	100	₹ 7,73,100.00	
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	20	₹ 47,600.00	
d	PGE (six elements)	Nos	4.1.5d	₹ 11,800.00	20	₹ 2,36,000.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	40	₹ 2,70,400.00	
ii)	**Surface Check samples (10% External)**						
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	20	₹ 84,000.00	
b	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.)	Nos	4.1.14	₹ 7,731.00	10	₹ 77,310.00	
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	2	₹ 4,760.00	
d	PGE (six elements)	Nos	4.1.5d	₹ 11,800.00	2	₹ 23,600.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	4	₹ 27,040.00	
iii)	**PIT & Trench Samples**						
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	150	₹ 6,30,000.00	100 Trench& 50 Pit samplesFor rock characterization

b	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.)	Nos	4.1.14	₹ 7,731.00	150	₹ 11,59,650.00	For Rare metal & rare earth elements
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	20	₹ 47,600.00	
d	PGE (six elements)	Nos	4.1.5d	₹ 11,800.00	20	₹ 2,36,000.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	40	₹ 2,70,400.00	
iv)	**Check samples (10% External)**						
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	15	₹ 63,000.00	For rock characterization
b	Analysis of one rock/ soil sample for determination of a package by34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.)	Nos	4.1.14	₹ 7,731.00	15	₹ 1,15,965.00	For Rare metal & rare earth elements
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	2	₹ 4,760.00	
d	PGE (six elements)	Nos	4.1.5d	₹ 11,800.00	2	₹ 23,600.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	4	₹ 27,040.00	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	₹ 2,353.00	0	₹ 0.00	
ii	Study of thin section	Nos	4.3.4	₹ 4,232.00	0	₹ 0.00	

iii	Preparation of thin polish section	Nos	4.3.2	₹ 1,549.00	100	₹ 1,54,900.00	
iv	study of polished section	Nos	4.3.4	₹ 4,232.00	100	₹ 4,23,200.00	
v	Digital Photographs	Nos	4.3.7	₹ 280.00	50	₹ 14,000.00	
vi	Bulk density analysis	Nos	4.8.1	₹ 1,605.00	0	₹ 0.00	
vii	SEM-EDX	Nos	4.4.2	₹ 2,940.00	0	₹ 0.00	
viii	XRD	Nos	4.5.1	₹ 4,000.00	20	₹ 80,000.00	
ix	EPMA	per hour	4.4.1	₹ 8,540.00	0	₹ 0.00	
x							
Submission of Review Report after completion of Phase II							
	Sub Total D					**₹ 56,33,925.00**	
Phase-III **Timeline: 6months, Review : after completion of Phase III, Review Report**							
F	**Ground Geophysical Survey- In-House**						
	Gravity - magnetic method	per station	3.1b	4500	800	3600000	(500 x 500 grid); 200 Sq. Km.
	IP cum-resistivity, SP, magnetic (100 line Km)	8-10 Line Km	3.4.b	1448693	10	14486930	Over most potential target areas
	Cost of interpretation in terms of Geophysicist mandays (HQ)	day	3.18	₹ 9,000.00	45	₹ 4,05,000.00	
	Geologist: Field	Mandays	1.2	11000	90	3316500	

	Labour charges (for sample collection, packaging, carrying)	Mandays	5.7	541	180	97380	2 labour per Geologist; Amount will be reimbursed as per the notified rates by the Central Labour Commission or respective State Govt. whichever is higher.
	Geologist: HQ- For Prepartion of Interim Progress Report	Mandays	1.2	9000	30	270000	
	Charges for one sampler per day (for sample preparation)	Mandays	1.5.2	5100	38	649230	Avg. 10 samples to be prepared in a day
	Labour charges (for sample preparation)	Mandays	5.7	541	152	82232	1. 4 persons per day2. Minimum 10 samples to be prepared in a day
						osp	
	Pitting	per cu m	2.1.2	3800	100	380000	1.0m x 1.0m x 1.0m
	Trenching	per cu m	2.1.1	3330	200	666000	
	Bed Rock, Channel, pit-trench samples				300		Collection of samples
	BRS / Chip/ Channel Samples/ Trench/ Pit	Per Sample	4.1.14	7731	250	1932750	ICPMS
	Oxide Analysis	Per sample	4.1.15a	4200	50	210000	
	Preparation of thin polish section	Nos	4.3.2	1549	50	77450	
	study of polished section	Nos	4.3.4	4232	50	211600	
	Digital Photographs	Nos	4.3.7	280	50	14000	
	Bulk density analysis	Nos	4.8.1	₹ 1,605.00	3	₹ 4,815.00	
	EPMA	per hour	4.4.1	₹ 8,540.00	10	₹ 85,400.00	

	Fluid Inclusion Study	Nos	4.3.9	₹ 12,600.00	5	₹ 63,000.00	
	Geochronology (Isotope studies by LA-MC-ICPMS)	Nos	4.6.3	₹ 8,540.00	5	₹ 42,700.00	
	Sub Total					₹ 2,65,94,987.00	
Phase- IV Timeline: 6 months							
F	**Survey work**						
a	DGPS Survey for BH fixation & RL determination	Per Point of observation of observation	1.6.2	₹ 19,200.00	21	₹ 4,03,200.00	11 Cardinal points & 10 borehole
	Sub-Total F					**₹ 4,03,200.00**	
G	**Drilling (after review)**						
1	Drilling up to 2000 m (very Hard rock)	m	2.2.1.5	₹ 12,650.00	2000	₹ 8,47,55,000.00	
2	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	₹ 20,000.00	10	₹ 6,70,000.00	As per actuals
3	Construction of concrete Pillar (12"x12"x30")	per borehole	2.2.7a	₹ 2,000.00	10	₹ 67,000.00	
4	Transportation of Drill Rig & Truck associated per drill (2 rig)	Km	2.2.8	₹ 36.00	3,920	₹ 4,72,752.00	Raniganj to Meghalaya to and fro (980 Km) =1960*2
5	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	₹ 50,000.00	4	₹ 6,70,000.00	Considering drilling activity for 4 months
6	Drilling Camp Setting Cost	Nos	2.2.9a	₹ 2,50,000.00	2	₹ 16,75,000.00	

7	Drilling Camp Winding up Cost	Nos	2.2.9a	₹ 2,50,000.00	2	₹ 16,75,000.00	
8	Road Making (Rugged Terrain)	Km	2.2.10a	₹ 32,200.00	5	₹ 5,39,350.00	
9	Drill Core Preservation	per m	5.3	₹ 1,590.00	500	₹ 26,63,250.00	200 m 1 BH, 9 BH *20
10	Charges for Geologist per day for execution of drilling activity (without labour)	day	1.2. b	₹ 11,000.00	120	₹ 44,22,000.00	2 Geologist
11	b. Labours Charges; Base rate	day	5.7	₹ 541.00	240	₹ 1,29,840.00	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
12	Charges for Geologist per day (HQ)	day	1.2. a	₹ 9,000.00	30	₹ 2,70,000.00	
13	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	₹ 5,100.00	81	₹ 13,83,885.00	
14	Labours (4 Nos)	day	5.7	₹ 541.00	324	₹ 1,75,284.00	Amount will be reimbursed as per the notified rates by the Central Labour Commissioner or respective State Govt. whichever is higher.
	Sub Total G					**₹ 9,95,68,361.00**	
H	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
i)	**BH Core samples**						
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	250	₹ 10,50,000.00	

b	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.) with REE	Nos	4.1.14	₹ 7,731.00	250	₹ 19,32,750.00	For Rare metal & rare earth elements
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	20	₹ 47,600.00	
d	PGE (five elements)	Nos	4.1.5d	₹ 11,800.00	20	₹ 2,36,000.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	50	₹ 3,38,000.00	
ii)	**BH Core samples (10%External)**						
a	Analysis of major oxides by XRF	Nos	4.1.15a	₹ 4,200.00	25	₹ 1,05,000.00	
b	Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (34 elements along with Cu, Pb, Zn, Fe, Ni, Co, Cr, Al, S, Bi etc.)	Nos	4.1.14	₹ 7,731.00	25	₹ 1,93,275.00	
c	Analysis for Au by fire assay technique	Nos	4.1.5a	₹ 2,380.00	2	₹ 4,760.00	
d	PGE (five elements)	Nos	4.1.5d	₹ 11,800.00	2	₹ 23,600.00	
e	FeO analysis by wet chemical method For Magnetitte samples	Nos	4.1.4	₹ 6,760.00	5	₹ 33,800.00	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	₹ 2,353.00	0	₹ 0.00	
ii	Study of thin section	Nos	4.3.4	₹ 4,232.00	0	₹ 0.00	

iii	Preparation of thin polish section	Nos	4.3.2	₹ 1,549.00	20	₹ 30,980.00	
iv	study of polished section	Nos	4.3.4	₹ 4,232.00	20	₹ 84,640.00	
v	Digital Photographs	Nos	4.3.7	₹ 280.00	20	₹ 5,600.00	
vi	Bulk density analysis	Nos	4.8.1	₹ 1,605.00	3	₹ 4,815.00	
vii	SEM-EDX	Nos	4.4.2	₹ 2,940.00	0	₹ 0.00	
viii	XRD	Nos	4.5.1	₹ 4,000.00	20	₹ 80,000.00	
ix	EPMA	per hour	4.4.1	₹ 8,540.00	5	₹ 42,700.00	
x	Fluid Inclusion Study	Nos	4.3.9	₹ 12,600.00	0	₹ 0.00	
xi	Geochronology (Isotope studies by LA-MC-ICPMS)	Nos	4.6.3	₹ 8,540.00	0	₹ 0.00	
	Total H					**₹ 42,13,520.00**	
I	**Total A to H**					**₹ 14,84,78,443**	
J	Geological Report Preparation	**5 Hard copies with a soft copy**	5.2	ii		₹ 20,00,000	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET. ****subjected to max amount of 20 lakhs**
K	**Peer review Charges**		**As per EC decision**	₹ 30,000.00	**1**	**₹ 30,000**	
L	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	5 Hard copies with a soft copy	5.1	2% of the Cost or Rs. 3.8 Lakhs whichever is less		₹ 5,00,000	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
M	**Total Estimated Cost without GST**					**15,10,08,443**	

N	**Provision for GST (18% of J)**				**₹ 2,71,81,520**	GST will be reimburse as per actual and as per notified prescribed rate
O	**Total Estimated Cost with GST**				**₹ 17,81,89,963**	
				Rs. In Lakhs	**₹ 1,781.90**	
Note:						
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**					
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**					
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.**					
4	**Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.**					
5	**Any item of work not mentioned above shall be added as per SoC.**					
6	**All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency.**					
7.	**The recommendations are for purpose of initiating the project. The final costing will be done after the revised SoC of NMET is issued**					

Annexure 4B

Time schedule/ Action plan for Regional Mineral Targeting Block (pre G4) in parts of AMGC and associated granites West Khasi Hill and East Garo Hill Districts, Meghalaya

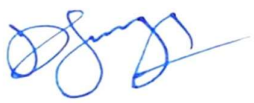
	Item of work	Field Season-I												Review	Field Season-II										
		1	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12
Phase-I	Data integration and interpretation																									
Phase-II	Geological mapping, (1:25,000 scale)																									
	Bed rock sampling																									
	Chemical analysis of surface samples																									
	Physical & Petrological Studies of surface samples																									
	Predictive analysis for execution of next phase planning																									
Phase-III	Ground Geophysical Survey																									
	Data integration and interpretation																									
	DGPS Survey for BH fixation & RL determination																									
Phase-IV	Drilling up to 2000 m (very Hard rock)																									
	Core sampling and preparation																									
	Chemical Analysis of core samples																									
	Physical & Petrological Studies of core samples																									
	Geological Report Preparation																									
	Submission of Final Geological Report																									

Annexure 5A

Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks for Manganese,Graphite,Tungsten,REEand Associated minerals, around Gudem and Chintapalll areas of Alluri Sitaramaraju District, Andhra Pradesh
Name of the Exploration Agency – Critical Mineral Trackers, Hyderabad
Total Area - 1450 sq.km ; Completion Time -24 months Review: quarterly/ after completion of each phase

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)	LWE charges	Total Amount (Rs) (a*b)	
First Phase Timeline: 4 months , Review : after completion of Phase I, Review Report								
1	**Collation, Integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, ASTER alterations etc. and preparation of thematic maps. Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS**	day	1.5.1b	9000	150		1350000	
	Project Manager for the project			9000	120	0	0	
	SUB TOTAL						**13,50,000.00**	
2nd Phase- Traverse Mapping on 1: 50000/25000 Scale Timeline: 8 months , Review : after completion of Phase II, Review Report								
2	**Traverse mapping**							

	Charges for Geologist per day (Field)	day	1.5.1a	11000	150	1	1650000	
	Labours Charges; Base rate	day	1.2	541	300	1	162300	
	Headquarter Geologist	day	1.5.1a	9000	45		405000	
3	**Sample Preparation**							
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	120	1	612000	
	e. Labours (4 Nos)	day		541	480	1	259680	
	SUB TOTAL						**3088980**	
	Geochemical Sampling-Surface samples (Bedrock/Channel /Soil/Stream sediment)							
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	250		10,50,000	
	10% Check Samples	Nos	4.1.15a	4,200	25		1,05,000	
	ICPMS	Nos	4.1.14	7,731	250		19,32,750	
	10% Check Samples	Nos	4.1.14	7,731	25		1,93,275	
	ICPMS-PGE	Nos	4.1.5d	11,800	-		-	
	10% Check Samples	Nos	4.1.5d	11,800	-		-	
	ICPMS-Fire Assasy for Au	Nos	4.1.5a	2,860	-		-	
	10% Check Samples	Nos	4.1.5a	2,860	-		-	
	Water Sample analysis	Nos	4.1.8a	3,680	-		-	
6	**Physical & Petrological Studies**							
	Preparation of polished thin section of rock		4.3.2	1,549	60		92940	
	Ore Micrographic study	Nos	4.3.4	4,232	60		2,53,920	
	Digital Photographs	Nos	4.3.7	280	50		14,000	
	EPMA	Hrs	4.4.1	8,540	-		-	



	SUB TOTAL						**36,41,885**	
	PHASE III **Timeline: 6 months , Review : after completion of Phase III, Review Report**							
7	**Pitting/ Trenching**							
	Charges for Geologist per day (Field) for geological mapping & trenching work, drilling work over 300 Sq.km	day	1.2b	11,000	150	1.00	16,50,000	
	Labours Charges; Base rate	day		541	300	1.00	1,62,300	
	Headquater Geologist	day	1.5.1a	9000	60	1.00	5,40,000	
	Trenching	Cum	2.1.1	3330	150	1.00	4,99,500	
	Pitting			3800	150	1.00	5,70,000	
	Charges for one Sampler per day (1 Party) for sample preparation	one sampler per day	1.5.2	5,100	56	1.00	2,85,600	100 Samples
	Labours (4 Nos)	day		541	224	1.00	1,21,184	
	Total						**38,28,584**	
8	**Geophysical Studies- In House**							
	Gravity - Magnetic Method - Regional / Detailed (0.5 to 200 sq.km depending on the objective)	**Per station**	**3.1b**	4,500	800	1	3600000	500mX500m grid, 200sq.km area
	Drone Magnetic Survey (10-30 lkm)	**Per station**	**-**	0	0	1	0	To be decided after Review of Phase 1
	EM/Resistivity/SP (8-10 lkm)	**LKM**	**3.4b**	1448693	5	1	7243465	50 lkm
	Geophysicst - Field	day	3.19b	11000	0	1	0	6 Geophysists for 90 Days
	HQ Expert Geophysicst	day	3.18b	9000	45	1	405000	4 Geophysists for 90 Days
	Total						**11248465**	
	Geophysical Studies- In House							
	Monitoring Geophysicst for outsourcing	day	3.19b	11000	0			1 Field GeoP

	Expert Geophysicst/ AI engineer	day	3.18b	9000	60		540000	1 HQ GeoP
	Geochemical mapping							
	Charges for Geologist per day (Field) for geological mapping	day	1.5.1a	11000	0			4 Field GEO
	Labours Charges; Base rate	day	1.2	522	0			8 LABOUR
	Headquater Geologist	day	1.5.1a	9000	0			1 HQ GEO and 1 GIS
	Charges for one Sampler per day (1 Party)	one sampler per day	1.5.2	5100	0	1	0	
	Labours (4 Nos)	day		541	0	1	0	
9	**Chemical Analysis**							
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	150		6,30,000	
	10% Check Samples	Nos	4.1.15a	4,200	15		63,000	
	ICPMS	Nos	4.1.14	7,731	150		11,59,650	
	10% Check Samples	Nos	4.1.14	7,731	15		1,15,965	
	For PGE (ICP-MS Ni-S Fire assay technique)	Nos	4.1.5d	11,800	15		1,77,000	
	10% Check Samples	Nos	4.1.5d	11,800	2		23,600	
	Proximate analysis for Graphite		4.1.16	3,000	100		3,00,000	
10	**Physical & Petrological Studies**						-	
	Preparation of Polished thin section	Nos	4.3.2	1,549	50		77,450	
	Ore Micrographic study	Nos	4.3.4	4,232	50		2,11,600	
	Digital Photographs	Nos	4.3.7	280	50		14,000	
	EPMA	Hrs	4.4.1	8,540	25		2,13,500	
	XRD	Nos	4.5.1	4,000	-		-	
	Cost per OTS testing and identification of costly gems like diamond, emerald, natural ruby, sapphire etc.	Nos	4.3.13	1,820	50		91,000	
	SUB TOTAL						**36,16,765**	

	PHASE IV **Timeline: 6 months , Review : after completion of Phase I**							
11	**Drilling- In House**							
	Drilling Hard Rock	m	2.2.1.4	11500	1500	1	1,72,50,000	BH-10
	Land/Crop Compensation	Per BH	5.6	20000	10	1	2,00,000	
	Construction of Concrete Pillar	Per BH	2.2.7a	2000	10	1	20,000	
	Transportation of Drill rig and Truck	km	2.2.8	36	1600	1	57,600	As per actuals- From Hyderabad to Chintapally and Back
	Monthly accomodation charges for Drilling Camp	month	2.2.9	50000	5	1	2,50,000	
	Drilling Camp setting cost	Nos	2.2.9a	250000	1	1	2,50,000	
	Drilling camp winding up cost	Nos	2.2.9b	250000	1	1	2,50,000	
	Road making	km	2.2.10b	32200	5	1	1,61,000	As per actuals
	Drilling core Preservation	per m	5.3	1590	500	1	7,95,000	
	Charges for Geologist per day (Field) for Drilling monitoring	day	1.5.1a	11000	150	1	16,50,000	
	HQ Geophysicst & AI Engineers	day	3.18b	9000	0	1	0	
	Headquater Geologist	day	1.5.1a	9000	30	1	270000	
	Labours (4 Nos)	day		541	300	1	1,62,300	As per actual
	Sampler			5,100	150	1	7,65,000	
	Labours (4 Nos)			541	600	1	3,24,600	
12	**Chemical Analysis**					1		
	Major Oxide (XRF and LOI)	Nos	4.1.15a	4,200	50	1	2,10,000	
	10% Check Samples	Nos	4.1.15a	4,200	5	1	21,000	
	ICPMS	Nos	4.1.14	7,731	100		7,73,100	
	10% Check Samples	Nos	4.1.14	7,731	10		77,310	
	Graphite Analysis	Nos	4.1.16	3,000	50		1,50,000	

	Preparation of Polished thin section	Nos	4.3.2	1,549	30		46,470	
	Ore Micrographic study	Nos	4.3.4	4,232	30		1,26,960	
	Digital Photographs	Nos	4.3.7	280	30		8,400	
	XRD	Nos	4.5.1	4,000	-		-	
	SUB TOTAL						**2,38,18,740**	
	TOTAL WORK VALUE						**5,05,93,419**	3,41,66,370
13	**Report**							
	Peer Review	Nos		30,000	1		30,000	
	Exploration Plan Preparation	Nos	5.1				5,00,000	
	Geological Report Preparation	Nos	5.2				15,17,803	
	Tendering cost						-	
	Operational Charges						-	
	Sub total of Report work						20,47,803	
	Total (including all phase) without GST						5,26,41,222	
	GST						94,75,420	
	Total including GST						**6,21,16,641**	
	Rs. In Lacs						**621.17**	
Note:								
1	**Strict adherence to the Ministry of Finance's and GFR guidelines is mandatory. Every transaction must adhere to GFR rule 21.**							
2	**In case of delay/non- performance, the appropriate action will be taken by competent authority against delinquent agency as per prevailing govt. of India rules/guidelines on procurement.**							
3	**If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by NEA on its own, a Certificate regarding non outsourcing of any component/project is required.**							
4	**Necessary efforts should be made to minimize any adverse impact on the environment during exploration activities.**							
5	**Any item of work not mentioned above shall be added as per SoC.**							
6	**All the Geological Reports and data are to be uploaded on NGDR as per MERT template by the agency.**							

Annexure 5A

Time Schedule/ Action Plain for Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks for Manganese,Graphite,Tungsten,REEand Associated minerals, around GUDEM and CHINTAPALLI areas of ALLURI SITARAMARAJU DISTRICT, ANDHRA PRADESH

S. No.	TASK	1	2	3	4	5	6		7	8	9	10	11	12		13	14	15	16	17	18		19	20	21	22	23	24
	PHASE-I																											
1	Collation, Integration of datasets of NGCM, NGPM, Airborne Geophysical, Geology, Structural trend maps, Outcrop boundaries, Mineral occurrences, Seismo-tectonics, Geochronology, ASTER alterations etc. and preparation of thematic maps.							Review																				
2	Consultation of all ME reports, extraction and plotting of selected data (drill, alteration minerals, geophysical etc.) in GIS																											
3	Traverse mapping																											
	PHASE-II																											
4	Geo-chemical mapping																											
5	Geo-physical mapping																											
6	Sampling																											
7	Chemical Analysis@														Review													
8	Data interpretation for Phase III work.																											
	PHASE-III																											
9	Potential zone mapping																					Review						
10	Pitting/Trenching																											
11	Geo-physical mapping																											
12	Sampling																											
13	Chemical Analysis@																											
14	Data interpretation and locating drilling points for Phase IV work.																											
	PHASE-IV																											
15	Scout Drilling (10 drilling of average 200m depth)																											
16	Sampling																											
17	Chemical Analysis@																											
18	Data interpretation and Prospectivity Analysis, Identification of mineral systems and potential areas for G4 investigations																											
19	finalisation of potential zones and preparation and submission of Geological Report																											

Annexure 6A

Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks for Graphite, Niobium, REE and associated mineralisation in Yellikod-Azhikod areas, near Achankovil shear zone, Southern Granulite Terrain, Kerala and Tamilnadu States.(999 sq km)

Timelines : 24 months, Review: quarterly/ after completion of each phase

S. No.	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	
First Phase Timeline: 4 months , Review : after completion of Phase I, Review Report							
	Collection,Integration of datasets of NGCM, NGPM, Airborne Geophysical, Geological, Structural trend maps, Outcrop boundaries, Geochronology,Mineral occurences, seismotectonics and preperation of thematic maps Processing of RS data(ASTER & LANDSAT) and preparation of Thematic maps-Alteration maps, Structural maps, Lithological maps etc)	day	1.3	9,000	150	13,50,000	Geologist/ Geophysicists (HQ)/GIS
Sub total A						**13,50,000**	
2nd Phase- Traverse Mapping on 1: 50000/25000 Scale Timeline: 8 months , Review : after completion of Phase II, Review Report							

	Geological field checks & Sample collection/BRS/Chip/Channel samples	day	1.3	11,000	90	9,90,000	2 geologists -45 days
	Labours Charges (2)	day		541	180	97,380	As per actual
3	**Sample Preparation**						**(200 BRS, 150 SS, 150 SSS)**
	d. Charges for one Sampler per day (1 Party)	**one sampler per day**	**1.5.2**	**5100**	**54**	**275400**	
	e. Labours (4 Nos)	**day**		**541**	**216**	**116856**	
	Primary for major oxides and LOI by XRF technique	Nos	4.1.15a	4,200	150	6,30,000	
	Check Sample		4.1.15a	4,201	15	63,015	
	Primary +check samples For REE ,Ga,V ,Sc,Y,Nb,Ta,Li and other Trace elements : by ICPMS 34 elements : by ICPMS+ check samples 10 %	Nos	4.1.14	7,731	165	12,75,615	
	Physical & Petrological Studies						
	Preparation of thin section	Nos	4.3.1	2,353	-	-	
	Preparation of polished thin section	Nos	4.3.2	1,549	50	77,450	
	petrographic/ore microscopic study	Nos	4.3.4	4,232	50	2,11,600	
	Digital Photographs	Nos	4.3.7	280	50	14,000	
	EPMA	hrs	4.4.1	8,540	-	-	
	XRD	Nos	4.5.1	4,000	20	80,000	
	SEM /EDX	Nos	4.4.2	2,940	-	-	
	Proximate analysis of Graphite	Nos	4.1.16	3,000	100	3,00,000	
Sub total II						**41,31,316**	
PHASE III **Timeline: 6 months , Review : after completion of Phase III, Review Report**							
	UAV-Geophysical survey						

	Drone survey (magnetic) (20% area)	**lkm**	3.9a		**-**		To be decided after Review of Phase II
	Drone survey (gamma ray) (20% area)	Lkm	3.9		-	-	To be decided after Review of Phase II
	Drone survey (EM) (20% area)	lkm	3.9d		-		To be decided after Review of Phase II
	Potential field mapping(Predictive geological mapping based on drone geophysicst and geochemical sampling (~200 sq km)	days	1.2	11,000	-	-	2 Geologist X 30 days
	Ground Geophysical survey- In House					-	
	Micro gravity 10 lkm with 20m station interval(60lkm)		3.1c	1470580	0	-	
	Magnetic(10-30 lkm)	Per station	3.2a	1800	0	-	
	SP Method	lkm	3.3a	29600	50	14,80,000	
	Resistivity Soundings(AB/2=1km)	Per station	3.5a	70650	50	35,32,500	
	Resistivity Profiling(station interval 200m)	lkm	3.6a	58880	50	29,44,000	
	Geophysicist (HQ)	day	3.18	9000	45	4,05,000	
	Geophyscists field	day	3.18	11000	0	-	
	Labours Charges	day		710	0	-	**4 months*4**
Sub Total phaselll						**83,61,500**	
PHASE IV Timeline: 6 months , Review : after completion of Phase I							
	DRILLING						
	Geologist - field	day	1.3	11,000	120	13,20,000	
	Labours Charges	day		541	240	1,29,840	
	Drilling in hard rock (10 BH)	m	2.2.1.4a	11,500	1,500	1,72,50,000	

	DGPS for BH fixation & RL determination(10 BH)	Per Point of observation	1.6.2	19,200	10	1,92,000	
	Land / Crop Compansation (in case the BH falls in agricultural Land)	per BH	5.6	20,000	10	2,00,000	
	Transportation of Drill Rig & Truck associated per drill (2 rigs)	Km	2.2.8	36	1,300	46,800	To & Fro from Mangalore to Thiruvananthapuram
	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	5	2,50,000	
	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	
	Drill core Preservation	m	5.3	1,590	500	7,95,000	
	Sample Preparation						
	d. Charges for one Sampler per day (1 Party)	**one sampler per day**	**1.5.2**	**5100**	**120**	**612000**	
	e. Labours (4 Nos)	**day**		**710**	**480**	**340800**	
	LABORATORY STUDIES (PHASE 3)						
	Chemical Analysis						
	BH Core samples						
	Primary + 10 % Check Sample for major oxides and LOI by XRF technique	Nos	4.1.15a	4,200	275	11,55,000	
	Primary +check samples For REE ,Ga,V ,Sc,Y,Nb,Ta,Li and other Trace elements : by ICPMS 34 elements : by ICPMS	Nos	4.1.14	7,731	275	21,26,025	
	Proximate analysis of Graphite	Nos	4.1.16	3,000	50	1,50,000	
	Physical & Petrological Studies						
	Preparation of thin section	Nos	4.3.1	2,353	-	-	

	Preparation of polished thin section	Nos	4.3.2	1,549	50	77,450	
	petrographic/ore microscopic study	Nos	4.3.4	4,232	50	2,11,600	
	Digital Photographs	Nos	4.3.7	280	50	14,000	
	EPMA	hrs	4.4.1	8,540	25	2,13,500	
	XRD	Nos	4.5.1	4,000	10	40,000	
	SEM /EDX	Nos	4.4.2	2,940	-	-	
Sub Total PhaseIV						**2,56,24,015**	
	Total A to H					**3,94,66,831**	
	Mineral Prognostication , Prediction of anomalous zones .AI/ML Studies	days		9000	60	5,40,000	2 Geo scienstists for 3 months(HQ), AI/ML scientists for 6 months
	SUB TOTAL					**4,00,06,831**	
	Geological Report Preparation	**5 Hard copies with a soft copy**	**5.2**	Exploration cost exceeding 300 lakh : A Minimum of ₹9 lakh or 3% of the work whichever is more		**12,00,205**	Reimbursement will be made after submission of the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
	Peer review Charges		**As per EC decision**			**30,000**	
	Preparation of Exploration Proposal (5 Hard copies with a soft copy)	**5 Hard copies with a soft copy**	**5.1**	2% of the Cost or Rs. 5Lakhs whichever is less		**5,00,000**	EA will be reimbursed after submission of the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.

	Total Estimated Cost without GST				**4,17,37,036**	
	Provision for GST (18% of J)				**75,12,666**	GST will be reimbursed as per actual and as per notified prescribed rate
	Total Estimated Cost with GST				**4,92,49,702**	
				Rs. In Lakhs	**492.50**	

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

Annexure 6B

Time Schedule/ Action Plan for Regional Mineral Targeting and integrated mineral system studies for identification of prospective blocks for Graphite, Niobium, REE and associated mineralisation in Yellikod-Azhikod areas, near Achankovil shear zone, Southern Granulite Terrain, Kerala and Tamilnadu States.(999 sq km)

			1	2	3	4		5	6	7	8	9	10	11	12		13	14	15	16	17	18		19	20	21	22	23	24
PHASE-I	Desktop Studies																											
PHASE-II	Camp Setting	**Months/Days**																										
	Geological Mapping & Sampling	**days**																										
	Laboratory Studies	**Nos.**																										
PHASE-III	**DRONE** Geophysical survey	**L.km**																										
	Predictive Geological Mapping																											
	Ground Geophysical Survey																											
	Geophyscist party days (HQ) for data interpretation & Report	**Days**																										
PHASE-IV	Pitting/Trenching	**cu.m**																										
	Drilling (1 rigs)	**m**																										
	Sampler Man days	**days**																										
	Camp Winding	**months**																										
	Laboratory Studies	**Nos.**																										
	Mineral Prognostication, AI & ML studies																											
	Report Writing with Peer Review	**months**																										

Review **Review** **Review**