**F. No. 61/1/2018-NMET**
**Ministry of Mines**
**National Mineral Exploration Trust**

New Delhi, the 31st March, 2020

# OFFICE MEMORANDUM

**Subject: Circulation of Schedule of Charges (SoC) of NMET, Ministry of Mines.**

The Schedule of Charges (SoC) for projects funded through National Mineral Exploration Trust (NMET), approved by the competent authority, is enclosed for circulation to all the Notified Exploration Agencies (NEAs) for information. The enclosed SoC is applicable *w.e.f.* 01.04.2020.

(Dr. L. P. Singh)
Director (NMET)

**Enclosure:** Schedule of Charges (SoC) of NMET, Ministry of Mines.

# SCHEDULE OF CHARGES (SoC)
# FOR PROJECTS FUNDED THROUGH
# NATIONAL MINERAL EXPLORATION TRUST
# (*w.e.f.* 01.04.2020)

**NATIONAL MINERAL EXPLORATION TRUST**
**MINISTRY OF MINES**
**GOVERNMENT OF INDIA**

**March, 2020**

# SCHEDULE OF CHARGES (SoC)
# FOR PROJECTS FUNDED THROUGH
# NATIONAL MINERAL EXPLORATION TRUST

**Contents**

## 1. INTRODUCTION

NMET is funding for mineral exploration projects in different parts of the country for various commodities. The stage of investigation of these mineral exploration projects varies from Reconnaissance Survey (G4), Preliminary Exploration (G3), General Exploration (G2) to Detailed Exploration (G1) as per UNFC guidelines. It has been endeavored to include all such activities in Schedule of Charges (SoC) which form an integral part of any mineral exploration project and is essential for its execution and successful completion.

The work components of Multisensor Aero-Geophysical Survey carried out by GSI in Obvious Geological Potential (OGP) and adjoining areas of India under NMET funding has also been taken into consideration. In addition, some of the work components involved in Project: Uncover of GSI aimed to search and target the deep seated concealed deposits are also included in the SoC.

Besides, the advanced geophysical techniques like 2D and 3D Seismic Reflection Surveys, Ground Penetration Radar (GPR) Survey, Deep Seismic Reflection Survey (DSR) have also been included in the ambit of SoC.

## 2. LIST OF ACTIVITIES/WORK COMPONENTS OF SoC

The various activities involved in different stages of mineral exploration are clubbed together under major work components of the SoC. These major work components of SoC are as follows:

I. **Geological Mapping [Large Scale Mapping/Detailed Mapping], Other Geological Work and Surveying:** Geological mapping along with surveying is the basic component of any mineral exploration project which leads to preparation of geological map of the area/block. The following activities have been included in SoC:

- Large Scale Mapping (LSM), Traverse Mapping, Detailed Mapping (DM) on the different scales essential for mineral exploration.
- Geological Mapping on Expedition basis in Himalayan terrain (in inaccessible areas of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh) in order to give thrust to the mineral exploration activity in inaccessible areas of the country.
- Monitoring of various mineral exploration activities by Geologist in the field as well as at headquarter since many Notified Exploration Agencies (NEAs) are partly outsourcing drilling and other major work related to exploration.
- Various activities of Survey work with Total Station and Differential Global Positioning System (DGPS).

- Monitoring by qualified Surveyor since many NEAs are outsourcing drilling, surveying and other major works related to exploration.

**II. Mineral Investigation:** Various important activities associated with mineral investigation like pitting & trenching, drilling, borehole deviation survey, borehole pillaring, transportation of drill rigs, monthly accommodation charges for drilling camp etc. have been clubbed under this major work component. The dominant lithology of host rocks was taken into consideration which may be intersected in the drill hole for fixing of costing. In case the dominant lithology expected to be intersected in the borehole is of different hardness than the mineral commodity being targeted, the decision will be taken during the technical evaluation of the project in the meeting for considering the hardness of the mineral commodity or the dominant lithology for costing. The different lithologies have been put in following hardness category:

- **Soft Rock**

Coal formations, Shale, Slate, Sandstone, Bauxite-Laterite, Limestone etc.

- **Medium Hard Rock**

Chlorite-schist, Hornblende schist, Mica-schist, Phyllite, Calc-silicate, Marble etc.

- **Hard Rock**

Granite, Granulite, Gneiss, Rhyolite, Dacite, Basalt, Metabasalt, Alkaline rock including carbonatites, ultrabasic, mafic, dolomite, Dunite, Pyroxenite, Dolerite, Gabbro, Gondite etc.

- **Very Hard Rock**

Quartzite, Chert, BMQ, BHJ, BHQ etc.

***Note:*** *Potash has been included in soft rock/strata based on its hardness; but the drilling of potash involves specialised drilling techniques, hence rate of drilling for Hard rock category will be applicable to compensate the drilling cost.*

**III. Geophysical Surveys:** Geophysical survey is most important tool for mineral exploration. Various types of geophysical methods viz. ground geophysical and bore hole geophysical methods used for locating and delineation of potential mineral zones during the course of mineral exploration have been put under Geophysical Surveys. Besides including convention methods like Gravity, Magnetic, Self Potential (SP), Induced Polarization (IP), Electrical Resistivity, Electro Magnetic Survey etc.; advanced geophysical methods like Magneto Telluric (MT) surveys, 2D Seismic Reflection survey, 3D Seismic Reflection Survey, Deep Seismic Reflection Surveys (DSRS), Ground Penetration Radar Surveys (GPR) and various Aero Geophysical surveys like Aero Gravity/Magnetic/Magnetic (High Resolution)/Electromagnetic, Airborne Gravity Gradiometric Survey have also been included in the SoC.

IV. **Laboratory Studies:** Various laboratory studies like chemical analysis, petrological studies, geotechnical analysis, mineral physics forming an integral part of mineral exploration project have been kept under this major component. Chemical analysis of rock/water samples by different methods like conventional wet, fire assay, AAS, ICP-AES, ICPMS, XRF have been kept under 'Chemical Analysis'. Analytical methods particularly used for coal and lignite have been kept separately under 'Chemical Analysis for coal and lignite'. Likewise, petrological studies for coal have been kept in 'Organic Petrological Studies for Coal' under 'Petrological Studies'. In addition, EPMA/SEM studies, Mineral Physics studies, Geochronology studies have been included in 'Petrological Studies'.

Considering the requirement of G2 level mineral exploration projects, laboratory scale ore dressing investigation involving studies for recovery of mineral by various physical beneficiation methods, Decrepitation test and Devis Tube Recovery test have been included under 'Beneficiation Studies'.

Different types of geotechnical tests required in mineral exploration projects have been kept under 'Geotechnical Laboratory' including Insitu & Bed Moisture Determination (for Lignite), Reactivity test, Washability Study (for coal) and tests for CBM studies.

V. **Miscellaneous Charges:** In addition to major work components mentioned above, there are activities which are directly or indirectly related with mineral exploration work. These activities include Formulation of mineral exploration projects, Geological Report Preparation, Drill Core Preservation, 3D Ore Body modelling using compatible software, Environmental studies, Support for Auctioning, Expenses for attending pre/post-bid meetings, charges for 'Land/Crop compensation' and charges for engaging workers for attending miscellaneous work associated with the mineral exploration project in the field/camp/HQ have been included.

VI. Additional components which are not included in the SoC can be added on request from implementing agencies after approval of the EC of NMET.

## 3. REIMBURSEMENT OF COST TO EXPLORATION AGENCIES IN CASE OF OUTSOURCED COMPONENTS OF PROJECT WORK

It is well known fact that many of the Exploration Agencies (EAs) in the country are not well equipped/have lessor capacity to carry out all the components of mineral exploration on their own and therefore, need to outsource some component of the approved project to other agencies to accomplish the project work. Keeping in view the above, a separate provision for reimbursement of cost to EAs in case of outsourced components of project has also been incorporated in SoC.

For the above purpose, the term "Exploration Agency" (EA) shall mean the agency to which sanction of funds for conducting exploration of minerals (including coal) has been granted by NMET as per approved exploration project and the term

"outsourcing" shall refer to contracting to any other agency by the EA of work related to any component(s) of the approved project. Reimbursement to the EA of the charges incurred on outsourced component(s) of project approved by NMET shall be as follows:

i. **In case of total outsourced cost up to ₹50 lakh:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, 10 *percent* of the total outsourced cost will be paid to EA towards operational charges. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the EA, whichever is lower.

ii. **In case of total outsourced cost more than ₹50 lakh up to ₹1 crore:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, ₹5 lakh plus 7.5 percent on the balance amount of outsourced cost in excess of ₹50 lakh will be paid to EA towards operational charges. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the EA, whichever is lower.

**Illustration:** If the outsourced cost is ₹1.00 crore. The operational charges to be paid will be calculated as under:

| | | |
|---|---|---|
| Up to ₹50 lakh | = | ₹5.00 lakh |
| More than ₹50 lakh to ₹1.00 Cr.= (₹1 Cr. – ₹50 lakh) x 7.5 % | = | ₹3.75 lakh |
| Total Operation Charges to be paid | = | ₹8.75 lakh |

iii. **In case of total outsourced cost more than ₹1 crore:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, ₹8.75 lakh plus 5 *percent* on the balance amount of outsourced cost in excess of ₹1 crore will be paid to EA towards operational charges. The maximum ceiling of operational charges is ₹15 lakh. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the EA, whichever is lower.

**Illustration:** If the outsourced cost is ₹2.50 crore. The operational charges to be paid will be calculated as under:

| | | |
|---|---|---|
| Up to ₹1.00 crore | = | ₹8.75 lakh |
| More than ₹1 Cr. to ₹2.50 Cr. = (₹2.50 Cr. – ₹1 Cr) x 5 % | = | ₹7.50 lakh |
| Total Operation Charges | = | ₹16.25 lakh |
| Maximum ceiling of operational charges | = | ₹15.00 lakh |

**Amount to be paid as operational charges is ₹15.00 lakh being lower of ₹16.25 lakh and ₹15.00 lakh.**

iv. The monitoring charges of Geologist/Geophysicist in respect of outsourced work will be reimbursed as per SoC rates subject to prior approval of Technical cum Cost Committee, NMET.

v. For non-outsourced components the rates shall be paid as per SoC.

vi. In no case the sum of outsourced cost and operational charges should exceed the cost as per SoC rates of the total outsourced component(s).



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## 4. ESCALATION FORMULA FOR VARIOUS COMPONENTS OF SoC

The escalation/de-escalation clause is inserted in SoC. This will be carried out on yearly basis on the SoC rates of immediate previous year. The purpose to include this clause is to meet out the dearness impact on all the major work components of any mineral exploration project like geological mapping, surveying, drilling, geophysical surveys, laboratory studies and miscellaneous charges involve considerable cost in terms of salary & wages, fuel, power, cost of drill rigs, bits, other equipments & stores. These rates will be based on the indices issued by RBI on annual basis.

The escalation formula is given below:

$$\textbf{Escalation (E) \%age} = \frac{\frac{55(W2-W1)}{W1} + \frac{35\,(M2-M1)}{M1} + \frac{10\,(P2-P1)}{P1}}{100}$$

Note:

- Where E= Escalation
- W1= Average All India Consumer Price Index (AICPI) for Industrial Workers during the year preceding to the year of escalation.
- W2= Average All India Consumer Price Index (AICPI) for Industrial Workers during the year of escalation.i.e the year for which the existing rate is effective.
- M1 = Average price level for industrial raw materials for group of all basic metals, alloy and metal products during the year preceding to the year of escalation.
- M2 = Average price level for industrial raw materials for group of all basic metals, alloy and metal products during the year of escalation i.e the year for which existing rate is effective.
- P1= Average price level of Fuel, Power, Light & Lubricants during the year preceding to the year of escalation.
- P2= Average price level of Fuel, Power, Light & Lubricants during the year of escalation i.e. the year for which existing rate is effective.
- The escalation so worked out will be materialised only to the extent of 70%.

The above proposed escalation formula will be applicable to all the activities of SoC for the year 2020-21 onwards.

## 5. APPLICABILITY OF SOC IN REMOTE AND INACCESSIBLE TERRAIN EXISTING IN NORTH EASTERN STATES AND HILLY TERRAIN OF HIMALAYA REGION

It is well known fact that North-Eastern States of the country and inaccessible hilly terrain of Himalayan region are endowed with limited infrastructure and the working environment get worsen due to inherent adverse law and order situation prevailing in some of these states thereby having adverse effect on the progress of field activities. It may cause inordinate delay resulting in incurring higher cost for executing exploration activities in these areas.

In view of the above, rates shall be 3.35 times higher than the normal SoC rate for carrying out exploration work in North Eastern States and hilly terrain of Himalaya region. This practice is also followed by the Ministry of Coal.

## 6. INCENTIVE FOR MINERAL EXPLORATION

Greenfields exploration, also referred as grass-root exploration, provides the foundation of the resources sector. It is imperative to ensure the discovery of new resources and maintaining a pipeline of new resource projects. Without ongoing Greenfield exploration activity, there is no opportunity to replace depleting resources. Greenfields exploration refers to activity undertaken in unexplored or incompletely explored areas.

As exploration is a high risk activity, many countries provide attractive and innovative tax incentives to attract exploration companies. In view of above, the following incentive provision has been given to enhance mineral exploration activity in the country:

i. **Exploration Incentive (EI):** An Exploration Incentive (EI) of 10% of the approved cost of the project for G4 items in Greenfield areas for gold, base metals, other precious minerals, strategic/ critical minerals and fertilizer minerals (Ref. Table-1) will be paid if the block is upgraded from G4 to G3 Stage subject to approval of Executive Committee, NMET. The Exploration Incentive (EI) will be paid on the cost of G4 work completed by the implementing agencies. Such incentive will not be applicable for other category of mineral commodities.

A Penalty/LD clause has been introduced for timely completion of projects. The Penalty/LD will be imposed as per stipulated guidelines prescribed by the Ministry of Finance/GFR. In case of delay on part of the implementing agency, Penalty/ LD will be imposed @ one percent per month on the balance cost of incomplete work of the project from the date of delay subject to a maximum of five percent of approved project cost.

However, if the project delays due to following events beyond the control of NMET and project implementation agency, the Executive Committee of NMET can waive off the applicable penalty on submission of justifiable reasons by the agency.

**i.** Natural calamities (such as fire, explosion, earthquake, drought, tidal waves, flood, landslides etc.).

**ii.** War, hostilities, invasion, act of foreign enemies, etc., and rebellion, revolution, revolt, etc., at the location of the project.

**iii.** Riot, strikes, go slows, lockouts or disorder, unless solely attributable to employees of the agency or of their subcontractor.

**iv.** Local disturbances at the project location unless timely intimation and justifiable reasons are submitted by the agency immediately.

**v.** Forest clearance issues, if arises unexpectedly during the ongoing project.

**vi.** Any other justifiable reasons beyond the control of NMET and project implementing agency.

## 7. MANDATORY GEOLOGIST DAYS FOR HEADQUARTER BASED ACTIVITIES:

To ensure a consistently high quality of work, a comprehensive interpretation of all exploration data is required at all stages of the project both in field and in headquarter, after the results of the laboratory investigations are made available. Therefore, a separate rate for Geologist man days for headquarter based activity has been kept in SoC.

## 8. TIME PERIOD OF SCHEDULE OF CHARGES (SoC):

The Schedule of Charges (SoC) will remain effective for 5 years *w.e.f.* from 1st April 2020 or until further order, whichever is earlier.

## 9. SCHEDULE OF CHARGES (SoC):

The SoC for various activities is given in following table. These charges are excluding GST.

## Table-1: Schedule of Charges (SoC) for NMET funded projects (applicable *w.e.f.* 01.04.2020)

| S. No. | Work/Activity | Unit | Charges/Cost (₹) |
|---|---|---|---|
| **1.0** | **Geological Mapping [Large scale mapping (LSM)/Detailed Mapping (DM)], Other Geological Work and Surveying** | | |
| 1.1 | **Satellite imagery/Aerial photo interpretation studies**<br><br>**a**. Charges for procurement of imageries | Satellite imagery/ Aerial photos | 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 man days | Charges for one Geologist per day **(HQ charges will be applicable)** | **9,000 per day (HQ charges will be applicable)** |
| 1.2 | **Large scale (LSM) Geological Mapping/ Traverse mapping:** Large scale Geological mapping on 1:50,000/ 1:12,500, 1:10,000 scale including surface outcrop sampling (BRS/PS/PCS/Groove/Chip/Grab/ Channel/Soil/SSS/Heavy Mineral); water sampling; pit and trench logging, pit and trench sampling; consultation of literature, maps, reports etc.<br>***Rec. traverse Mapping** (1:25000/1:50000 for KCR {Kimberlite clan of rocks}/Diamond exploration)*<br>**a) Charges for one Geologist per day at HQ**<br>**b) Charges for one Geologist per day in Field (without labour)** | Charges for one Geologist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| 1.3 | **Detailed Geological Mapping (DM):** Detailed Geological mapping on 1:10,000 (for coal); 1:5000, 1:4000, 1:2000, 1:1,000, 1:500 ; 1:200 scale; including surface outcrop sampling (BRS/PS/PCS/Groove/Chip/Grab/ Channel/Soil/SSS/Heavy Mineral); water sampling; pit and trench logging, pit and trench sampling; consultation of literature, maps, reports etc.<br>**a) Charges for one Geologist per day at HQ**<br>**b) Charges for one Geologist per day in Field (without labour)** | Charges for one Geologist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| 1.4 | **Geological Mapping on Expedition basis:** Geological mapping on expedition basis in Himalayan terrain (in inaccessible areas of J & K, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh) for mineral exploration including surface outcrop sampling (BRS/PS/PCS/Groove/Chip/Grab/ Channel/Soil/SSS/Heavy Mineral); water sampling; pit and trench logging, pit and trench sampling; consultation of literature, maps, reports etc.<br>**a) Charges for one Geologist per day at HQ**<br>**b) Charges for one Geologist per day in Field (without labour)**<br>**c) The charges for transportation by mules, head load etc. shall be applicable as per GSI norms/prevailing market rates** | Charges for one Geologist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| **1.5** | **Other Geological Work/Activities** | | |
| 1.5.1a | **Other Geological work/studies** like geochemical studies, geochemical Orientation Survey, water sampling, surface sampling, outcrop sampling (BRS/PS/PCS/Groove/Chip/Grab/ Channel/Soil/SSS/Heavy Mineral), pit & trench logging and sampling, core logging and core sampling, preparation of beneficiation samples, skeletonisation of cores etc. including planning for sampling, Boreholes etc., consultation of literature, maps, reports etc.<br>**(where Geological Mapping is not carried out)**<br>**a) Charges for one Geologist per day at HQ**<br>**b) Charges for one Geologist per day in Field (without labour)** | Charges for one Geologist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| 1.5.1b | **Other Geological work/monitoring in case of outsourcing:** Monitoring of surface sampling, core sampling, core logging activities; execution of JMC Certification at drill site; preparation of Band by Band Advice of coal core samples, preparation of overall advice/ Special test from result of Band by Band Analysis, | Charges for one Geologist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |

| | | | |
|---|---|---|---|
| | monitoring of preparation of beneficiation samples etc.; HQ charges applicable for Geologist engaged in vetting of exploration scheme prepared by Private agency if outsourced and vetting of draft Geological Report and checking of minex model if outsourced.<br>**a) Charges for one Geologist per day at HQ**<br>**b) Charges for one Geologist per day in Field (without labour)** | | |
| 1.5.2 | Sample processing work including marking of samples, core splitting, crushing and powdering of samples, coning and quartering, packing & labeling of samples, preparation of beneficiation samples etc.<br>**a) Charges for one Sampler per day (without labour)** | Charges for one sampler per day | **5,100 per day** |
| **1.6** | **Survey Work** | | |
| 1.6.1a | Charges of one qualified surveyor with Total Station for carrying out topographical survey in different RF and surface contouring at different interval, fixation of borehole and determination of co-ordinates & Reduced Level (RL) of the boreholes with total station etc.<br>**a) Charges of one Surveyor per day (without labour)** (Up to 4 labours will be allowed per surveyor) | Charges for one Surveyor per day | **8,300 per day** |
| 1.6.1b | **Monitoring in case of outsourcing:**<br>Charges of one qualified surveyor with Total Station for monitoring of topographical survey in different RF and surface contouring at different interval, fixation of borehole and determination of co-ordinates & Reduced Level (RL) of the boreholes with total station etc.<br>**a) Charges of one Surveyor per day (without labour)**<br>(Up to 4 labours will be allowed per surveyor) | Charges for one Surveyor per day | **8,300 per day** |
| 1.6.2 | Demarcation of lease boundary, Fixation of borehole and determination of co-ordinates & Reduced Level (RL) of the boreholes by DGPS (including charges for labours deployed for the work) | Per point of observation | **19,200 per point of observation** |
| **2.0** | **Mineral Investigation** | | |
| **2.1** | **Pitting & Trenching** | | |
| 2.1.1 | Excavation of Trenches upto 2.0 m depth | per cu m | **3,330 per cu.m** |
| 2.1.2 | Excavation of Pit up to 2.0 m depth | per cu.m | **3,800 per cu.m** |
| 2.1.3 | Excavation of Pit between 2.0 m to 5.0 m depth | per cu.m | **5,330 per cu.m** |
| **2.2** | **Drilling** | | |
| **2.2.1** | **Drilling: For NQ size borehole (Diamond core drilling)** | | |
| 2.2.1.1a | Drilling for Lignite | per m | **3,722 per m**<br>(Drilling rate approved by MoC will be applicable) |
| 2.2.1.1b | Drilling for Coal/ Drilling in Soft rock/ Strata | per m | **5,242 per m**<br>(Drilling rate approved by MoC will be applicable) |
| **2.2.1.3** | **Drilling in Medium hard rock** | | |
| 2.2.1.3a | Drilling up to depth of 300 m (Normal rate) | per m | **10,100 per m** |
| 2.2.1.3b | Drilling between depth of 301-600m | per m | 8% excess of normal rate applicable i.e. **10,908 per m**<br>(Normal rate X 1.08) |
| 2.2.1.3c | Drilling between depth of 601-900m | per m | 15% excess of normal rate applicable i.e. **11,615 per m**<br>(Normal rate X 1.15) |
| **2.2.1.4** | **Drilling in Hard rock** | | |
| 2.2.1.4a | Drilling up to depth of 300 m (Normal rate) | per m | **11,500 per m** |
| 2.2.1.4b | Drilling between depth of 301-600m | per m | 8% excess of normal rate applicable i.e.**12,420 per m**<br>(Normal rate X 1.08) |



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|---|---|---|---|
| 2.2.1.4c | Drilling between depth of 601-900m | per m | 15% excess of normal rate applicable i.e.**13,225 per m** (Normal rate X 1.15) |
| **2.2.1.5** | **Drilling in Very Hard rock** | | |
| 2.2.1.5a | Drilling up to depth of 300 m (Normal rate) | per m | **12,650 per m** |
| 2.2.1.5b | Drilling between depth of 301-600m | per m | 8% excess of normal rate applicable i.e. **13,662 per m** (Normal rate X 1.08) |
| 2.2.1.5c | Drilling between depth of 601-900m | per m | 15% excess of normal rate applicable i.e. **14,548 per m** (Normal rate X 1.15) |
| **2.2.2** | **Auger Drilling for soft strata up to 150m depth** | per m | **4,760 per m** |
| **2.2.3** | **Reverse Circulatory (RC) Drilling** | per m | **8,870 per m** |
| **2.2.4** | **Drilling: For HQ size borehole** | | |
| 2.2.4a | Drilling up to depth of 300 m | per m | Base rate up to 300m depth to be derived by adding 20% excess of rate applicable for NQ size core drilling |
| 2.2.4b | Drilling between depth of 301-600m | per m | Base rate plus 10% excess of base rate (Base rate X 1.10) |
| 2.2.4c | Drilling beyond depth of 601m | per m | Base rate plus 25% excess of base rate (Base rate X 1.25) |
| **2.2.5** | **Non-Coring drilling by mechanical/ hydrostatic drills for coal and lignite** | | **Lignite- 2,792 per m**<br>**Coal- 3,932 per m** |
| **2.2.6** | **Borehole Deviation Survey by Multi shot camera** | per m | **330 per m** |
| **2.2.7** | **Borehole Pillaring** | | |
| **2.2.7a** | **Construction of concrete Pillar (12"x12"x30")** | per borehole | **2,000 per borehole** |
| **2.2.7b** | **Borehole plugging by cement** | per m | **i) NQ size: 150/m**<br>**ii) HQ size: 200/m** |
| **2.2.8** | **Transportation of Drill Rig & Truck associated per drill (To & from Headquarter/Previous drill site)** | per km | **36 per km** |
| **2.2.9** | **Monthly Accommodation charges for drilling camp** | Monthly basis | **50,000** per month up to two drill rigs; 50% additional charges will be paid for each additional drill rig |
| **2.2.9a** | **Drilling camp setting cost** | per drill | **2,50,000** |
| **2.2.9b** | **Drilling camp winding cost** | per drill | **2,50,000** |
| **2.2.10** | **Approach Road to drill site** | | |
| 2.2.10a | Approach Road making for Flat terrain | per km | **22,020 per km** |
| 2.2.10b | Approach Road making for Rugged-Hilly terrain | per km | **32,200 per km** |
| **2.3** | **Tendering process cost** | One time, in case of outsourced component(s) of project work | **2%** of the approved project cost or **5 lakh** whichever is lower will be paid one time to Exploration Agency |
| **3** | **Geophysical Survey** | | |
| **3.1** | **Gravity Method** | | |
| 3.1a | Gravity Method-Regional/Detailed (0.5 to 200 sq.km depending on the objective) | Per station | **i)** Non coal minerals- **3,800/ station**<br>**ii)** Coal/Lignite-**1,589/station** |
| 3.1b | Gravity - Magnetic Method - Regional / Detailed (0.5 to 200 sq.km depending on the objective) | Per station | **4,500** |
| 3.1c | Microgravity Surveys (10 Line km with 20m station interval & 5 km with 10 m interval) | 5-10 Line km | **14,17,580** |
| **3.2** | **Magnetic Method** | | |
| 3.2a | Magnetic Surveys (10-30 line km) | Per station | **i)** Non coal- **1,800/station**<br>**ii)** Coal/Lignite-**382/station** |

| | | | |
|---|---|---|---|
| **3.3** | **Self-Potential Method** | | |
| 3.3a | Self-Potential (8-20 line km) | Line km | **29,600** |
| 3.3b | Self-Potential & Magnetic (8-20 line km) | 8-20 Line km | **12,92,047** |
| 3.3c | S.P. & Shallow electrical resistivity (10-20 line km) | Line km | **60,000** |
| **3.4** | **Induced Polarization Method** | | |
| 3.4a | Induced Polarization (Dipole-Dipole) (10-20 line km) | Line km | **69,950** |
| 3.4b | I.P. cum-resistivity, S.P., magnetic (8-10 line km) | 8 –10 Line km | **14,48,693** |
| **3.5** | **Electrical Resistivity Method** | | |
| 3.5a | Electrical Resistivity (AB/2=1km)) | per station | **70,650** |
| 3.5b | Deep resistivity method (4 soundings with AB/2 = 3-10 km) | 4 soundings | **14,35,082** |
| **3.6** | **Resistivity Profiling/Imaging** | | |
| 3.6a | Profiling (Station interval 200m.) | Line km | **58,880/Line km** for non-coal minerals; **12,433/Line km** for coal/lignite |
| 3.6b | Profiling with single separation or Resistivity imaging (station interval up to 10m.) | Line km | As per actual |
| 3.6c | Profiling with twin separation or Resistivity imaging (station interval up to 10m.) | Line km | **3,00,000/Line km** for non-coal minerals; **34,759/Line km** for coal/lignite |
| **3.7** | **Electro Magnetic Survey** | | |
| 3.7a | Electro Magnetic survey (profiling/sounding) | Sounding | **21,197** |
| **3.8** | **Magneto-Telluric (MT) Surveys (6 stations per month)** | | **11,90,313** |
| **3.9** | **Aero GP Surveys** | | As per actual |
| 3.9a | Aero Gravity | | As per actual |
| 3.9b | Aero Magnetic | | As per actual |
| 3.9c | Aero Magnetic (High Resolution) | | As per actual |
| 3.9d | Aero Electromagnetic (AEM) | | As per actual |
| 3.9e | Airborne Gravity Gradiometric | | As per actual |
| **3.10** | **Misa-La-Masse (8-25 line km)** | 8-25 line km | **12,20,956** |
| **3.11** | **Geophysical logging for Coal & Lignite / CBM** | | |
| 3.11a | Base log | Per m | **151/m** |
| 3.11b | SP | Per m | **39/m** |
| 3.11c | Resistivity | Per m | **39/m** |
| 3.11d | Dual Density | Per m | **102/m** |
| 3.11e | Gamma-Gamma | Per m | **90/m** |
| 3.11f | Neutron | Per m | **74/m** |
| 3.11g | Caliper | Per m | **19/m** |
| 3.11h | Natural Gamma | Per m | **90/m** |
| 3.11i | SPR | Per m | **39/m** |
| 3.11j | Focused Resistivity | Per m | **71/m** |
| 3.11k | Sonic | Per m | **122/m** |
| 3.11l | Temperature & Fluid Conductivity | Per m | **42/m** |
| 3.11m | Deviation | Per m | **90/m** |
| 3.11n | HR acoustic Televiewer (In Borehole) | Per m | **298/m** |
| 3.11o | Spectral Gamma (In Borehole) | Per m | **164/m** |
| 3.11p | I.P. (In Borehole) | Per m | **93/m** |
| 3.11q | Magnetic Susceptibility (In Borehole) | Per m | **129/m** |
| 3.11r | Shallow Hole Temperature | 50 holes | **7,64,166** |
| 3.12 | Borehole Geophysical logging (5 BHs of 350m each) | (5 BHs of 350m each) | **10,88,941** |
| **3.13** | **Seismic Surveys** | | |
| 3.13a | Shallow Refraction (Hammer seismic) surveys (10-12 line km both direct and reverse method) | 10-12 line km | **15,55,638** |
| 3.13b | High Resolution Seismic Survey<br>**A.** Source: Hammer/Weight drop & Equip.: 24 Channel<br>**1.** Group Interval : <5 m (12 Foldage)<br>**2.** Group Interval: 5 m (12 Foldage) & within 300 m | <br><br>Per Line km<br>Per Line km | <br><br>**3,64,127**<br>**3,03,437** |

| | | | |
|---|---|---|---|
| | depth.<br>**3.** Group Interval: 105 m (12 Foldage) & within 300 m depth.<br><br>**B.** Source : Explosive / Vibrosis & Equip.24/48<br>**1.** Group Interval: 10m (12 Foldage) < 300 m depth & 24 Channel.<br>**2.** Group Interval: 10m (12 Foldage) Up to 1000 m depth & 48 Channel.<br>**3.** Group Interval: 10m (24 Foldage) Up to 1000 m depth & 48 Channel.<br>**4.** Group Interval: 5m (24 Foldage) Up to 1000 m depth & 48 Channel. | Per Line km<br><br><br>Per Line km<br>Per Line km<br>Per Line km<br>Per Line km | **2,60,215**<br><br><br>**2,56,376**<br>**2,61,609**<br>**3,05,212**<br>**3,40,091** |
| **3.14** | **2D Seismic Reflection survey** | | |
| 3.14a | 2D Seismic Reflection survey (Split spread /End on) with 240 Channels with 10m interval and acquiring 30 fold data with **vibrator as source** | | As per actuals |
| 3.14b | 2D Seismic Reflection survey (Split spread /End on) with 240 Channels with 10m interval and acquiring 30 fold data with **Explosive as source**. | | As per actuals |
| 3.14c | Up hole Survey (for statistics calculation) | | As per actuals |
| 3.14d | Every One Km or grid pattern with 40mts deep with every 2mts interval (only for Explosive as source) | | As per actuals |
| 3.14e | 2D Seismic data Processing | | As per actuals |
| 3.14f | 2D Seismic data Interpretation and Report Preparation | | As per actuals |
| **3.15** | **3D Seismic Reflection Survey** | | |
| 3.15a | 3D Seismic Reflection survey (Split spread /End on) with 30 fold data with **vibrator as source.** Vibrator parameters | | As per actuals |
| 3.15b | 3D Seismic Reflection survey (Split spread /End on) acquiring 30 fold data **with Explosive as source.** | | As per actuals |
| 3.15c | 3D Seismic data Processing | | As per actuals |
| 3.15d | 3D Seismic data Interpretation and Report Preparation | | As per actuals |
| **3.16** | **DSRS Surveys** | | As per actuals |
| **3.17** | **GPR Surveys** | | As per actuals |
| **3.18** | **Expert Charges for Geophysicist** | Charges per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| **3.19** | **Monitoring in case of outsourcing:**<br>Monitoring of geophysical logging/geophysical investigations | Charges for one Geophysicist per day | **a) HQ: 9,000 per day**<br>**b) Field: 11,000 per day** |
| **4.0** | **Laboratory Studies** | | |
| **4.1** | **Chemical Analysis** | | |
| 4.1.1 | Quantitative chemical analysis of rock by conventional wet chemical method for 12 determinations (other than alumino-silicate and phosphate rock) | Per Sample | **8,157** |
| 4.1.2 | Analysis of one alumino-silicate rock (Silimanite/ Kyanite) | Per Sample | **8,796** |
| 4.1.3 | Analysis of phosphate rock | Per Sample | **9,805** |
| 4.1.4 | Analysis of chrome - ore sample by wet chemical method (12 determinations) | Per Sample | **6,760** |
| 4.1.5 | Analysis for precious metals by fire assay technique | Per Sample | |
| 4.1.5a | For Gold | Per Sample | **2,380** |
| 4.1.5b | For Platinum | Per Sample | **2,860** |
| 4.1.5c | For Palladium | Per Sample | **2,860** |
| 4.1.5d | For PGE (ICP-MS Ni-S Fire assay technique) | Per Sample | **11,800** |
| 4.1.6 | Gold Analysis by AAS method (MIBK Method) | Per Sample | **1,557** |
| **4.1.7** | **Rapid geochemical analysis by AAS method** | | |
| 4.1.7a | First five radicals | Per Sample | **2,506** |
| 4.1.7b | Each subsequent radical | Per Sample | **335** |

| | | | |
|---|---|---|---|
| **4.1.8** | **Water analysis** | | |
| 4.1.8a | Complete analysis for 14 determinations (pH, Conductivity, Total Hardness, Alkalinity, TDS, Sulphides, Nitrate, Chloride, Iron, Silica, Phosphorous, Manganese, Sodium & Potassium) | Per Sample | **3,680** |
| 4.1.8b | Analysis for boron in water sample | Per Sample | **1,180** |
| 4.1.8c | Analysis for mercury in water sample | Per Sample | **1,247** |
| 4.1.8d | Analysis for fluoride in water sample | Per Sample | **1,160** |
| 4.1.9 | Complete analysis of dolomite/ limestone/ gypsum/ clay/ manganese ore/ bauxite/ iron ore samples | Per Sample | **2,900** |
| 4.1.10 | Determination of mercury in rock or soil samples (by Cold Vapour Technique) | Per Sample | **1,060** |
| 4.1.11 | Determination of arsenic in rock or soil samples by Vapour Generation Assembly (VGA) | Per Sample | **2,110** |
| 4.1.12 | Determination of fluoride in rock or soil samples | Per Sample | **2,320** |
| 4.1.13 | Analysis of one rock/ soil sample for quantitative REE analysis (14 REE elements/radicals by ICP-MS (sequential technique) | Per Sample | **5,380** |
| 4.1.14 | Analysis of one rock/ soil sample for determination of a package by 34 elements by ICP-AES / ICPMS (sequential technique) | Per Sample | **7,731** |
| **4.1.15** | **Estimation of major oxides by XRF technique (Whole rock analysis)** | | |
| 4.1.15a | Major oxides | Per Sample | **4,200** |
| 4.1.15b | For each additional trace elements | Per Sample | **421** |
| 4.1.16 | Proximate analysis of Graphite | Per Sample | **3,000** |
| **4.1.17** | **Analysis for Bauxite** | | |
| 4.1.17a | Combined determination of Trihydrate Alumina (THA-140º C), Monohydrate Alumina (MHA-240º C) & Reactive Silica | Per Sample | **6,700** |
| 4.1.17b | Determination of Trihydrate Alumina (THA-140º C) | Per Sample | **2,000** |
| 4.1.17c | Determination of Monohydrate Alumina (MHA-240º C) | Per Sample | **3,500** |
| 4.1.17d | Determination of Reactive Silica | Per Sample | **1,500** |
| 4.1.17e | Determination of Bond Work Index | Per Sample | **10,000** |
| **4.2** | **Chemical Analysis for coal and lignite** | | |
| 4.2.1 | House keeping | Per Sample | **115** |
| 4.2.2 | Sample preparation up to 5Kg Coal/Lignite | Per Sample | **500** |
| 4.2.3 | Overall sample preparation + Housekeeping for individual constituent samples | Per Sample | **795** |
| 4.2.4 | Extra charges for processing of HGI/Float samples from 3mm fractions | Per Sample | **690** |
| 4.2.5 | Ash sample preparation at 800º C from coke for analysis | Per Sample | **875** |
| 4.2.6 | Ash + moisture | Per Sample | **700** |
| 4.2.7 | Proximate analysis of coal | Per Sample | **935** |
| 4.2.8 | Moisture at 60% RH & at 40º C | Per Sample | **1,010** |
| 4.2.9 | Moisture at 96% R.H & at 40º C | Per Sample | **1,250** |
| 4.2.10 | Carbonate Carbon di-oxide | Per Sample | **1,265** |
| 4.2.11 | Gross Calorific Value (if already charges of moisture determination is included) | Per Sample | **1,505** |
| 4.2.12 | Carbon (uncorrected) & Hydrogen | Per Sample | **4,090** |
| 4.2.13 | Carbon (Corrected) & Hydrogen (corrected) | Per Sample | **5,336** |
| 4.2.14 | Total Sulphur | Per Sample | **1,900** |
| 4.2.15 | Distribution of Sulphur | Per Sample | **3,695** |
| 4.2.16 | Nitrogen | Per Sample | **1,900** |
| 4.2.17 | Ultimate analysis (C, H, N, S) | Per Sample | **9,945** |
| 4.2.18 | HGI including sample preparation | Per Sample | **3,805** |
| 4.2.19 | HGI house-keeping of all constituents samples for preparation of final HGI sample | Per Sample | **115** |
| 4.2.20 | Ash Fusion Temperature (rage MRA/OA including ash preparation) | Per Sample | **2,745** |
| 4.2.21 | Phosphorus | Per Sample | **2,480** |
| 4.2.22 | Roga Index (Instead of Caking Index) | Per Sample | **5,365** |



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|---|---|---|---|
| 4.2.23 | Swelling Index | Per Sample | **2,745** |
| 4.2.24 | LTGK coke type | Per Sample | **4,550** |
| 4.2.25 | Ash analysis | Per Sample | **325** |
| **4.3** | **Petrological Studies** | | |
| 4.3.1 | Preparation of standard thin section of rock | Per Sample | **2,353** |
| 4.3.2 | Preparation of polished thin section of rock/ wafer | Per Sample | **1,549** |
| 4.3.3 | Preparation of unmounted polished section of rock (8cm x 5cm) | Per Sample | **1,185** |
| 4.3.4 | Complete petrographic /ore microscopic study/mineragraphic report of rock sample | Per Sample | **4,232** |
| 4.3.5 | Separation of mineral constituents of rock by isodynamic separator | Per Sample | **3,640** |
| 4.3.6a | Heavy mineral separation by liquid | Per Sample | **2,380** |
| 4.3.6b | Separation of heavy minerals from stream sediment samples of -2mm size through gravity and magnetic separation | Per sample | **13,820** |
| 4.3.7 | Digital photomicrograph of thin polished section | Per Sample | **280** |
| 4.3.8 | Modal analysis of thin section | Per Sample | **3,780** |
| 4.3.9 | Fluid inclusion studies/analysis | Per Sample | **12,600** |
| 4.3.10 | Glass sample preparation | Per Sample | **12,600** |
| 4.3.11 | Platinum capsule preparation | Per Sample | **980** |
| 4.3.12 | Rock powdering | Per Sample | **2,520** |
| 4.3.13 | Cost per OTS testing and identification of costly gems like diamond, emerald, natural ruby, sapphire etc. | Per Sample | **1,820** |
| **4.3.14** | **Organic Petrological Studies for Coal** | | |
| 4.3.14a | Sample preparation including pellet preparation for petrography | Per Sample | **1,160** |
| 4.3.14b | Quantification of Miceral composition per sample | Per Sample | **10,060** |
| 4.3.14c | Quantification of Micro lithotype composition per sample | Per Sample | **20,000** |
| 4.3.14d | Detailed Maceral analysis/ per sample (without photomicrography) | Per Sample | **20,000** |
| 4.3.14e | Detailed Maceral analysis/ per sample (with photomicrography) | Per Sample | **25,000** |
| 4.3.14f | Detailed Micro lithoytype analysis/ per sample (without photomicrography) | Per Sample | **20,000** |
| 4.3.14g | Detailed Micro lithoytype analysis/ per sample (with photomicrography) | Per Sample | **25,000** |
| 4.3.14h | Determination of Rank (VRO random %) per sample | Per Sample | **16,345** |
| 4.3.14i | Determination of Rank (VRO Max. and Min.%) per sample | Per Sample | **21,025** |
| 4.3.14j | Mean Ro% | Per Sample | **16,345** |
| 4.3.14k | Micro-cleat analysis per sample (without photomicrography) | Per Sample | **60,760** |
| 4.3.14l | Micro-cleat analysis per sample (with photomicrography) | Per Sample | **63,560** |
| **4.4** | **EPMA/SEM Lab.** | | |
| 4.4.1 | EPMA Studies per hour | Per hour | **8,540** |
| 4.4.2 | SEM Studies per hour | Per hour | **2,940** |
| **4.5** | **Mineral Physics Studies** | | |
| 4.5.1 | XRD analysis for identification of minerals (Random) | Per Sample | **4,000** |
| **4.6** | **Geochronology Studies** | | |
| 4.6.1 | Sulphur/carbon isotope analysis by Mass Spectrometer per sample | Per Sample | **25,340** |
| 4.6.2 | Carbon/oxygen isotopic analysis by Mass Spectrometer per sample | Per Sample | **24,360** |
| 4.6.3 | Isotopic analysis of one sample by LA-MC-ICPMS | Per Sample | **8,540** |
| **4.7** | **Beneficiation Studies** | | |
| 4.7.1 | Pre-Feasibility studies including collection of sample, transportation and manpower. | Per Sample | **Costing to be decided by TCC on project to project basis.** |
| 4.7.2 | Beneficiation study for G2 stage mineral exploration project<br><br>(Complete laboratory scale ore dressing investigation involving studies for recovery of mineral by various physical beneficiation methods) | Per Sample | **Actual expenses at IBM rate** |
| 4.7.3 | Decrepitation test for limestone/dolomite | Per Sample | **1,200** |
| 4.7.4 | Devis Tube Recovery Test (for BMQ) | Per Sample | **30,000** |
| **4.8** | **Geotechnical Laboratory** | | |

| | | | |
|---|---|---|---|
| 4.8.1 | Specific gravity of rock sample | Per Sample | **1,605** |
| 4.8.2 | Porosity | Per Sample | **2,547** |
| 4.8.3 | Density | Per Sample | **1,568** |
| 4.8.4 | Compressive Strength | Per Sample | **3,050** |
| | a. Determination of unconfined compressive strength (soil) | Per Sample | **2,240** |
| | b. Uniaxial compressive strength for a set of three samples including cutting and polishing as per standard | Per Sample | **6,160** |
| | c. Uniaxial compressive strength for only one core | Per Sample | **2,380** |
| | d. Compressive strength on a set of five bricks | | **7,560** |
| 4.8.5 | Tensile Strength | Per Sample | **2,745** |
| 4.8.6 | Shear Strength | Per Sample | **2,000** |
| | a. Triaxial shear Test (soil) | Per Sample | **2,240** |
| | b. Direct Shear Test (soil) | Per Sample | **4,060** |
| | c. Laboratory Vane Shear Test | Per Sample | **2,520** |
| 4.8.7 | Young's Modulus of Elasticity | Per Sample | **5,500** |
| 4.8.8 | Poisson's Ratio | Per Sample | **5,000** |
| 4.8.9 | Triaxial Compressive Strength (with Cohesion and angle of internal friction along with Mohr's envelopes) | Per Sample | **6,500** |
| 4.8.10 | Protodyakonov Strength Index | Per Sample | **1,800** |
| 4.8.11 | Point Load Strength Index. | Per Sample | **750** |
| 4.8.12 | Cone Indenter Index. | Per Sample | **752** |
| 4.8.13 | Slake durability Index | Per Sample | **3,000** |
| 4.9 | Determination of Fine : Lump ratio in Iron Ore | Per cu.m | **6,523** |
| 4.10 | Determination of insitu bulk density | Per Sample | **3,540** |
| **4.11** | **Insitu & Bed Moisture Determination (For Lignite)** | | |
| 4.11a | Bed Moisture determination including Lab sample preparation & housekeeping. | Per Sample | **1,246** |
| 4.11b | In situ Moisture determination including lab sample preparation & housekeeping. | Per Sample | **162** |
| 4.12 | **Reactivity test:** Sample Preparation, Char making, reactivity test & calculation of results. | Per Sample | **9,368** |
| 4.13 | **Washability Study:** Sampling , Mixing , Coring , quartering, crushing and screening, Float & sink test, generation of washed coal and compilation of report | Per Sample | **1,27,775** |
| **4.14** | **CBM Studies** | | |
| 4.14.1 | Desorption Studies and construction of adsorption isotherms. | Per borehole | **13,29,969** |
| 4.14.2 | Geophysical studies | | |
| 4.14.2a | Helium porosity. | Per Sample | **12,778** |
| 4.14.2b | Air permeability | Per Sample | **29,468** |
| 4.14.2c | Selective permeability (Water - Gas ) | Per Sample | **71,625** |
| **5.0** | **Miscellaneous Charges** | | |
| **5.1** | **Preparation of Exploration Proposal** | One Number (5 Hard copies) along with soft copy | **2% of approved project cost or 3.8 lakh whichever is lower** |
| **5.2** | **Geological Report Preparation**: including charges for tying of text, table etc.; digitization of maps/sections etc. on GIS in form of shape files; reprographic charges for photocopying of text, maps, plates, binding of reports etc. | Cost per 5 Hard copies of report along with soft copy | i) **Short term investigation/ Reconnaissance Survey/ Preliminary exploration/General exploration/Detailed exploration up to ₹50 lakh:** Minimum ₹1.50 lakh or 5% of the total value of work whichever is more and ₹1000/ each additional copy. **ii) Reconnaissance Survey/ Preliminary** |

| | | | |
|---|---|---|---|
| | | | **exploration/General exploration/Detailed exploration exceeding ₹50 lakh but less than 150 lakh:** A Minimum of ₹2.5 lakh or 5% of the work whichever is more and ₹ 3000/- per each additional copy.<br>**iii) Reconnaissance Survey/ Preliminary exploration/General exploration/Detailed exploration exceeding ₹150 lakh but less than 300 lakh:** A Minimum of ₹7.5 lakh or 3% of the work whichever is more and ₹3000/- per each additional copy.<br>**iv) Detailed exploration with cost of work exceeding ₹ 300 lakh:** A minimum of ₹ 9 lakh or 3% of the value of work whichever is more subject to a maximum amount of ₹ 20 lakh and ₹ 10,000/- per each additional copy. |
| **5.3** | **Drill Core Preservation**<br>One complete borehole plus mineralised cores of all the BHs of the Block / Prospect to be preserved in GI Core boxes and subsequently transported to the notified Core Repository.<br>(It includes cost of GI Core boxes, transportation charges, loading and unloading charges and manpower engaged in execution of the work).<br>(As far as possible exploratory drilling guidelines for NMET funded projects will be followed, however, the decision of TCC, NMET will be final) | Per m | **1,590 per m** |
| 5.4 | 3D Ore Body modeling using compatible software | As per actuals/ Implementing agency to put the cost based on the market survey | **As the rate varies from mineral to mineral and on mode of occurrence, hence charges applicable would be as per actual, based on market survey** |
| **5.5** | **Support for Auctioning** | | |
| **5.5.1** | **Environmental studies** | | |
| 5.5.1a | Satellite imagery/Aerial photo interpretation studies<br>a. Charges for procurement of imageries. | | **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 man days | Charges for one Geologist per day (HQ charges will be applicable) | **9,000 per day (HQ charges will be applicable)** |
| 5.5.1b | Baseline data collection (Land use/ land cover studies, collection of data on various attributes like Geology, geomorphology, soil, meteorology, biota, socioeconomics) | 10 km radius area | **5,94,570** |
| 5.5.1c | Chemical Analysis (sample collection and analysis in respect of four environmental attributes namely ambient air quality, noise | 10 km radius area | **7,72,329** |



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| | level, water quality and noise quality) of the block (pre and post monsoon) | | |
| 5.5.1d | Charges for preparation of Environmental Report | One Number (5 Hard copies) along with soft copy | **75,000 (5 Hard copies along with soft copy)** |
| 5.5.2 | Expenses for attending pre bid and post bid meetings (TA/DA for officers to attend pre bid and post bid meetings) | One time | **3,00,000** |
| 5.6 | Land/Crop compensation | Per borehole | **As per actuals as certified by local authorities subject to a maximum of 20,000 per bore hole** |
| 5.7 | Charges for engaging skilled, semiskilled and unskilled workers for attending work associated with the mineral exploration project in the field/camp/HQ. | Per worker/labour | **As per rates prescribed by Central Labour Commission rates or respective State Govt. whichever is higher** |
| **6.0** | **Reimbursement of cost in case of outsourced components of project work** | | |
| | Reimbursement of the charges incurred on outsourced component(s) of project approved by NMET shall be as follows: | | |
| | **(i) In case of total outsourced cost up to ₹50 lakh:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, 10 percent of the total outsourced cost will be paid to Exploration Agency towards operational charges. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the Exploration Agency, whichever is lower. | | |
| | **(ii) In case of total outsourced cost more than ₹50 lakh up to ₹1 crore:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, ₹5 lakh plus 7.5 percent on the balance amount of outsourced cost in excess of ₹50 lakh will be paid to Exploration Agency towards operational charges. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the Exploration Agency, whichever is lower. | | |
| | **(iii) In case of total outsourced cost more than ₹1 crore:** Cost for outsourced component(s) of project work will be reimbursed as per actuals. In addition, ₹8.75 lakh plus 5 percent on the balance amount of outsourced cost in excess of ₹1 crore will be paid to Exploration Agency towards operational charges. The maximum ceiling of operational charges is ₹15 lakh. The operational charges will be calculated on the cost of total outsourced component or certified actual payment made by the Exploration Agency, whichever is lower. | | |
| | **(iv) The monitoring charges of Geologist/Geophysicist** in respect of outsourced work will be reimbursed as per SoC rates subject to prior approval of Technical cum Cost Committee, NMET. | | |
| | **(v) For non-outsourced components** the rates shall be paid as per SoC. | | |
| | **(vi)** In no case the sum of outsourced cost and operational charges should exceed the cost as per SoC rates of the total outsourced component (s). | | |

**Note**: (i) Any item not indicated in SoC or indicated 'As per Actual' and required to be taken up during the course of exploration, shall be charged separately.

(ii) The rates/charges are excluding taxes.

(iii) The Schedule of Charges (SoC) will remain effective for 5 years *w.e.f.* from 1st April 2020 or until further order, whichever is earlier.

**Table-2: List of Basemetals, Strategic Minerals, Precious Metals & Stones and Fertilizer Minerals***

| S. No. | Commodity |
|---|---|
| **Basemetals** | |
| **1** | Copper |
| **2** | Lead |
| **3** | Zinc |
| **Strategic Minerals** | |
| **4** | Antimony |
| **5** | Beryllium |
| **6** | Bismuth |
| **7** | Chromium |
| **8** | Cobalt |
| **9** | Gallium |
| **10** | Germanium |
| **11** | Indium |
| **12** | Molybdenum |
| **13** | Nickel |
| **14** | Niobium |
| **15** | Rare Earths |
| **16** | Selenium |
| **17** | Tin |
| **18** | Tungsten |
| **19** | Tantalum |
| **20** | Vanadium |
| **Precious Metals & Stones** | |
| **21** | Gold |
| **22** | PGE |
| **23** | Silver |
| **24** | Diamond |
| **Fertilizer Minerals** | |
| **25** | Phosphate (Apatite) |
| **26** | Phosphate (Phosphorite) |
| **27** | Potash |

**Reference***


**i.** National Mineral Inventory 2015, IBM

**ii.** Report of Working Group on Mineral Exploration and Development (Other than Coal & Lignite) for the XII Five Year Plan (2012-17)

**iii.** Strategic Materials: A Resource Challenge for India by Ajay Lele & Parveen Bhardwaj, Institute for Defense Studies and Analyses, Pentagon Press, New Delhi, 2014

**Government of India**
**Ministry of Mines**
**National Mineral exploration Trust**

**File No. 6/2/2015-NMET/407** **New Delhi, 27th March, 2023**

## OFFICE MEMORANDUM

**Subject: Revision of charges towards "Preparation of Exploration Proposal" in the Schedule of Charges (SoC) of NMET**

The Executive Committee (EC) of NMET in its 16th meeting held on 25th February 2020 approved the Schedule of Charges (SoC) of NMET. The "Preparation of Exploration Proposal" given at Sl.No.5.1 of Table-1 of SoC read as "2% of approved project cost or ₹ 3.8 lakh whichever is lower". The SoC was implemented w.e.f. 01.04.2020.

On the recommendation of Committee formed to review Preparation of Exploration Proposal charges in the Schedule of Charges (SoC) of NMET, the Executive Committee (EC) of NMET in its 28th meeting held on 16th March, 2023 accorded its approval for revision of SoC for Preparation of Exploration Proposal to "2% of approved project cost subject to a maximum of ₹5 lakh".
Hence, the charges for " Preparation of Exploration Proposal" given at Sl.No.5.1 of Table-1 of SoC may now be read as "2% of approved project cost subject to a maximum of ₹5 lakh".

27.03.23
[Vivek Kumar Sharma]
Director &HoD, NMET

**To**

1. Sh. Janardan Prasad, Addl. Director General, SR, GSI, Hyderabad.
2. Sh. Ranjan Kumar Sinha, Controller General (Retd.), Indian Bureau of Mines.
3. Sh. Hemraj Suryavanshi, Addl.Director General (Retd.), Geological Survey of India.
4. Sh. M.K.Patel, Director General & RMH-II, ER,GSI, Kolkata.
5. Sh. S.K.Adhikari, Chief Mining Geologist, IBM, Nagpur.
6. Dr. Anjani Kumar, Dy G.M. Exploration & HoD Planning (Retd.), MECL.
7. Sh. Naeem Ahmad, G.M. Exploration (Retd.), CMPDI.
8. Sh. K.L. Mundra, Head, RMRE , AMD, Hyderabad
9. Director, In-charge of NMET, Ministry of Mines, New Delhi.
10. Sh. Vinay Pal, Cost Accounts Officer, CR, GSI, Nagpur.
11. Sh. P.K.Maharana, AGM (Finance), NALCO, NALCO Bhawan, P/1, Nagapalli, Bhubaneswar.
12. Sh. Ravi Kumar Gupta, GM (Finance), HCL, Tamra Bhawan, 1, Ashutosh Chowdhury Avenue, Kolkata.
13. Sh. Suresh Chander, Director (G), WR, GSI, Jaipur.

**Copy for information to:**

1. PSO to Secretary, Ministry of Mines, Shastri Bhawan, New Delhi-110 001.
2. PPS to AS, Ministry of Mines, Shastri Bhawan, New Delhi-110 001.
3. The Director (Tech.), Ministry of Mines, Shastri Bhawan, New Delhi-110 001.

**Government of India**
**Ministry of Mines**
**National Mineral exploration Trust**

**File No. 6/2/2015-NMET/ 151** **New Delhi, 7th July 2023**

## OFFICE MEMORANDUM

Subject: **Modification of Para 5.3 on "Drill Core Preservation" in Schedule of Charges (SoC) of NMET**

The Executive Committee (EC) of NMET in its 30th meeting held on 6th June 2023 accorded approval for modification of "Drill Core Preservation" at Para 5.3 of the Schedule of Charges (SoC) of NMET by inclusion of Plastic core boxes .

Hence para 5.3 of SoC may now be read as:

| S.No | Work/Activity | Unit | Charges/Cost (₹) |
|---|---|---|---|
| 5.3 | **Drill Core Preservation**<br>One complete borehole plus mineralised cores of all the BHs of the Block/Prospect to be preserved in **GI/ Plastic Core boxes** and subsequently transported to the notified Core Repository.<br>(It includes cost of **GI/ Plastic Core boxes**, transportation charges, loading and unloading charges and manpower engaged in execution of the work).<br>**The implementing agencies will ensure quality and durability of GI/Plastic Core boxes.**<br>(As far as possible exploratory drilling guidelines for NMET funded projects will be followed, however, the decision of TCC, NMET will be final) | **Per m** | **1,590 per m** |

(Vivek Kumar Sharma) 07.07.23
Director & HoD, NMET

**To,**

**Copy for Information:**

1. Dr. S. Ravi, Dy. Director General, SU: Karnataka & Goa, GSI, Bangalore.
2. Sh. Ranjan Kumar Sinha, Controller General (Retd.), Indian Bureau of Mines.
3. Sh. Hemraj Suryavanshi, Addl. Director General (Retd.), Geological Survey of India.

4. Dr. S.K. Kulshrestha, DDG-RMH-III, NER, GSI, Shillong
5. Sh. S. K. Adhikari, Chief Mining Geologist, IBM, Nagpur.
6. Dr. Anjani Kumar, Dy G.M. Exploration & HoD Planning (Retd.), MECL.
7. Sh. Naeem Ahmad, G.M. Exploration (Retd.), CMPDI Limited.
8. Sh. K.L Mundra, Head-RMRE, AMD, Hyderabad.
9. Director, In-charge of NMET, Ministry of Mines, New Delhi.
10. Sh. Vinay Pal, Cost Accounts Officer, CR, GSI, Nagpur.
11. Sh. P.K. Maharana, AGM (Finance), NALCO, NALCO Bhawan, P/1, Nagapalli, Bhubaneswar.
12. Sh. Ravi Kumar Gupta, GM (Finance), HCL, Tamra Bhawan, 1, Ashutosh Chowdhury Avenue, Kolkata.
13. Sh. Suresh Chander, Director (G), WR, GSI, Jaipur.

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2. PPS to AS, Ministry of Mines, Shastri Shawan, New Delhi-110001.
3. The Director (Tech.), Ministry of Mines, Shastri Shawan, New Delhi-110001.
4. Sh. M.K. Patel, Dy. Director General and RMH-II, GSI, ER, Kolkata-700064

**Government of India**
**Ministry of Mines**
**National Mineral Exploration Trust**

**File No. 6/2/2015-NMET/** 237 **New Delhi, 3rd** October 2023

## OFFICE MEMORANDUM

**Modification in Schedule of Charges (SoC) of NMET for Exploration Incentive (EI)**

The Executive Committee (EC) of NMET in its 31st meeting held on 12th September 2023 approved the modification of Schedule of Charges (SoC) of NMET for Exploration Incentive (EI) under Para 6 (i) of SoC with Enhancement of Incentive for Mineral Exploration in gold, base metals, other precious minerals, strategic/ critical minerals and fertilizer minerals .

Accordingly, Para 6 (i) of SoC may now be read as:

**Exploration Incentive (EI)**: An Exploration Incentive (EI) of 25% of the approved cost of the project for G4 items in Greenfield areas for gold, base metals, other precious minerals, strategic/ critical minerals and fertilizer minerals (Ref. Table-2) will be paid if the block is successfully auctioned or upgraded from G4 to G3 Stage subject to approval of Executive Committee, NMET. The Exploration Incentive (EI) will be paid on the cost of G4 work completed by the implementing agencies. Such incentive will not be applicable for other category of mineral commodities."

Sharma 03.10.23
(Vivek Kumar Sharma)
Director & HoD, NMET

**Copy for Information:**

1. Dr. S. Ravi, Dy. Director General, Su: Karnataka & Goa, GSI, Bengaluru.
2. Sh. I.R. Kirmani, ADG (Retd.), GSI.
3. Shri HemrajSuryavanshi, Additional Director General (Retd.), GSI.
4. Sh. K. Koteshwar Rao, Dy.D.G. (Retd.), GSI.
5. Shri S. K. Adhikari, Chief Mining Geologist, IBM, Nagpur.
6. Sh. SK Kulshrestha , DOG-RMH-III, NER, GSI, Shillong.
7. Dr. E.V.S.SK Babu, Scientist (G), NGRI.
8. Sh. K.L. Mundra, Head-RMRE, AMD, Hyderabad.
9. Sh. A.R. Sengupta, Director (IFD), Ministry of Mines.
10. Director - In-charge of NMET, Ministry of Mines

11. Shri Ravi Kumar Gupta, GM (Finance) Hindustan Copper Limited, Kolkata.
12. Sh. P. K. Maharana, AGM (Finance), NALCO, Bhubaneswar.
13. Smt. Vandana, Cost Accounts Officer, RSAS, Bangalore, GSI.
14. Shri. C. Parthsarathi, Director, GSI & Member Secretary,TCC- NMET, GSI , Bengaluru

**Copy for information to:**

1. PSO to Secretary, Ministry of Mines, Shastri Shawan, New Delhi-110001.
2. PPS to AS, Ministry of Mines, Shastri Shawan, New Delhi-110001.
3. The Director (Tech.), Ministry of Mines, Shastri Shawan, New Delhi-110001.

**Government of India**
**Ministry of Mines**
**National Mineral exploration Trust**

**File No. 6/2/2015-NMET/295** **New Delhi, 18th October 2023**

## OFFICE MEMORANDUM

### Modification of Cost for Ash Analysis in Schedule of Charges (SoC) of NMET

The Executive Committee (EC) of NMET approved the modification of cost for Ash analysis to ₹13664/- (Rupees Thirteen Thousand Six Hundred Sixty Four only) in Table1:S.No. 4.2.25 of the Schedule of Charges (SoC) of NMET.

Accordingly, Table 1: S. No 4.2.25 of SoC may now be read as:

| S. No. | Work/Activity | Unit | Charges/Cost ( ₹ ) |
|---|---|---|---|
| 4.2.25 | Ash analysis | Per Sample | **13,664** |

19.10.23
(Vivek Kumar Sharma)
Director & HoD, NMET

**Copy for Information:**

1. Dr. S. Ravi, Dy. Director General, Su: Karnataka & Goa, GSI, Bengaluru.
2. Sh. I.R. Kirmani, ADG (Retd.), GSI.
3. Shri HemrajSuryavanshi, Additional Director General (Retd.), GSI.
4. Sh. K. Koteshwar Rao, Dy.D.G. (Retd.), GSI.
5. Shri S. K. Adhikari, Chief Mining Geologist, IBM, Nagpur.
6. Sh. SK Kulshrestha , DOG-RMH-III, NER, GSI, Shillong.
7. Dr. E.V.S.SK Babu, Scientist (G), NGRI.
8. Sh. K.L. Mundra, Head-RMRE, AMD, Hyderabad.
9. Sh. A.R. Sengupta, Director (IFD), Ministry of Mines.
10. Director - In-charge of NMET, Ministry of Mines
11. Shri Ravi Kumar Gupta, GM (Finance) Hindustan Copper Limited, Kolkata.
12. Sh. P. K. Maharana, AGM (Finance), NALCO, Bhubaneswar.
13. Smt. Vandana, Cost Accounts Officer, RSAS, Bangalore, GSI.
14. Shri. C. Parthsarathi, Director, GSI & Member Secretary,TCC- NMET, GSI , Bengaluru.

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2. PPS to AS, Ministry of Mines, Shastri Shawan, New Delhi-110001.
3. The Director (Tech.), Ministry of Mines, Shastri Shawan, New Delhi-110001.