MINUTES OF THE 16TH MEETING OF TECHNICAL- CUM-COST COMMITTEE (TCC) OF NATIONAL MINERAL EXPLORATION TRUST (NMET)

Held at Fermor Hall, Geological Survey of India, Nagpur on 24th & 25th September, 2018

The 16th meeting of Technical -cum- Cost Committee (TCC) of National Mineral Exploration Trust (NMET) was held at Fermor Hall, GSI, Central Region, Nagpur on 24-09-2018 & 25-09-2018 under the chairmanship of Shri D. Mohan Raj, Addl. Director General & Head, National Mission-II, GSI, Nagpur.

The list of participants is annexed.

Shri Manoj Kumar, Director, Member Secretary, TCC-NMET , welcomed all the members & invited them for a fruitful discussion which was followed by self-introduction of all participants.

Shri Pradeep Singh, Director, NMET briefed about reconstitution of the Technical- cum Cost Committee (TCC). He also informed the committee that the object heads of NMET have been opened and all pending payments shall be made after re-appropriation of budget in the newly opened object heads after approval of the Ministry of Finance.

Shri D. Mohan Raj, Chairman, TCC, in his opening remark informed the committee that:

- Seamless proposal, (G4 to G3 followed by G2) should not be prepared as decided in last EC meeting.
- Earlier, maximum number of proposal approved by NMET are of bulk minerals, now committee will give priority to other minerals which include Au, Cu, Pb, Zn, Ni, Co, W, Mo, PGE, REE etc. However, proposal for bulk minerals will also be considered on case to case basis.
- Concerned State Unit officer (s) from GSI should also be called for TCC meeting.

AGENDA-1: EVALUATION OF NEW PROPOSALS

The committee evaluated the new proposals separately proposed for different stage of exploration.

I. PROPOSAL FROM OMECL

1. PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) IN 47.00 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA

The Committee discussed the proposal in detail and suggested following changes:

- All the unexplored area allotted to OMECL (excluding G-2/ G-3 exploration area/block) should be included for large scale geological mapping on 1:12500 scale.
- Pit & trench sampling should be carried out in the area.

OMECL incorporated above changes and modified proposal was again put up to the committee.

Committee recommended the approval of G-4 stage exploration in the block with large scale Geological Mapping (1:12,500), pitting trenching & associated Laboratory Studies at an estimated cost of Rs. 56.71 Lakh to be completed in a time schedule of 08 months including the final report submission.

2. *GENERAL EXPLORATION (G-2) IN 2.93 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA*

Committee recommended the approval of G-2 stage exploration in the Block with a total of 2000m drilling in 10 BHs. The boreholes may be drilled up to the depth of 200mts or intersecting the BHJ or top of the lower shale whichever is earlier along with associated detailed Geological mapping (1:4000) & associated Laboratory studies at an estimated cost of Rs. 247.48 Lakh to be completed in the time schedule of 08 months including the final report submission. From the drill hole data the broad structure may also be delineated along three section lines across the strike.

II. PROPOSAL FROM MECL

MECL presented 9 (Nine) nos. of proposals and the details of the proposals discussed and the recommendations of the Committee in respect of various proposals are as under:

1. *PROPOSAL FOR GENERAL EXPLORATION (G-2) FOR MANGANESE ORE IN BIARPALLI BLOCK, DISTRICT-BOLANGIR, ODISHA*

The Committee discussed the proposal in detail and suggested following changes:

- Well demarcated boundaries should be made in the map for G-2 stage exploration proposal.
- Block boundary should be restricted towards south, halfway between PBH-09 and PBH-13.
- Only boreholes falling in the above mentioned revised boundary are approved and the borehole Nos. PBH-12/31/32/13/33/34/35/36/37/38 (Total 10 Bhs) are not required.
- Boreholes to be drilled in 100m spacing with 1st level infilling at 30m vertical depth and 2nd level at 70m vertical depth of intersection.

MECL incorporated above changes and the modified proposal was again put up to the committee.

Committee recommended the approval of G-2 exploration in the Block with a total of 2450m drilling in 28 Bhs along with associated detailed Geological mapping (1:4000) & other Laboratory studies at an estimated cost of Rs. 357.35 Lakh to be completed in the time schedule of 12 months including the final report submission.

2. *PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) FOR MANGANESE ORE IN BIARPALLI BLOCK, DISTRICT-BOLANGIR, ODISHA*

The Committee discussed the proposal in detail and suggested following changes:

- G-4 exploration block boundary to be modified as per G-2 revised block boundary.
- Detailed surface trench sampling to be taken up along the exposures as well as in unexposed areas.
- If trench sampling results are positive, geophysical surveys which includes magnetic, gravity and resistivity methods in the area for demarcating the continuity of mineralized zones to be carried out.
- 5 scout boreholes, which include 2 boreholes in longest exposed body and one each in other 3 small bodies, are to be drilled for 30m vertical intersection of mineralised zone.
- The borehole meterage should not exceed 400m.

MECL incorporated above changes and modified proposal was again put up to the committee.

Committee recommended the approval of G-4 exploration in the block with trenching/ pitting, Geophysical Survey (Gravity, Magnetic & Resistivity) and 400 m of drilling in 5 Bhs and associated large scale Geological Mapping (1:12500) & associated Laboratory Studies at an estimated cost of Rs. 151.34 Lakh to be completed in a time schedule of 10 months including the final report submission.

3. *PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) FOR MANGANESE ORE IN BABIA BLOCK, DISTRICT-BOLANGIR, ODISHA.*

The Committee discussed the proposal in detail and suggested following changes:

- Well demarcated boundaries should be made in the map for G-4 stage exploration proposals.
- Random Magnetic survey with the help of GPS in the total 3.00 sq km area (100m interval) to delineate the disposition of Mn ore body and structural fabric of the area.
- Detailed surface trench sampling along the exposures as well as unexposed gap areas.
- If results of trench sampling are positive, a total of 500m scout drilling including one test borehole is to taken up in the eastern part of the block C between BHA-13 & BHA 11.

MECL incorporated above changes and modified proposal was again put up to the committee.

The Committee discussed the proposal in detail and recommended for approval of EC for G-4 exploration in the block with large scale geological mapping (1:12500), trenching/ pitting, Geophysical Survey (Magnetic) and 500 m of drilling in 5 Bhs at an estimated cost of Rs 107.91 Lakh to be completed in a time schedule of 10 months including the final report submission.

4. *PROPOSAL FOR GENERAL EXPLORATION (G-2) FOR MANGANESE ORE IN BABIA BLOCK, DISTRICT-BOLANGIR, ODISHA.*

The Committee discussed the proposal in detail and suggested that only Block-B of GSI shall be taken up to G-2 level exploration as per the plan proposed. Block C is negative, therefore, no work recommended. One borehole is positive in the Block C and the same may be included in G 4 Block area.

MECL incorporated above changes and modified proposal was again put up to the committee.

The Committee recommended the proposal for approval of EC for G-2 stage exploration in the block with a total 700 m of drilling in 10 Bhs along with associated detailed geological mapping (1:4000) & associated Laboratory Studies at an estimated cost of Rs 144.23 Lakh to be completed in a time schedule of 08 months including the final report submission.

5. *PRELIMINARY EXPLORATION (G-3) IN DIGGOAN & UDAGI BLOCKS, CHITTAPUR TALUK, DISTRICT- KALABURAGI, KARNATAKA*

The Committee discussed about current status of Limestone exploration and mining in the adjoining area. As informed by DGM Karnataka, Diggaon & Udagi have common boundary and block was divided so that auctioning can be done separately for both the blocks. Both the blocks are free hold and there are operating mines in the surrounding areas.

Committee recommended that the Bhima Basin has well developed limestone exposures and the blocks are surrounded by operating mines, there is no need for taking up G-4 exploration in this area and straightway G-3 exploration can be carried out in these blocks at 800m grid interval for drilling boreholes.

The Committee discussed the proposal in detail and suggested following changes:

- Grid orientation should be changed with respect to common block boundary for respective blocks.
- G-3 level of exploration should be carried out at 800m grid interval for drilling boreholes.
- To check the presence of Glauconitic Sandstone, a total of 4 boreholes, 2 each in Diggoan & Udagi blocks should be drilled up to a depth of 200m. These boreholes should be evenly distributed widely spaced and unbiased with intersection. Samples should be analysed for K_2O & SiO_2 and modal analyses is to be carried out in the sample of Glauconitic Sandstone. Beneficiation study of 1 sample of Glauconitic Sandstone (combining the core of all four boreholes) should be carried out.
- The process of sampling in Glauconitic sandstone/ shale should be as follows:
  - Drill core should be half split.
  - Half core should be crushed up to 1 cm size chips.
  - After coning & quartering, one half should be pulverised for chemical analysis and other half should be used for making beneficiation study.
  - In case the quantity of beneficiation sample is not sufficient, then the powdered part of the samples after preparation of primary & check samples can also be handed over to the laboratory for beneficiation studies.

MECL incorporated above suggestion / modifications and put up the proposal again to the committee.

Diggaon Block:

The Committee recommended the proposal for approval of EC for G-3 level of Exploration in Diggaon Block with a total 1170 m of drilling in 13 Bhs along with detailed geological Mapping (1:4000) & associated Laboratory Studies at an estimated cost of Rs 205.98 Lakh to be completed in a time schedule of 9 months including the final report submission.

Udagi Block:

The Committee also recommended the proposal for approval of EC for G-3 stage of Exploration in Udagi Block with a total 1100 m of drilling in 12 Bhs along with detailed geological Mapping (1:4000) & associated Laboratory Studies at an estimated cost of Rs 192.01 Lakh to be completed in a time schedule of 9 months including the final report submission.

6. ***EXPLORATION PROPOSAL (G-3 STAGE) FOR IRON & MANGANESE ORE IN SILPUNJI BLOCK, DISTRICT: WEST SINGHBHUM, JHARKHAND***

The Committee discussed the proposal in detail and after deliberations suggested that proposal may be resubmitted by updating the geological map by plotting more structural data especially in the southern part of the block. This will help in proper planning of boreholes to be drilled in the block. Proposal will be discussed in the forthcoming TCC meeting after incorporation of above suggestions.

7. ***EXPLORATION PROPOSAL (G-3 STAGE) FOR IRON & MANGANESE ORE IN BOKNA BLOCK, DISTRICT: WEST SINGHBHUM, JHARKHAND***

The Committee discussed the proposal in detail and suggested following changes:

- Grid should be shifted 100m towards west so that maximum boreholes should fall in the iron ore body.
- All boreholes proposed in phyllite & shale lithounits (borehole nos. PBH-02/06/09/12/15/19/21) in the eastern part of block should be removed.
- 3 boreholes in western most grid of southern part of the block (borehole nos. PBH-13/15/19) are also not required and to be removed.
- All boreholes should be drilled vertical with maximum depth of 100m or shale/ phyllite whichever is intersected earlier.

MECL incorporated above suggestion / modifications and put up the modified proposal again to the committee.

The Committee recommended the proposal for approval of EC for G-3 stage of Exploration in Bokna Block with a total 1000 m of drilling in 10 Bhs along with associated detailed geological mapping (1:4000) & associated Laboratory Studies at an estimated cost of Rs 199.45 Lakh to be completed in a time schedule of 11 months including the final report submission.

8. *EXPLORATION PROPOSAL FOR LIMESTONE IN RANIGAON-GONDAIYA BLOCK, TEHSIL-KOTA, DIST.- BILASPUR, CHHATTISGARH*

The Committee discussed the proposal in detail and suggested that

- On completion of the drilling of proposed boreholes the results are to be reviewed in the TCC and depending upon the results and continuity of limestone, the level of exploration will be decided as the present boreholes are planned at 400m grid interval in G-3 level of exploration itself.
- The minutes of SGPB of Chhattisgarh referring for taking up further exploration in the block are to be quoted in the present proposal.
- DGM Chhattisgarh consent letter should be obtained and sent to Director NMET with a copy to the Chairman, TCC, NMET.
- The proposal may be put up to EC only after obtaining the consent letter from DGM, Chhattisgarh.

The Committee recommended the proposal for approval of EC for G-3 stage of Exploration in Ranigaon-Gondaiya block with a total 600 m of drilling in 11 BHs along with associated detailed geological mapping (1:4000) & associated Laboratory Studies at an estimated cost of Rs 123.61 Lakhs to be completed in a time schedule of 6 months including the final report submission.

The following four proposals of DGM Chhattisgarh could not be taken up for discussion as the representative of DGM, Chhattisgarh was not present.

1. Proposal for G-3 stage exploration for Bauxite in Chendradadar Block, Kabirdham district, Chhattisgarh
2. Proposal for Reconnaissance Survey (G-4) stage exploration for Iron ore in Gopaltola (Salhewara) Block, Rajnandgaon district, Chhattisgarh
3. Proposal for Reconnaissance Survey (G-4) stage exploration for Iron ore in Bogan area of Antagarh Block, Kanker district, Chhattisgarh
4. Proposal for G-3 stage mineral exploration for Bauxite in Lurena Block, Surguja district, Chhattisgarh

AGENDA- 2:

1. STANDARD FORMAT FOR REVIEWING NMET PROJECTS

On the formulation of the standard format for reviewing ongoing NMET funded projects a firsthand draft was presented by Member Secretary – TCC. The Chairman suggested to simplify the format further and to send the same to each TCC members for comments. After receiving the comments from the members, the finalised format will be presented in the next TCC meeting for approval.

2. FINANCIAL IMPLICATION IN CASE OF FORECLOSURE OF LAKHASAR BLOCK

The matter of financial implication in case of foreclosure of borehole in Lakhasar Block District Bikaner, Rajasthan was discussed. The MECL informed that foreclosure of borehole does not have any financial implication.

AGENDA-3:

G-4 STAGE EXPLORATION IN DEGVE-KALNA-ASANIA BLOCK, SINDHUDURG DISTRICT, MAHARASHTRA

NMDC informed that the project could not be initiated due to local resistance and non-support from local authorities. NDMC also provided the copies of the correspondence made with state authorities. Based on the discussion, the Committee recommended for closure of the project with approval of the EC.

AGENDA- 4: REQUIREMENT OF ADDITIONAL FUND FOR ONGOING PROJECTS

1. ***WORK PROGRESS OF UDBUR BLOCK FOR GOLD (BLOCK ID: SR-KAR-07) - KIOCL***

The Committee reviewed the progress of on-going exploration work.

- Stage-2A works for Nickel and Chromium establishment with pre approved quantity of 50 Cu.m. (14th TCC) have yielded good results and hence recommended for additional trenching works with 200 cu.m. along with the analysis of the samples.
- The Committee also recommended that whole rock analysis (25 Nos.) may be carried out as per GSI SoC package-A.
- The SEM and EPMA studies may be carried for identification of Nickel phase in fresh rock and also in the altered rocks.

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The Committee approved the proposed work plan for taking up this work at an additional estimated cost of Rs. 12.02 lakhs.

2. *G-3 EXPLORATION IN SALUMI BLOCK FOR LIMESTONE BLOCK, KIPHIRE DISTRICT, NAGALAND (APPROVED IN 6TH EC ON 11/01/2018, SANCTIONED DATED 24.02.2018) – DGM, NAGALAND*

DGM, Nagaland stated that an additional fund of Rs. 0.31 lakhs is required to complete the subject work approved by 6th Meeting of Executive Committee of National Mineral Exploration Trust (NMET) dated 11th January 2018 (as recommended by 12th TCC Meeting dated 8th & 9th January 2018 at Nagpur) namely - *(Ref: Annexure III (Sl. No 3) Minutes of the 6th Meeting of NMET).* As per the approved rate of NMET *(Ref. Cost estimate table Sl.No. C-1(iii) under Chemical),* is Rs. 31500/-. However, the cost of analysis of the same at the MECL lab, Nagpur (@Rs. 5790 per sample) is Rs. 57960/-. The difference in the cost for analysis 10 composite samples is Rs.26460/-*(i.e. Rs 57960 -Rs. 31500)*. Hence the required additional fund inclusive of GST@18% is Rs. 30694.24 i.e. say 0.31 lakh.

Therefore, the Committee approved the additional cost of Rs. 0.31 lakh for this work. Hence, the total Project cost is recast from 47.43 lakhs to Rs. 47.71 lakhs.

3. *G-4 EXPLORATION IN MOLLEN-JOPI-ZIPHU AND ADJOINING AREA FOR MAGNETITE, NI-CO-CR, PHEK, NAGALAND (APPROVED IN 6TH EC ON 11/01/2018, SANCTIONED DATED 24.02.2018) - DGM, NAGALAND*

DGM, Nagaland stated that an additional fund of Rs. 2.40 lakhs is required to complete the subject work approved by 6th Meeting of Executive Committee of National Mineral Exploration Trust (NMET) dated 11th January 2018 (as recommended by 12th TCC Meeting dated 8th & 9th January 2018 at Nagpur) namely - *(Ref: Annexure III (Sl. No 4) Minutes of the 6th Meeting of NMET).*

The total nos of 200 samples of magnetite are to be analysed for 6 radicals *(Ni, Co, Cr, Fe, Ti & V)* as per the approved Quantum of work *(Ref. Para 5.13.1 The details of Quantum of proposed work; Sl. No.4-A (i-a) Bed Rock Channel Samples).* However the cost estimate was made only for 120 Nos of samples as the approved detailed Cost Estimate table Sl.No.C-1(i-a & c) under Chemical analysis.The cost estimate for analysis of the remaining 80 samples of Magnetite at rate of Rs. 2580 per sample is Rs. 206400/-. Hence, the required additional fund inclusive of GST@18% is Rs. 243552/- i.e say Rs.2.43 lakhs.

The Committee reviewed the on-going exploration work and suggested that all magnetite samples are to be analysed for Ti & V.

The Committee approved the additional amount of Rs. 2.43 Lakh required for chemical analysis of 80 nos. of Magnetite bearing samples from Mollen-Jopi-Ziphu and adjoining area.

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AGENDA-5: REVIEW OF ONGOING NMET FUNDED PROJECTS

1. ***G-4 EXPLORATION IN SOUTH OF KESHARPUR (BLOCK-ID-ER-ODS-09) FOR COPPER, MAYURBHANJ, ODISHA (APPROVED IN 3RD EC ON 25/10/2016, SANCTIONED DATED 23.02.2017)***

The Committee reviewed the geophysical survey carried out by MECL in the block. MECL informed that GSI is carrying out drilling within the area where geophysical survey was carried out by MECL. Committee suggested to discuss the matter with the Officers of GSI State Unit ODISHA and to get the details of their field season programme being executed in this area. The Committee also requested RMH-II, GSI-ER to facilitate the matter. After obtaining the above mentioned information from GSI, MECL may plan their exploration programme by excluding the Madanshal block where GSI is carrying out exploration works. MECL may also update the geological map by incorporating more structural data.

2. ***G-4 EXPLORATION IN DERAVAD-CHARGARHIA-BANSRA AREA (BLOCK-ID: RAJ-02) FOR COPPER & GOLD, UDAIPUR DISTRCT, RAJASTHAN (APPROVED IN 3RD EC ON 25/10/2016, SANCTIONED DATED 23.02.2017)***

MECL has informed that after review of the project in 12th TCC , no further work has been carried out. However, the men and machinery has been mobilised to the site and the drilling will be starting shortly.

3. ***G-4 EXPLORATION IN MATMARI BLOCK FOR GOLD, (BLOCK-ID: SR-KAR-05), RAICHUR, KARNATAKA (APPROVED IN 4TH EC ON 21/02/2017, SANCTIONED DATED 03.04.2017)***

NMDC informed that an area of 125 Sq Km has been mapped on 1:12500 scale out of allocated area of 511 Sq Km and collected 203 samples in the area. NMDC informed that the Maps and other details will be presented in the forthcoming TCC meeting.

4. ***G-4 EXPLORATION IN JAMPANI-DILKIBURU-DANGUAPOSI BLOCK FOR IRON ORE, (BLOCK-ID: ER-JH-01), W. SINGHBHUM, JHARKHAND (APPROVED IN 4TH EC ON 21/02/2017, SANCTIONED DATED 03.04.2017)***

NMDC informed that the work has not been commenced yet as the requisite permissions are yet to be received from the concered authorities.

5. *WORK PROGRESS OF TIRUMNAKARADU IRON BLOCK (BLOCK ID: SR_TN_04) IN G4 STAGE*

KIOCL informed that the Stage-1 work of the project has been completed.

Due to local resistance, Stage-2 works have been temperorily suspended w.e.f. 19th June, 2018. KIOCL informed that consistent liasioning with State and District authoritioes are being carried out to re-initiate the work. The Committee recommended to pursue the matter with State authorities for reasumption of the work.

6. *WORK PROGRESS OF POOMEDU IRON ORE BLOCK IN G4 STAGE*

KIOCL informed that Stage-1 work could not be started as the permission from DGM, Tamil Nadu is awaited inspite of consistant liasioning. The Committee recommended to pursue the matter with State authorities for initiation of the work.

DETAILS OF THE NEW PROJECT PROPOSALS ALONGWITH THE COST ESTIMATES RECOMMENDED BY THE 16TH TCC-NMET FOR APPROVAL OF THE 10TH EC-NMET

Sl. No	Project Details	Commodity	Implementing Agency	Estimated Cost *(Rs. in Lakhs)*	Agency wise Estimate *(In Rs Lakhs)*
1.	PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) IN 47.00 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA	IRON	OMECL (Odisha)	56.71	304.19
2.	GENERAL EXPLORATION (G-2) IN 2.93 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA	IRON	OMECL (Odisha)	247.48	
3.	PROPOSAL FOR GENERAL EXPLORATION (G-2) FOR MANGANESE ORE IN BIARPALLI BLOCK, DISTRICT-BOLANGIR, ODISHA	MANGANESE	MECL	357.35	1481.88
4.	PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) FOR MANGANESE ORE IN BIARPALLI BLOCK, DISTRICT-BOLANGIR, ODISHA	MANGANESE	MECL	151.34	
5.	PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) FOR MANGANESE ORE IN BABJA BLOCK, DISTRICT-BOLANGIR, ODISHA	MANGANESE	MECL	107.91	
6.	PROPOSAL FOR GENERAL EXPLORATION	MANGANESE	MECL	144.23	

	(G-2) FOR MANGANESE ORE IN BABIA BLOCK, DISTRICT-BOLANGIR, ODISHA				
7.	PRELIMINARY EXPLORATION (G-3) IN DIGGOAN BLOCKS, CHITTAPUR TALUK, DISTRICT- KALABURAGI, KARNATAKA	LIMESTONE	MECL	205.98	
8.	PRELIMINARY EXPLORATION (G-3) IN UDAGI BLOCKS, CHITTAPUR TALUK, DISTRICT- KALABURAGI, KARNATAKA	LIMESTONE	MECL	192.01	
9.	EXPLORATION PROPOSAL (G-3 STAGE) FOR IRON & MANGANESE ORE IN BOKNA BLOCK, DISTRICT: WEST SINGHBHUM, JHARKHAND	IRON & MANGANESE	MECL	199.45	
10.	EXPLORATION PROPOSAL FOR LIMESTONE IN RANIGAON-GONDAIYA BLOCK, TEHSIL- KOTA, DIST.- BILASPUR, CHHATTISGARH	LIMESTONE	MECL	123.61	
TOTAL				1786.07	1786.07

DETAILS OF THE ADDITIONAL FUND REQUIREMENT FOR ONGOING PROJECTS

Sl. No.	Project Details	Implementing Agency	Original Cost of the Proposal *(Rs in Lakhs)*	Additional Fund Requirement *(Rs in Lakhs)*	*TOTAL COST OF THE PROJECT (REVISED) (Rs in Lakhs)*
1.	UDBUR BLOCK FOR GOLD (BLOCK ID: SR-KAR-07)	KIOCL	523.69* (Gold) + 1.56 (Silver)	12.02 (Nil + Cr)	**537.27**
2	G-3 EXPLORATION IN SALUMI BLOCK FOR LIMESTONE BLOCK, KIPHIRE DISTRICT, NAGALAND (APPROVED IN 6TH EC ON 11/01/2018, SANCTIONED DATED 24.02.2018)	DGM, NAGALAND	47.43	0.31	**47.74**
3	G-4 EXPLORATION IN MOLLEN-JOPI-ZIPHU AND ADJOINING AREA FOR MAGNETITE, Ni-Co-Cr, PHEK, NAGALAND (APPROVED IN 6TH EC ON 11/01/2018, SANCTIONED DATED 24.02.2018)	DGM, NAGALAND	43.65	2.43	**46.08**

* GST @18% has been calculated on the approved cost i.e Rs. 443.81 lakhs.

The cost sheets for above referred proposals (10-new & 3 under progress) are annexed.

The meeting ended up with the vote of thanks by Shri Manoj Kumar, Member Secretary, TCC of NMET.

(Sarada Mohanty)
DGM (Finance), NALCO &
Member, Technical cum-Cost
Committee (TCC), NMET

(Dr. S. Ravi)
Director, GSITI, &
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(Vinay Pal)
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Member, Technical cum-Cost
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(Shri H.K. Verma)
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(Shri D. Mohan Raj)
Addl. Director General GSI
& Head M-II &Chairman,
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16TH TCC-NMET MEETING, 24TH SEPT., 2018, NAGPUR

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24	K.C. Mohapatra Director Geology	9438506981	kcmohapatra@gmail.com	
25	K.C. Naik	9437438283	Kali.mk@	
26	Saileendra Nath Sahoo	7873388303	Shailendra.gsi@gmail.com	
27	Sadesh Kumar Singh	7979971261	singh.11.660@gmail.com	
28	—	—		
29	P. Sharma	9449620105	bmed@	
30	Shivakumar M	9481444688	bmed@	
31	Shashi Kant Pandey Director, Geology	9849933999	dirmines@	
32	Yuvaraj D.S	7899038800		
33	Dr. P. Habibulla Khan Jt. Adv. (Geology) NMDC, Hyd.	9491757464	PHKhan@nmdc.co.in	P Habibulla Khan
34	Md. N. Ansari Sr. Manager (Geol.) NMDC, Hyd.	9963170345	mdnansari@nmdc.co.in	
35	Dr K Srivatsavan Sr. Manager (Geol) NMDC, Hyd.	9502176080	Kargunv@yahoo.com	

16TH TCC-NMET MEETING, 25TH SEPT., 2018, NAGPUR

Sl No	Name & Designation	Mobile No.	Email	Signature & Date
1	D. Mohan Raj ADG, HoD, M-II, GSI & Chairman, TCC-NMET			
2	PradiptaTarafdar Dy DG, PSS, GSI & Member TCC-NMET			
3	Dr. S. Ravi Iyer Director, GSITI, & Member TCC-NMET			
4	Pradeep SinghTarafdar Director, NMET, MoM& Member TCC-NMET			
5	J. V. Rama Rao Director, Geophysics, GSI &Member TCC-NMET			
6	Addl. Director, Op-I, AMD & Member TCC-NMET			
7	GM, CMPDIL & Member TCC-NMET			
8	B.P. Raturi HoD (Exploration), MECL & Member TCC-NMET			
9	SaradaMohanty DGM (Finance), NALCO & Member TCC-NMET			
10	H.K. Verma DGM (Finance), HCL & Member TCC-NMET			
11	Vinay Pal Asstt. Cost Accounts Officer, GSI & Member TCC-NMET			
12	PrasantaMaharana DGM, NALCO & Member TCC-NMET			
13	Manoj Kumar Director, GSI, DGCO & Member Secretary			

36	Indrani Sarkar	7028442902	indrani.705@	Indrani Sarkar
37	Alok Dahariwal	7774835845	alok.dal@	
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25/9/18

16TH TCC-NMET MEETING, 25TH SEPT., 2018, NAGPUR

Sl No	Name & Designation	Mobile No.	Email	Signature & Date
1	D. Mohan Raj ADG, HoD, M-II, GSI & Chairman, TCC-NMET	9711581957	hodnm2@gsi.gov.in	
2	PradiptaTarafdar Dy DG, PSS, GSI & Member TCC-NMET	9433088547		25/9/18
3	Dr. S. Ravi Director, GSITI, & Member TCC-NMET	9441188834	sravi.jeyes@gmail.com	25/09/2018
4	Pradeep Singh Director, NMET, MoM& Member TCC-NMET	9810233957	nmet-mines@gov.in	
5	J. V. Rama Rao Director, Geophysics, GSI &Member TCC-NMET	14406918844	ramajammi@rediffmail.com	25/9/18
6	Addl. Director, Op-I, AMD & Member TCC-NMET			
7	A.K. Mohanty GM (Geology), CMPDIL & Member TCC-NMET			
8	B.P. Raturi HoD (Exploration), MECL & Member TCC-NMET	9422806412	bpraturi100@yahoo.co.in	25/9/18
9	Sarada Mohanty DGM (Finance), NALCO & Member TCC-NMET	9937251551	saradamohanty@nalcoindia.co.in	25/9/18
10	H.K. Verma DGM (Finance), HCL & Member TCC-NMET			
11	Vinay Pal Asstt. Cost Accounts Officer, GSI & Member TCC-NMET	8527368161	palvinay009@gmail.com	25th Sep. 2018
12	Prasanta Maharana DGM, NALCO & Member TCC-NMET	8500669500	prmaharana@rediffmail.com	25/9/18
13	Manoj Kumar Director, GSI, DGCO & Member Secretary	8968443417	nmet-tcc@gsi.gov.in	25/9/18

14	Jaya Lal DDG & RMH-II, ER, GSI	9001530777	Jaya Lal. gsi.	
15	N.S. Gadakar DDG & RMH-II, SR, GSI	8105155266		
16	S. Ray DDG & RMH-II, CR, GSI	9460258582		
17	P. Sharma	9449620105	K.S.O.C.L Bangalore	
18	Shivakumar H	9481944686	KIOCL, Bajpe	25/07/2018
19	IVSV Prasad	9440664530	MECL, NGP	
20	Alok Deharkar	7771835195	MECL Nagpur	
21	David Lhouvum DGM Nagaland	9436434678	dlhouvum@gmail.com	25/7/2018
22	Biswajit Gangopadhyay Director, CR, GSI, Nagpur	7030017555	biswajit.gangopadhyay@gsi.gov.in	
23	Indrani Sarkar SAO, MECL, Nagpur	7028442992	indrani.705@rediffmail.com	Indrani Sarkar
24	K.C. Mahapatra Director (Mining), OMDC	9438024991	kcmpal@rediffmail.com	
25	Shailendra Singh CMECL, Odisha	9937788303	shailendra.jodc@gmail.com	
26	Kali Charan Rath Chief Manager, OMDC	9437432258	OMDC Sile	
27	Saurabh Dixit Asst. Geology, MECL	9543542973	saurabh.1285@gmail.com	
28	Pradeep Kulkarni CGM(C), MECL	9425890225	Kulkarni.mecl@gmail.com	
29	K.K.S.R.K.S. Sai Sr. Manager (Geophy.)	9829127182	Saigeo@gmail.com	
30	J. Narayana Murthy DGM (Expl.) MECL	9581686163	JNMurthy@mecl.gov.in	
31	Dr. Sukanta Lakandari Sr Manager (CL)	9370621725	dr.slcompanies@gmail.com	
32	B.P. Ratul HOD (Exploration) MECL	9122306417	bpratul10@yahoo.co.in	
33	Bhim Ray Sr. Manager MECL (CR)	9771182447	rayBhim@gmail.com	
34	Santosh Kr. Singh	9999971268	singhsantosh@gsi.gov.in	
35	Md. Nasim Anwar Sr. Mgr. (Geol.) MECL	9963117015	mdnasimanwar@mecl.co.in	Nasim Anwar

36	Shaikh Kaushik Reddy	9849731991	DMO. Qlink	25/1
37	D.B. Yuvaraj	7893558300	Dwcc, B'lore	
38	M.W. Wadankar	9921870146		
39	P. Habibulla Khan	9490759616	NIMPC Unit, Pharmacovigilance	P. Habibulla Khan
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COST SHEET FOR PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) IN 47.00 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA								
Sl. NO.	Item of Work	Unit	Base Rate	Escalated rates (2018-19)			Grand Total	
				Esc. Rate	Qty.	Amount	Qty.	Amount
			1.4.90	2017-18		(Rs)		(Rs)
A	**DRILLING**							
1	Surface Drilling (2 Rigs) *	m	2551	8072	0	0	0	0
2	Transportation	Km	8.8	33	0	0	0	0
3	Camp Setting	- do-	69506	254864	1	254864	1	254864
4	Road Making (Hilly Terrain)	Km	7800	28975	0	0	0	0
	Sub Total -A							**254864**
B	**GEOLOGICAL WORK**							
1	Survey Party days (1 party)	day	1180	5056	0	0	0	0
2	Geologist Party days (1 party)	day	1541	8080	90	727470	90	727470
3	pitting & Trenching	Cum	2566	1739	100	173900	100	173900
4	Core Sampling Party days (2 party)	day	525	2805	0	0	0	0
	Sub-Total-B							**901370**
C	**GEO-PHYSICAL**							
1	Magnetic Survey	Nos.	107	479	7000	3353000	7000	3353000
	SUB-Total-C							**3353000**
D	**LABORATORY STUDIES**							
1	Chemical analysis							
	a)For 3 radicals Fe, SiO_2 & Al_2O_3 (Core sample + Internal Check sample)	Nos	262(113 +72x2)	1422	150	213300	715	213300
	b) Composite Samples for 7 radicals (Fe%, SiO2%, Al2O3%, P%, Mn%, S% & V2O5%)	Nos	266	3096	0	0	65	0
2	**Physical Analysis**							
i)	a) X-RD Studies on composite	Nos	1137	5813	0	0	5	0
ii)	b) Trace Element Study by ICPMS Method (15 elements Cd,Sn,W,Sb,Mi, Ce, Nb,Se,La,Bi,Co, N,Zr,Mo& V)	Nos	-	6414	0	0	0	0
iii)	Preparation of thin section	Nos	100	556	10	5560	5	5560
iv)	Petrographic Studies	Nos	228	1478	10	14780	5	14780
v)	Preparation of polished section	Nos	100	556	10	5560	5	5560
vi)	Bulk Density determination	Nos.	26	148	0	0	5	0
vii)	Specific Gravity determination	Nos	32	356	0	0	5	0
	Sub-Total -D					239200		**239200**
	Total A+B+C+D							**4748434**
E	**EXPLORATION REPORT - 1% of (A+B+C+D)**							**47484**
F	**PEER REVIEW OF DGR (Lump Sum)**	Nos		**10,000**				**10,000**
	Grand Total : A to F							**4,805,918**
G	**GST @ 18%**							**865065**
H	**GRAND TOTAL for 8.404 sq. km area**							**5,670,983** Say 56.71 lacs.

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR IRON ORE IN KHANDHAR BLOCK, (G-4 Level) DISTRICT - SUNDARGARH, ODISHA

			1	2	3	4	5	6	7	8	
1	Camp Setting	Month	←	→							1 month
2	Geologist Party days (1Party)	Party days		←			→				90 Days
3	Geophysical Work	Months		←		→					2 month
4	Geophysical Report preparation	Months				←	→				1 month
5	Pitting Trenching	Cu.m		←		→					100
6	Sampling Party days, Core Sampling (1 party)	Party days		←			→				90 Days
10	Laboratory Studies	Nos.				←		→			795 Nos.
11	Camp Winding	Months	Continue to G2								
12	Report Writing with Peer Review	Months						←		→	3 months

COST SHEET FOR GENERAL EXPLORATION (G-2) IN 2.93 SQ KM AREA FOR IRON ORE IN KHANDADHAR , DISTRICT SUNDERGARH, ODISHA

SL. NO.	Item of Work	Unit		Escalated rates (2018-19)			Grand Total	
			Base Rate	Esc. Rate	Qty.	Amount	Qty.	Amount
			1.4.90	2017-18		(Rs)		(Rs)
A	DRILLING							
1	Surface Drilling (2 Rigs) *	m	2551	8472	2000	16944000	2000	16944000
2	Transportation	K.m	8 8	33	0	0	0	0
3	Camp Setting	do-	68636	254264	0	0	0	0
4	Road Making (Hilly Terrain)	K.m	7600	28976	20	579520	20	579520
	Sub Total -A							17523520
B	GEOLOGICAL WORK							
1	Survey Party days (1 party)	day	1180	5056	10	50560	10	50560
2	Geologist Party days (1 party)	day	1541	8083	120	969960	120	969960
3	Bulk Sampling Party days (1 party)	day	2586	13908	15	208620	15	208620
4	Core Sampling Party days (2 party)	day	525	2905	120	0 348600	120	348600
	Sub-Total-B							1587740
C	LABORATORY STUDIES							
1	Chemical analysis							
	a)For 3 radicals Fe, SiO_2 & Al_2O_3 (Core sample + Internal Check sample)	Nos	262(110 +78X2)	1374	1000	1374000	1000	1374000
	b) Composite Samples for 7 radicals (Fe%, SiO2%, Al2O3%, P% Mn% S% & V2O5%)	Nos	265	2982	40	119280	40	119280

	c) Sample Check External	Nos	262	1374	100	137400	100	137400
2	Physical Analysis							
i)	a) XRD Studies on composite	Nos	0137	5605	0	0	0	0
ii)	b) Trace Element Study By ICPMS Method (15 elements-Cd,Sn,W,Sb,Mi, Ce, Nb,Ba,La,B ,Co , Ni,Sr,Mo& V)	Nos	-	4820	0	0	0	0
iii)	Preparation of thin section	Nos	100	538	5	2690	5	2690
iv)	Petrographic Studies	Nos	226	1436	5	7180	5	7180
v)	Preparation of polished section	Nos	100	535	5	2690	5	2690
vi)	Bulk Density determination	Nos	24	139	5	696	5	696
vii)	Specific Gravity determination	Nos	32	165.5	0	0	0	0
	Sub-Total -C							1643935
	Total A+B+C							20755195
D	EXPLORATION REPORT - 1% of (A+B+C+D)							207552
E	PEER REVIEW OF DGR (Lump Sum)	Nos		10,000				10000
	Grand Total : A to F							20972747
F	GST @ 18%							3775094
G	GRAND TOTAL for deposit-III							24747841 Or 247.48 Lacs

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR IRON ORE IN KHANDHAR SUB BLOCK BLOCK, (G-2 Level) DISTRICT - SUNDARGARH, ODISHA

			1	2	3	4	5	6	7	8	
1	Camp Setting	Month	In Continuation of G-4								
2	Surface Drilling (2 rigs)	m.		←	—	—	→				2000 m (in 20 BHs)
4	Survey Party days (1 Party)	Party days	←	—	→						10 Days
5	Geologist Party days (1 Party)	Party days		←	—	—	→				120 Days
6	Bulk Sampling Party days, (1 Party)	Party days		←	→						30 Days
7	Sampling Party days, Core Sampling (1 Party)	Party days			←	—	→				120 Days
8	Laboratory Studies	Nos.				←	—	→			1695 Nos.
9	Camp Winding	Months							← →		1 month
10	Report Writing with Peer Review	Months						←	—	→	3 months

COST SHEET FOR PROPOSAL FOR GENERAL EXPLORATION (G-2) FOR MANGANESE ORE IN BIAHPALLI BLOCK, DISTRICT-RAYAGADA, ODISHA

Sl. No.	Item of Work	Unit	Base Rate	Escalated rates (2015-19)			Escalated rates (2019-20)			Grand Total	
				Esc. Rate	Qty.	Amount	Esc. Rate	Qty.	Amount	Qty.	Amount
				(Rs)		(Rs)					(Rs)
A	DRILLING										
1	Surface Drilling (Core)	m	2639	3477	3756	13060356			0	3756	13060356
2	Transportation	Km	88	116	2400	278400			0	2400	278400
3	Accessories (Drill Tools/ Drill)		150335	198039	2	396078			0	2	396078
4	Core Splitting/Sawing	m	3962	5220	4	20879			0	4	20879
5	Road Making (Hilly Terrain)	Km	9220	12147	10	121470			0	10	121470
	Sub Total A					14278183			0		14278183
B	GEOLOGICAL WORK										
1	Survey Party days (1 party)	day	1120	1476	82	121032			0	82	121032
2	Geological Party days (1 party)	day	1241	1635	182	297570			0	182	297570
3	Bulk Sampling Party days (1 party)	day	2500	3294	12	39528			0	12	39528
4	Core Sampling Party days (1 party)	day	656	865	242	209330			0	242	209330
	Sub-Total B					667460			0		667460
C	Pitting & Trenching										
	a) Pitting & Excavation in Soil & Disintegrated Laterite up to 3m depth (Unit: 1 Cum) (1 Cum = 2.5 tons RD) / Size	Cu.m	390	514	0	1047			0	5	3085
	Sub Total C					3085			0		3085
D	LABORATORY STUDIES										
1	Chemical Analysis										
	i) Primary & Check samples										
	a) Primary Samples for Chemical (Mn, SiO2, P2O5, Fe2O3, MnO, and moisture)	Nos	687 (+10%) +75%)	1059	800	2118000			0	200	2118000
	b) Check samples for Chemical (Mn, SiO2, P2O5, Fe2O3, MnO, and moisture)	Nos	687 (+10% +75%)	1059	40	105900			0	40	105900
	c) External Check Samples from NABL labs for Chemical (Mn, SiO2, P2O5, Fe2O3, MnO, and moisture)	Nos	687 (+10% +75%)	1059	82	216780			0	58	216780
	ii) Composite Samples										
	a) Composite Sample for Chemical Analysis (Mn, SiO2, P2O5, Fe2O3, MnO, and moisture)	Nos	687 (+10 +75%)	1059	10	10590			0	50	52950
2	Physical Analysis										
	a) XRD Studies on composite	Nos	1107	1707	0	0			0	0	0
	b) ICP MS studies (+ Trace elements Co,Cu,Ni,Pb,Ce,Rb,Ba,La,Th,Cr,B,...)	Nos		6910	0	0			0	0	0
	c) Preparation of thin section	Nos	720	946	10	9460			0	10	9460
	d) Polishing Studies	Nos	720	1077	10	10770			0	10	14786
	e) Preparation of polished section	Nos	720	946	10	9460			0	10	9460
	f) Micrographic Studies	Nos	1720	2380	10	23800			0	10	23800
	g) Specific Gravity determination	Nos	327	1814	15	27210			0	15	39177
	h) Bulk Density	Nos	200	144	5	720			0	5	720
	Sub Total D					2720438			0		3723439
E	Preservation of Core										
	i) Core house			1386	730	1100010			0	793	1007007
	ii) Transportation of Core Boxes	Nos	888	1166	1210	39600			0	1303	39600
	Sub-Total E					1139610			0		1033593
	Total A+B+C +D+E					29974046			0		33974046
F	EXPLORATION REPORT 1% of A+B+C +D+E					339740			0	1	339740
G	PSR Review (Lump Sum)					10000			0	1	10000
	Total A+B+C +D+E+F+G+I					30323786			0		33883786
I	GST @ 18%					5451081			0		5451081
	Grand Total					35774868			0		39334866
											Say 393.35 Lakhs

Note:

1. Cost Escalation rates for Manganese ore are not available hence Gold prices are taken as actual escalation as per IBM Indices as on 31.3.2018 and same has been considered for subsequent year.
2. ** Rate has taken from Schedule of Charges of diamond accessories of GSI as on 2014-15 and 40% escalation on the same has been considered for FY 2018-19.
3. ***Payment will be as per length of road made.
4. Statutory payments relating to forest clearance will be paid extra.
5. In case of outsourcing handling charges will be paid as applicable for IBM Indices.

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR MANGANESE ORE IN BIARPALI BLOCK, (G-2 Level) DISTRICT - BOLANGIR, ODISHA

			1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Camp Setting	Month														
2	Surface Drilling (2 rigs)	m.														2460 m (in 28 BHs)
3	Pitting (5 Pit)	Cu.m														5.00
4	Survey Party days (1 Party)	Party days														80 Days
5	Geologist Party days (1 Party)	Party days														180 Days
6	Bulk Sampling Party days, (1 Party)	Party days														10 Days
7	Sampling Party days, Core Sampling (1 Party)	Party days														240 Days
8	Laboratory Studies	Nos.														1385 Nos.
9	Camp Winding	Months														1 month
10	Report Writing with Peer Review	Months														3 months

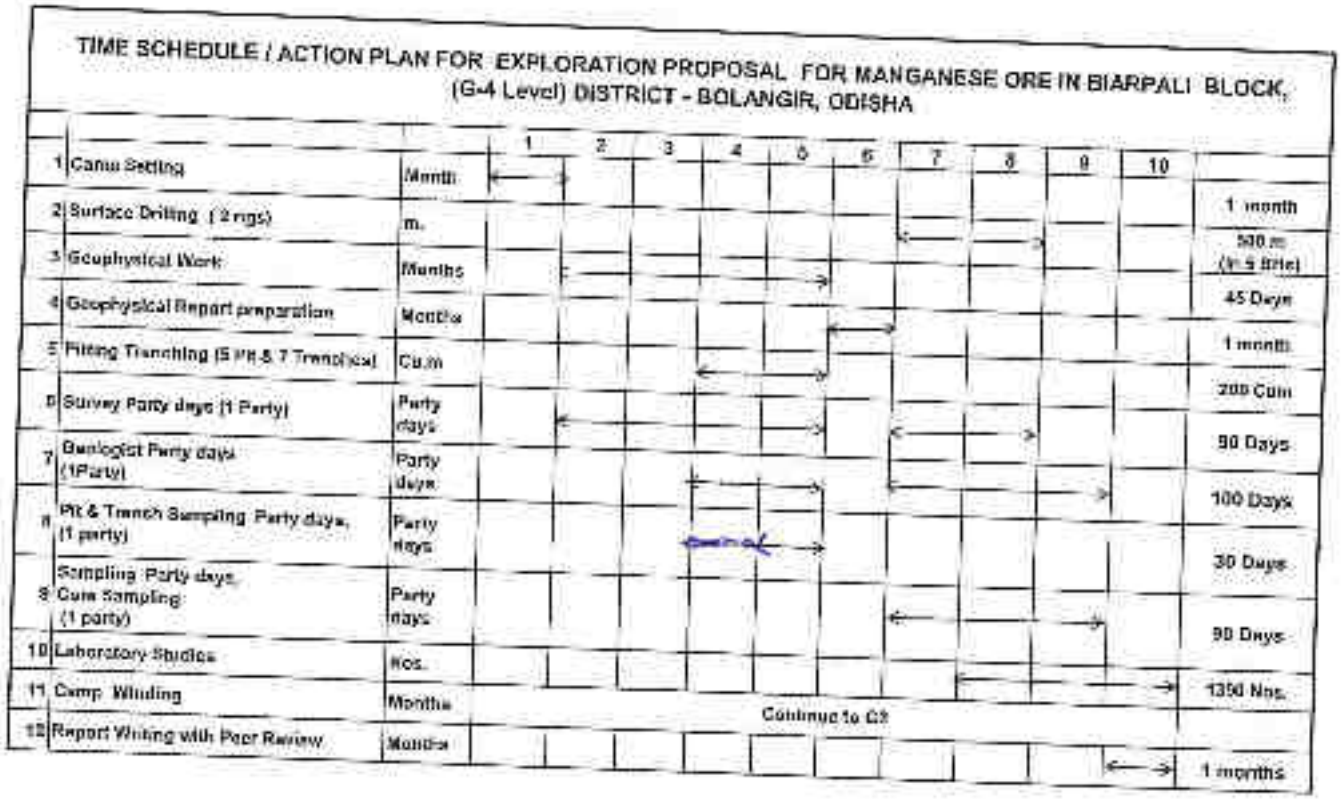
COST SHEET FOR PROPOSAL FOR RECONNAISSANCE SURVEY (G-4) FOR MANGANESE ORE IN RAMPALLI BLOCK, DISTRICT-BOLANGIR, ODISHA

Sl. No.	Item of Work	Unit	Base Rate	Executive rates (2019-20)			Proposed rates (2020-21)			Grand Total	
				Unit Rate (Rs)	Qty	Amount (Rs)	Unit Rate	Qty	Amount	Qty	Amount (Rs)
A	DRILLING		1.4.20								
1	Shifting (Rs. per Shift)	m	2000	2420	421	1020820		0		400	1388333
2	Transportation	Km	44	53	20931	99827		0		1880	99827
3	Access Labour (One time) Lump Sum		407625	493566	0	0		1		1	0
4	Pits & Trench Sampling Rate (per 1 metre)	mtr	6000	7260	1	0		0		0	0
5	Road Making (Max 7mtr)	Km	5000	6050	0	0		0		0	0
	Sub Total A					1120647		0		0	0
B	GEOPHYSICAL Works					3474933		0			3474933
1	Vigneti Survey	Kms	700	847	1133	959000		0		2333	959000
2	Gravity Survey	Kms	995	1660	2333	2270000		0		2333	2270000
3	Resistivity Survey	Line Km	1471	1781	21	37500		0		21	37500
	Subtotal B					5116933		0			5116933
C	GEOLOGICAL WORK							0			
1	Survey Party cost (1 party)	day	1100	1331	30	39930		0		30	39930
2	Geology Party exp. (1 party)	day	1761	2131	300	639300		0		300	639300
3	R & Travel Charges Party cost (1 party)	day	1224	1481	90	133221		0		90	133221
4	Core Sampling (1 party)	day	1761	2131	90	191790		0		90	191790
	Sub-Total C					1004241		0			1004241
D	Pitting & Trenching					1785510		0			1785510
	a) Pitting & Trenching (Max 3 mtr Depth & Trenching (Max 500 mtr Length)	Cum	997	1207	293	347000		0		290	347000
	Sub Total D					347000		0			347000
E	LABORATORY STUDIES							0			
	Chemical Analysis										
	i) Primary & Check samples										
	a. Primary Samples (Fe, Mn, SiO_2, P_2O_5, Fe/Fe, MnO and Inclusive)	Nos	933 (110 +Taxes)	1129	333	1525000		0		333	1524000
	b) Check Samples (Fe & Mn, SiO_2, P_2O_5, Fe_2O_3, MnO, and Inclusive)	Nos	450 (110 +Taxes)	1129	25	28250		0		25	28250
	c) Physical Check Samples (Fe, MnO, SiO_2, P_2O_5, Fe_2O_3, MnO, and Inclusive)	Nos	450 (110 +Taxes)	1129	80	33771		0		30	33771
	ii) Bore hole Samples										
	a) Core Sample Sampling (Fe & Mn, SiO_2, P_2O_5, Fe_2O_3, MnO, and Inclusive)	Nos	450 (110 +Taxes)	1129	36	40332		0		35	40332
2	Physical Analysis										
	a) XRD studies on composite	Nos	1107	1341	0	0		0		0	0
	b) LIMS Analysis for Fe, Mn, SiO_2, Al_2O_3, CaO, MgO, P_2O_5, Na_2O, K_2O, Ti, Sr, Zr, V**	Nos		4500	0	0		0		0	0
iii)	Preparation of Thin section	Nos	333	403	70	28221		0		70	28221
iv)	Petrographic Study	Nos	1174	1421	10	14210		0		10	14210
v)	Preparation of polished section	Nos	700	847	10	8470		0		10	8470
vi)	Mineragraphy Studies	Nos	364	2640	12	31680		0		12	31680
vii)	Spot Sp. Gravity determination	Nos	72	87	12	1045		0		12	1045
viii)	Bulk Density	Nos	42	51	0	0		0		0	0
	Sub-Total E					1824758		0			1824758
F	Preservation of Core							0			
i)	Core Shed				2000	726	500000	0		1	500000
ii)	Transportation of Core Boxes	Km	66	80	333	43560		0		333	43560
	Sub-Total F					543560		0			543560
	Total A+B+C+D+E+F					12543133		0			12543133
G	EXPLORATION REPORT 1% of A+B+C+D+E+F or 175000/- whichever is higher					175000		0			175000
H	PF+R, Review (Lump Sum)					10000		0			10000
	Total A+B+C+D+E+F+G+H					12928133		0			12928133
I	GST @ 18%					2326464		0			2326464
	Grand Total					15254598		0			15254598
											Say 152.54 Lakhs

Note:

1. Cost Operation rates for Manganese ore are not available hence field rates are taken as actual escalation as per ASI indices w.e.f. 1.4.2017 and same has been considered for subsequent year.
2. ** Rate has taken from Schedule of Charges of different activities of GSI as on 2014-15 and 40% escalation on the same has been considered for FY 2016-
3. Payment will be as per length of road made.
4. Satisfactory payments relating to Forest clearance will be paid extra.
5. If case of pesticide any handling charges will be paid as applicable for MMTC Made.

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR MANGANESE ORE IN BIARPALI BLOCK, (G-4 Level) DISTRICT - BOLANGIR, ODISHA



COST SHEET FOR PROPOSAL FOR RECONNAISSANCE SURVEY (S-4) FOR MANGANESE ORE IN BADJA BLOCK, DISTRICT BOLANGIR, ODISHA

Sl. No.	Item of Work	Unit	Base Rate	Escalated rates (2018-19)			Escalated rates (2019-20)			Grand Total	
				Esc. Rate	Qty.	Amount	Esc. Rate	Qty.	Amount	Qty.	Amount
			1.4.00	(Rs)		(Rs)					(Rs)
A	ORE BLOCK										
1	Surface Exploration	m	2600	3432	500	4290000			0	500	4290000
2	Trenching	Rm	5.0	38.5	2600	99550			0	2600	99550
3	Accomodation (One time Cost)		155025	852638	0	0			0	0	0
4	T.A./Transport Supplying Party days, (1 party)	Day	22000	231231	0	0			0	0	0
5	Road Making (Old Tracks)***	Km	5000	31497	0	0			0	0	0
	Sub Total A					4321550			0		4321550
B	GEOPHYSICAL WORK										
1	Magnetic Survey (100m x 100m)	Hec	157	478	220	105160			0	220	105160
	Subtotal B					105160			0		105160
C	GEOLOGICAL WORK										
1	Senior Party days (1 party)	day	1357	8556	42	359352			0	42	359352
2	Geologist Party days (1 party)	day	1343	8460	120	1015200			0	120	1015200
3	Pit & Trench Sampling Party days (1 party)	day	934	5884	30	176520			0	30	176520
4	Core Sampling Party days (1 party)	day	930	5855	60	351300			0	60	351300
	Sub-Total C					1648572			0		1648572
D	Pitting & Trenching										
	(i) Pitting & Non Lateritic Trial & Trenching (Limy Type) in Hard	Cu.m	785	1725	200	347500			0	200	347500
	Sub Total D					347500			0		347500
E	LABORATORY STUDIES										
1	Chemical Analysis										
	i. Primary & Check samples										
	a. Primary Samples For Major oxides (Mn, SiO2, P2O5, Fe2O3, MnO2 and Ignition Loss)	Nos	400 (110 +290)	2970	700	1980000			0	700	1980000
	b) Check Samples for Major oxides (Mn, SiO2, P2O5, Fe2O3, MnO2 and Ignition Loss)	Nos	420 (110 +310)	2970	35	93450			0	35	93450
	c) External Check Samples from NABL Labs for Major oxides (Mn, SiO2, P2O5, Fe2O3, MnO2 and Ignition Loss)	Nos	497 (110 +387)	3870	35	135572			0	35	135572
	ii) Composite Samples										
	a) Composite Samples for Beneficiation (Mn, SiO2, P2O5, Fe2O3, MnO2 and Ignition Loss)	Nos	280 (110 +170)	2212	15	40000			0	15	40000
2	Physical Analysis										
	a) X-RD Studies on composite	Nos	1127	5113	0	0			0	0	0
	b) ICP-MS studies (14 trace elements Cd,Sb,W,Sn,Cs,Nb,Ba,Bi, Co,Hf,Ta,Mo,V)**	Nos		4822	0	0			0	0	0
	c) Preparation of thin sections	Nos	55	249	10	2550			0	10	2550
	d) Petrographic Studies	Nos	272	1760	10	14750			0	10	14750
	e) Preparation of polished section	Nos	137	606	10	6550			0	10	6550
	f) Mineragraphic Studies	Nos	354	2090	10	20900			0	10	20900
	g) Specific Gravity (Core/ natural	Nos	37	10100	10	1345			0	10	1345
	h) Bulk Density	Km	24	141	5	725			0	5	725
	Sub-Total E					3253955			0		3253955
F	Transportation of Core										
	i) Sl Core boxes			2000	125	250000			0	125	250000
	ii) Transportation of Core Boxes	Km	1.8	24	1800	42000			0	1800	42000
	Sub-Total F					292000			0		292000
	Total A+B+C+D+E+F					9668015			0		9668015
G	EXPLORATION REPORT 1.5% of A+B+C+D+E Or 1,20,000/- which ever is higher					120000			0		120000
H	PCER Review (Lump Sum)					10000			0		10000
	Total A+B+C+D+E+F+G+H					9145815			0		9145815
I	GST @ 18%					1646247			0		1646247
	Grand Total					10792110			0		10792110
										Say 107.9 Lakhs	

Note:

1. Base Escalation rates for Manganese ore are not available, hence Gold rates are taken on actual escalation as per RBI indices as on 1.3.2017 and same has been considered for subsequent year.
2. ** Rate has taken from Schedule of Charges of different activities of GSI as on 2014-15 and 40% escalation on the same has been considered for FY 2018-
3. ***Payment will be as per length of road made.
4. Statutory payments relating to taxes, insurance will be paid extra.
5. In case of contractual handling charges will be paid as Applicable for NMET Blocks.

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR MANGANESE ORE IN BABJA BLOCK, (G-4 Level) DISTRICT - BOLANGIR, ODISHA

			1	2	3	4	5	6	7	8	9	10	
1	Camp Setting	Month	←	→									1 month
2	Surface Drilling (2 rigs)	m				←		→					500 m (in 5 BHs)
3	Geological Work	Months		←	→								1 month
4	Geophysical Report preparation	Months			←	→							1 month
5	Pitting Trenching (5 Pit & 7 Trenches)	Cu.m			←	→							200 cu.m
6	Survey Party days (1 Party)	Party days		←	→								40 Days
7	Geologist Party days (1 Party)	Party days			←	→							120 Days
8	Pit & Trench Sampling Party days, (1 party)	Party days			←	→							30 Days
9	Sampling Party days, Core Sampling (1 party)	Party days				←	→						90 Days
10	Laboratory Studies	Nos					←	→					700 Nos.
11	Camp Winding	Months						Continue to G2					
12	Report Writing with Post Review	Months								←	→		3 months

COST SHEET FOR PROPOSAL FOR GENERAL EXPLORATION (G-3) FOR MANGANESE ORE IN RAEJA BLOCK, DISTRICT-BOLANGIR, ODISHA

SL. NO.	Item of Work	Unit	State Rate	Estimated rate (2018-19)			Escalated rates (2019-20)			Grand Total	
				Est. Rate	Qty.	Amount	Est. Rate	Qty	Amount	Qty.	Amount
			3.4.5%	(Rs)		(Rs)					Rs.
A	DRILLING										
1	Surface Drilling (Departmental)	m	2239	5472	700	3830400			0	700	3830400
2	Transportation	Km	0.8	93.0	240	22320			0	240	22320
3	Accommodation (One time/Drill)		180329	86,580	3	259740			0	3	259740
4	Camp Setting / Winding	dc	88635	254584	4	1018336			0	4	1018336
5	Road Making (No. Lumpsum)***	Km	9839	10,317	10	103170			0	10	103170
	Sub Total A					5233967			0		5233967
B	GEOLOGICAL WORK										
1	Sampling Party days (2 parties)	day	1130	6,356	48	305088			0	48	305088
2	Geological Party days (1 parties)	day	1041	8,289	110	911790			0	110	911790
3	Soil Sampling Party days (1 parties)	day	2205	12,150	10	121500			0	10	121500
4	Data Compiling Party days (1 parties)	day	625	2,700	120	324000			0	120	324000
	Sub Total B					1642378			0		1642378
C	Piling & Trenching										
	a) Piling (Size 1.10 x 1.10 x 1.10 m & Trenching (1m x 2mx 500 cm) (Nos.)	Cu.m	815	1738	5	8690			0	5	8690
	Sub Total C					8690			0		8690
D	LABORATORY STUDIES										
1	Chemical Analysis										
	i) Primary & Check samples										
	a) Primary Samples for 8 species (Mn, SiO_2, P_2O_5, Fe_2O_3, MnO_2 and insoluble)	Nos	450 (10 +25%)	2072	450	1086800			0	450	1086800
	b) Check samples for 5 species (Mn, SiO_2, P_2O_5, Fe_2O_3, MnO_2 and insoluble)	Nos	450 (10 +25%)	497	20	10440			0	20	10440
	d) Exterior Check Samples from NABL Labs for 5 product (Mn, SiO_2, P_2O_5, Fe_2O_3, MnO_2 and insoluble)	Nos	187 (10 +75%)	3277	40	109080			0	40	109080
	ii) Composite Samples										
	a) Composite Samples for 8 Products (Mn, SiO_2, P_2O_5, Fe_2O_3, MnO_2 and insoluble)	Nos	450 (10 +25%)	2570	40	108540			0	40	1086800
2	Physical Analysis										
a	a) X-RD Studies on ore/product	Nos	1131	5710	0	0			0	0	0
b	b) ICP-AES analysis (14 Trace elements Cd Sn W, B_2O_3, Co, Mo Ba, La, Cu, Ni, Sr, Rb, Y)	Nos		9010	0	0			0	0	0
	i) Preparation & Analysis	Nos	100	356	10	3560			0	10	3560
	ii) Pulverizing & Sieves	Nos	228	1419	10	14190			0	10	14190
	v) Preparation of thin section	Nos	100	356	10	3560			0	10	3560
	vi) Mineragraphic Studies	Nos	384	2010	10	20100			0	10	20100
	vii) Scanning Electron Microscope	Nos	32	124.5	30	3840			0	30	3840
	viii) Size Density	Nos	24	149	5	720			0	5	720
	Sub-Total D					1380410			0		1703410
E	Preservation of Core										
	i) Cl Core boxes			3803	75	285000			0	175	665000
	ii) Transportation of Core Boxes	Km	8.8	31.0	1000	31000			0	1000	88000
	Sub-Total E					316000			0		753000
	Total A+B+C+D+E					7203942			0		12353947
F	EXPLORATION REPORT (5 % of A+B+C+D+E Or 1.75,000/- which ever is higher					175000			0	1	175000
G	FEER Review During Spot					10000			0	1	10000
	Total A+B+C+D+E+F+Cost					13022942			0		13222947
	GST @ 18%					2339729			0		2339979
	Grand Total :					15362723			0		15562723
											Say 1.56 Crore

Note:

1. Govt Committee rates for Manganese ore are not available, hence Govt. rates are taken on actual extraction as per EC letters of on 31.3.2015 etc. same has been considered for subsequent year.
2. ** Rate has taken from Schedule of Charges of different activities of GSI as on 2014-15 and 40% escalation on the same has been considered for FY 2018-19.
3. ***Payment will be as per length of road cleared.
4. Statutory payments relating to forest clearances will be paid extra.
5. In case of outer-inter handling charges will be paid as applicable for VMET blocks.

TIME SCHEDULE / ACTION PLAN FOR EXPLORATION PROPOSAL FOR MANGANESE ORE IN BABJA BLOCK, (G-2 Level) DISTRICT - BOLANGIR, ODISHA

			1	2	3	4	5	6	7	8	
1	Camp Setting	Month	In Continuation of G-4								
2	Surface Drilling (2 rigs)	m.	←	→	→						700 m (in 10 BHs)
3	Pitting (5 Pit)	Cu.m	← →								5.00
4	Survey Party days (1 Party)	Party days	←	→	→						45 Days
5	Geologist Party days (1 Party)	Party days	←	→	→	→					110 Days
6	Bulk Sampling Party days, (1 Party)	Party days	← →								10 Days
7	Sampling Party days, Core Sampling (1 Party)	Party days	←	→	→	→					120 Days
8	Laboratory Studies	Nos.		←	→	→	→				565 Nos.
9	Camp Winding	Months				← →					1 month
10	Report Writing with Peer Review	Months					←	→	→	→	4 months

COST SHEET FOR PRELIMINARY EXPLORATION (G-3) IN DIGGOAN BLOCKS, CHITTAPUR TALUK, DISTRICT - KALABURAGI, KARNATAKA						
S.N.	Item of Work	Unit	Base Rate as on 01-04-1998	Financial Year (2018-19)		
				Escalated Rate	Quantity	Amount (Rs)
A	DRILLING					
1	Surface Drilling (2 Rigs)	m	1714	7328	1170	8572760
2	Transportation	Km	4.5	20	800	16000
3	Accomodation	Rs./man/D.T.	1480/S	6806/S	2	1361280
4	Camp Setting (Winding	Drill month	59306	264864	4	1059456
5	Road Making (Rd Terrain)	Km	5290	23619	10	236190
	Sub Total A					10961726
B	GEOLOGICAL WORK					
1	Survey Party Days (1 party)	day	1740	8000	30	240000
2	Geologist Party days (1 party)	day	1941	8093	120	969960
3	Core Sampling Party days(1 party)	day	925	2905	120	438720
	Sub Total B					1769070
C	LABORATORY STUDIES					
a	Chemical Analysis					
	Primary - Drill Samples					
	i) for 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 (170+320)	2626	930	2442180
	ii) for additional 2 radicals SO3 & P2O5	Nos	196 (70+126)	1050	47	49350
	iii) Check samples for analysis of 08 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	481 (170+110)	2570	40	102800
	iv) External Check (NABL) samples for analysis of for 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 (170+320)	2620	92	241040
	v) Primary Samples for K2O	Nos	140	560	30	16800
	vi) Recreation **	Nos		380600	1	380600
	vii) Transportation for Geochemical samples	Km	8.5	35	0	0
2	Composite Samples					
	i) for 12 radicals (CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5, LOI (MnO, K2O, Na2O and Cl)	Nos	900 (170+110+320)	5166	152	785232
b	Physical Analysis					
1	X-RD Studies on composite	Nos	137	5813	0	0
2	Spectroscopic Studies (Trace element)	Nos	170	5603	0	0
3	Petrographic Studies	Nos	130	553	10	5530
4	Petrographic Studies	Nos	228	1478	10	14780
5	Specific Gravity determination	Nos	94	399	10	3990
	Sub Total C					3983473
	Total A+B+C					16653656
D	EXPLORATION REPORT - 1% of (A+B+C)					175000
	Preservation of Cores					
	Gl core boxes	nos	0	400	193	77200
	Transportation	kms	0.0	35	703	24605
E	Peer Review of Reports	Nos	10000*	10000	1	10000
	GRAND TOTAL A to E					17450861
	GST 18%					3141155
	Grand Total with GST 18%					20592158
						Say Rs 205.93 Lakh
1	Revised Terms of Financial assistance by NMET as per Gazette of India notification No. 22(1)/2007-M.I. dated 03-07-2014 and revised as per notification no. 22(1)/2007-M.I. dated 03-07-2015					
2	Phosphate values have been considered as per Rule 5(1)(b) Limitation on Royalty Rules, 2015 and Schedule of Rules					
3	*The Peer Review amount is to be paid to the members of Peer Review Committee constituted by the Executive Committee of NMET					
4	** Beneficiation costs has been considered @ 8% of ROM cost					

Time schedule (in months) for Prospecting Exploration (G-3) for Limestone in Digoan Block, Chittapur Taluka, Kalaburagi District, Karnataka

Sl. No.	Activities	Unit	MONTHS Financial Year 2018-19									Total
			1	2	3	4	5	6	7	8	9	
1	Camp Setting	Month	← →									1 month
2	Surface Drilling (2 rig)	m.		←	—	—	—	→				1170 m (in 13 BHs)
3	Survey Party days (1 Party)	day	←	—	—	—	—	→				7.01 sq.km.
4	Geologist Party days (1 Party)	day		←	—	—	—	—	→			150
5	Sampling Party days, Core Sampling (2 party)	day			←	—	—	—	→			120
6	Laboratory Studies	Nos.				←	—	—	—	→		930 samples
7	Camp Winding	Month							← →			1 month
8	Geological Report Writing	Month						←	—	—	→	4 month

COST SHEET FOR PRELIMINARY EXPLORATION (G-3) IN UDAGI BLOCKS, CHITTAPUR TALUK, DISTRICT- KALABURAGI, KARNATAKA

S.N	Item of Work	Unit	Base Rate as on 01-04-1990	Financial Year (2018-19)		
				Calculated Rate	Quantity	Amount (Rs)
A	DRILLING					
1	Surface Drilling (3 Nos)	m	1711	7048	1100	7750800
2	Transportation	Km	8.5	33	800	26400
3	Accomodation	One time/ Drill	54026	900969	2	1801938
4	Camp Setting / Winding	(a Drilling	85605	224504	4	1010456
5	Road Making (Flat Terrain)	Km	5400	15317	12	183804
	Sub Total A					10969846
B	GEOLOGICAL WORK					
1	Survey Party Days (1 party)	day	1360	5055	90	455080
2	Geologist Party days (1 party)	day	1541	5083	100	508960
3	Core Sampling Party days (party)	day	525	2805	140	467700
	Sub-Total B					1740020
C	LABORATORY STUDIES					
a	Chemical Analysis					
i	Primary – Oxide Samples					
	(i) for 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and, LOI	Nos	480 (180+300)	2670	240	7240800
	(ii) for additional 2 radicals SO3 & P2O5	Nos	180 (78+102)	3035	40	94240
	(iii) Check samples for analysis of for 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	480 (78x5=10)	3675	42	132140
	(iv) External Check (NABL) samples for analysis of for 8 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	480 (78x5= 10)	3570	54	224280
	v) Primary Samples for H2O	Nos	110	580	20	11600
	vi) Sterilization Studies	Nos		7000.00	0	0
	vii) Transportation for Discrete samples for Sterilization	Km	8.8	33	0	0
2	Composite Samples					
	i) for 12 radicals (CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5, LOI, MnO2, K2O, Na2O, and Cl)	Nos	900 (78x11+102)	5198	140	727840
b	Physical Analysis					
1	X-RD Studies on composite	Nos	1747	9518	0	0
2	Spectroscopic Studies (Trace elements)	Nos	1173	6700	0	0
3	Preparation of thin section	Nos	360	556	10	5560
4	Petrographic Studies	Nos	225	1470	10	14700
5	Specific Gravity calculation	Nos	80	989	10	9890
	Sub-Total C					2980670
	Total A+B+C					15510641
D	EXPLORATION REPORT - 1% of (A+B+C)					155106
	Preservation of cores					
	Core box	Nos		2000	275	550000
	Transportation	Kms	8.8	33	800	26400
E	Peer Review of Reports	Nos	10000	10000	1	10000
	GRAND TOTAL A to E					16271941
	GST 18%					2928949
	Grand Total : with GST 18%					19200890
				Say Rs. 192.01 Lakh		

1. Revised Rates in Form-I and Level (Work done by) MECL on behalf of Govt. of India Vide D.O.M. No. 20/1/2017-MI dated 02/07/2018 and revised as per notification issued by DGM (I/C) Vide No. MECL/20/2018-Estt. dated 13/07/2018 for all the work done by MECL for Geological & Exploration studies for Minerals.
2. Royalty is extra and to be reimbursed as there is no provision in Schedule-I of Revised Rates of Remuneration Vide S.O. 3636 Schedule of Rates.
3. The Peer Review charges shall be paid by the members of Peer Review Committee (one member) by the Executive Committee of MECL.

Time schedule (in months) for Prospecting Exploration (G-3) for Limestone in Udagi Block, Chittapur Taluka, Kalaburagi District, Karnataka

Sl. No.	Activities	Unit	MONTHS Financial Year 2018-19									Total
			1	2	3	4	5	6	7	8	9	
1	Camp Setting	Month	← →									1 month
2	Surface Drilling (2 rig)	m.		←	—	—	→					1100 m (in 12 BHs)
3	Survey Party days (1 Party)	day	←	—	—	—	→					6.11 sq.km.
4	Geologist Party days (1 Party)	day		←	—	—	—	→				150
5	Sampling Party days, Core Sampling (2 party)	day			←	—	—	→				120
6	Laboratory Studies	Nos.				←	—	—	→			860 samples
7	Camp Winding	Month							← →			1 month
8	Geological Report Writing	Month						←	—	—	→	4 month

COST SHEET FOR EXPLORATION PROPOSAL (G-3 STAGE) FOR IRON & MANGANESE ORE IN BOKNA BLOCK, DISTRICT: WEST

SL. NO.	Item of Work	Unit	Base Rate	Escalated rates (2015-16)			Grand Total	
				Esc. Rate	Qty.	Amount	Qty.	Amount
			1.4.90					(Rs)
A	DRILLING							
1	Surface Drilling (2 rigs)*	m	2651	[illegible]	1000	3472000	1000	3472000
2	Transportation	Km	69	93	2000	237600	2000	237600
3	Accomodation (One time Drill)		187000	650650	2	1301300	2	1301300
4	Camp Setting	day	41000	254154	4	1016616	4	1016616
5	Road Making (Hilly Terrain)**	Km	6600	21076	15	316140	15	316140
	Sub Total A					11400292		11400292
B	EXCAVATION							
	Pitting of 1m x 1mx 1m	Cu.m	397	1759	10	17590	10	17590
C	GEOLOGICAL WORK							
1	Survey Party days (1 party)	day	1150	5366	135	724410	135	724410
2	Geologist Party days (1 party)	day	1341	6263	150	939450	150	939450
3	Bulk Sampling Party days (1 party)	day	2000	13825	15	207375	15	207375
4	Core Sampling Party days (1 party)	day	500	2025	150	303750	150	303750
	SUB TOTAL B					2341050		2341050
D	LABORATORY STUDIES							
i	Chemical Analysis							
	i) Primary & Check samples							
	a)*** For 3 radicals (Fe, SiO_2 & Al_2O_3) For iron core samples + Internal Check Samp.	Nos	297(110 +75x2)	1402	500	701000	500	701000
	b)*** 9 Radicals (Al, SiO2, P_2O_5, Fe_2O_3, MnO and Insoluble) for Manganese (core samp + Internal Check Samp	Nos	420(110 +75x4)	2070	600	1242000	600	1242000
	c)*** External Check Samples from NABL Labs For 3 radicals (i.e. SiO2 & Al2O3) For iron	Nos	297(110 +75x2)	1402	25	35050	25	35050
	d) ***Externa Check Samples from NABL Labs For 9 Radicals (Mn, SiO_2, P_2O_5 Fe_2O_3, MnO and Insoluble) for Manganese	Nos	420(110 +75x5)	2770	25	69250	25	69250
	ii) Composite Samples							
	***Composite Samples for 7 radicals (Fe, SiO2, Al2O3, P, Mn, S & H2Os) For Iron	Nos	297(110 +75x5)	1386	40	55440	40	55440
	b)***Composite Samples for 11 radicals (Mn SiO_2, P_2O_5, Fe_2O_3, MnO2 and Insoluble) for Manganese	Nos	450(110 +85x5)	2870	70	200900	70	200900
2	Physical Analysis							
	i) Preparation of thin section	Nos	130	598	10	5980	10	5980
	ii) Reflected light Studies	Sets	225	1470	10	14700	10	14700
	iii) Preparation of polished section	Sets	100	500	10	5000	10	5000
	iv) Mineragraphic Studies	Nos	184	2009	10	20090	10	20090
	v) Density Determination	Nos	24	144	10	1440	10	1440
	Sub Total C					2425780		2425780
E	Preservation of Core							
	i) GI Core boxes	Nos.		1180	250	295000	250	295000
	ii) Transportation of Core Boxes	Km	5.5	19.2	1250	24000	1250	24000
	Sub-Total D					319000		319000
	Total A+B+C+D+E					16264072		16264072
F	EXPLORATION REPORT - 1% of (A+B+C+D+E)				1	162640	1	162640
G	PEER REVIEW OF DGR (Lump Sum)	Nos		3000	1	10000	1	10000
	Grand Total : A to G							16436712
H	GST @ 18%							2958608
	GRAND TOTAL							19395321
								Say 199.45 Lakhs

Notes:

1. Revised Rates of Promotional Work done by MECL on behalf of Govt. of India Vide letter No. 37(1)/2006-M... dated-05/07/2014 and based on actual escalation as per RBI indices as on 31-05-2015 and the same has been considered for subsequent year.
2. *Coal Committee rates for iron ore are not available, hence Gold mines are taken for Drilling
3. **Payment will be as per length of road made.
4. ***Decision on Choice of Radicals will be taken By Geologist in field only after logging and determination of Mineralised Zone on Visual basis.
5. Statutory payments relating to forest clearance will be paid extra
6. In case of outsourcing handling charges will be paid as applicable for NMET blocks.

(Fr. Prel Exploration and evaluation - 0803(P) HC Code: 960843)

TIME SCHEDULE /ACTION PLAN , G3 LEVEL OF IRON-MANGANESE ORE EXPLORATION IN BOKNA BLOCK, WEST

Sl. No.	Activities	Unit	MONTHS											Total
			1	2	3	4	5	6	7	8	9	10	11	
1	Camp Setting	Month	→											1 month
2	Core Drilling (2 rigs)	m.		←				→						1000 m (in 10 Bits)
3	Pitting	Cu.m				← →								10
4	Bulk Sampling Party days	Day				← →								10
5	Survey Party days (1 Party)	day		←				→						120
6	Geologist Party days (1 Parties)	day		←					→					120
7	Sampling Party days: Core Sampling (1 parties)	day			←				→					150
8	Camp Winding	Month			→				← →					1 Month
9	Laboratory Studies	Nos.				←				→				1220
10	Report-Writing	Month							←				→	5 months

COST SHEET FOR EXPLORATION PROPOSAL FOR LIMESTONE IN RANIGAON-GONDAIYA BLOCK, TEHSIL- KOTA, DIST.- BILASPUR, CHHATTISGARH

Sl. No	Item of Work	Unit	Base	Financial Year (2015-16)			Financial Year (2015-20)			Total	
			Rate	Est.Rate	Qty.	Amount	Est. Rate	Qty.	Amount	Qty	Amount
			14.10	(Rs.)		(Rs.)			(Total)		(Rs.)
A	DRILLING										
1	Rig mobilization (1 trip)	m	17.5	7029	600	4218000	7029	0	0	600	4218000
2	Transportation	Km	0.5	33	1907	62931	33	0	0	1907	62931
3	Accomodation	Drilling Unit	15987	150000	2	1281385	150000	0	0	2	1281385
4	Drilling Setting / Welding	Drilling Unit	38625	251064	4	1019456	251064	0	0	4	1019456
5	Road Repairing (Hot mix etc)	Km	7000	190.7	1	19057	19057	0	0	1	19057
	Sub Total A					6757027			0		6757027
B	GEOLOGICAL WORK										
1	Survey, Field Work (Deputy)	day	1107	7000	43	301000	6998	0	0	43	301000
2	Drafting of Plate/ day's (1 set/s)	day	1941	2000	35	70000	1999	0	0	35	70000
3	Core Sampling Party day's(2 persons)	day	927	2000	120	240000	2000	0	0	120	240000
	Sub-Total B					1276870			0		1276870
C	LABORATORY STUDIES										
	a Chemical Analysis										
1	Laboratory Check Samples										
	In the Sample (CaO, MgO, SiO_2, Al_2O_3, Fe_2O_3, LOI)	No.	740 (700+40)	2570	560	1439200	2570	0	0	560	1439200
	In the Sample (Fe_2O_3 & P_2O_5)	No.	180 (70+110)	1089	0	0	1089	0	0	0	0
	a) Internal Check Samples for (CaO, MgO, SiO_2, Al_2O_3, Fe_2O_3 & LOI)	Nos.	400 (140+260)	2570	25	64250	2570	0	0	25	64250
2	Chemical Services										
	Chemical Analysis (CaO, MgO, SiO_2, Al_2O_3, Fe_2O_3, Cl, TiO_2, Fe_2O_3, KMnO, K_2O, Na_2O, LOI)	No.	340 (270+70)	2570	90	231300	2570	0	0	90	231300
	b Physical Analysis										
1	Preparation of Pulverization	Nos.	180	535	10	5350	535	0	0	10	5350
2	Petrographic Studies	Nos.	228	1479	10	14790	1479	0	0	10	14790
3	Specific Gravity determination	Nos.	30	194.9	20	3898	194.9	0	0	20	3898
	Sub-Total C					787788			0		787788
D	Preservation of Core										
	a) Core boxes	Nos.		2025	150	303300	2025	0	0	150	303300
	b Transportation of Core Boxes	Km	8.5	39.6	600	23400			0	600	23400
	Sub-Total D					326400					326400
	Total A+B+C+D					10297277			0		10297277
E	EXPLORATION CONTIGENCY - 1% of (A+B+C+D) or 125000 whichever is more				0	175000			0	1	175000
F	PEER REVIEW OF DGR (Lump Sum)	No.		10000	1	10000	10000	0	0	1	10000
	TOTAL A to F					10472277					10472277
	GST 18%										1885916
	Grand Total (with GST 18%)										12358193
						Total					Say 123.6 Lakhs

Note

1 Revised Rates of Promotional Work (Lump Sum) by MECL on behalf of Govt. of No.2 Mineral Block No. 2(i) (2015-20) dated 09/07/2014 and based on DGM, CCDDA on 01.08.2014 and Lump sum Rs. 3710642/- of the same has been taken for all subsequent year.

2 Photographs in case have been considered as there is no rates for creating the Revised Rates of Promotional Work of Mineral Exploration of Rana.

Mineral Exploration and Consultancy Limited

Table:6.1 TIME SCHEDULE FOR EXPLORATION (G-3) OF LIMESTONE IN RANIGAON-GONDAIYA BLOCK, DISTRICT- BILASPUR, CHHATTISGARH

Sl. No.	Activities	Unit	MONTHS						Total
			1	2	3	4	5	6	
1	Surface Drilling (2 rig)	m.	←	→					600.00 (in 11 BHs)
2	Survey Party days (1 Partics)	day	←	→					50
3	Geologist Party days (1 Parties)	day	←	→					90
4	Sampling Party days, (2 Parties)	day	←	→					120
5	Laboratory Studies	Nos.		←	→				785
6	Camp Winding	Month			←	→			1
7	Report Writing (including peer review)	Month				←	→		4