MINUTES OF THE 12th MEETING OF TECHNICAL CUM-COST COMMITTEE (TCC) OF NATIONAL MINERAL EXPLORATION TRUST HELD AT GSI, CENTRAL REGION, NAGPUR ON 8th& 9th JANUARY 2018.

The 12th Meeting of Technical cum- Cost Committee of National Mineral Exploration Trust (NMET) was held at GSI, Central Region, Nagpur on 08-01-2018 & 09-01-2018 under the Chairmanship of Shri. D. Mohan Raj, Addl. Director General, GSI, Nagpur. The list of participants is as anx. -I.

Shri. D. Mohan Raj, Addl. Director General, GSI & Chairman Technical Cum-cost committee welcomed all the members of the committee. He appraised the committee regarding the agenda items of the meeting. He suggested that as this is first meeting of Technical cum-Cost committee, the committee can hold parallel session on discussions of technical proposals as well as the financial aspects.

Shri Mushtaque, HOD (Exploration) & Member Secretary, NMET, TCC also welcomed the all committee members and requested Shri B.P. Raturi, Dy. G.M. (Exploration), MECL to start the proceedings. Shri B.P. Raturi, Dy. G.M. (Exploration), MECL presented the agenda items of the meeting.

The Committee recommendations in respect of various proposals are as under:

1. Scrutiny and finalisation of cost estimates of 5 blocks, in principle approved by 5th executive committee of NMET (Total cost Rs. 1393.47 lakhs)

5th Executive committee of NMET has approved 5 blocks in principle which are: – Anx-I A-a to e.

a. NahardihMadhaipaur Block for Limestone Exploration (G-3/ G-2), In Tehsil -Tilda, Distt. Raipur, Chhattisgarh. **(cost Rs. 250.50 lakhs)**
b. Pasupulabodu Block for Limestone Exploration (G-2) Nereducherla Mandal, District- Suryapet, Telangana. **(cost Rs. 45.50 lakhs)**
c. Sultanpur Block, for Limestone Exploration (G-2) Mattampally- Mandal, District- Suryapet, Telangana. **(cost Rs. 49.90 lakhs)**
d. Saidulnama Block for Limestone Exploration (G-2) Nereducherla Mandal, District- Suryapet, Telangana (cost Rs. 43.41 lakhs)
e. BRH Iron Ore Mines NEB Range M/s RMMPL, ML NO. 2010, District- Ballari, Karnataka. (cost Rs. 1004.16 lakhs)

Committee decided that the cost of the proposals may be vetted by the finance members of the committee. These were vetted by the finance members of the committee. Shri. Alok Sharma, G.M. (Exploration), CMPDI, discussed rate applicable by different agencies. He also emphasized that GST will be applicable in all cost estimate.

MECL has informed that earlier during Service Tax regime, MECL was exempted to pay service tax for promotional projects and same is continued while raising bill for NMET projects. Committee also discussed about rates for different activities by different agencies. Dr. Joyesh Bagchi, Director (Technical), Ministry of Mines informed the committee that MOM approved rate for MECL is accepted as the basic rate and other organizations are free to submit their own rates if it is lower than that.

2. Regional Exploration Proposal for Copper and Gold In Deravad- Chargadhia- Bansra Block, (Block Id Wrraj-02), District- Udaipur, Rajasthan

Committee recommended for the approval of drilling proposal submitted by MECL with the following observations. (Quantum of work attached as Anx. II)

1. Surface work by Groove sampling to be carried out along the profile where drilling has been proposed.
2. The vertical depth of intersection is to be considered as 50m.
3. 9 BHs to be planned by corroborating the geophysical work and analytical data of GSI, total 625m drilling.
4. GR should be submitted by May 2018 (02 months for drilling, 1-month sample analysis and preparation of report, each).

3. Regional Exploration Proposal for Iron Ore In Kanawat-Chala - Karath-Bagholi Area, (Block Id-Wr-Raj-07), District: Jhunjhunu & Sikar, Rajasthan

Committee recommended for the approval of drilling proposal of MECL of 615m in 10 boreholes in the block Report is to be submission by July 2018 after peer review. (Quantum of work attached as Anx. III)

4. **Approval of honorarium of Rs. 10,000 (plus 15% handling charges) per report paid to peer review panel of expert members of NMET committee for NMET exploration blocks**

Committee recommended that as decided by EC, the honorarium of Rs, 10,000 (Rupees Ten thousand only) only per report will be paid to each peer reviewer for each report generated through NMET funding and same should be included in the exploration cost for all new proposals. This amount may be reflected in all projects sanctioned earlier. Committee also recommends that the selection of Peer Reviewer will be done by NMET Secretariat, New Delhi.

5. Approval of Additional Sampling Work Carried Out In Different Regional Exploration Blocks. (Total cost Rs. 8.10 lakh + 23.91 lakh = Rs. 32.01 lakh)

Committee recommended for the approval of all additional samples as listed Anx.-IV. The analyses should be done by NABL accredited laboratory.

6. Proposal for exploration for phosphorite in five blocks (block-I. II, III, IV, V), Sonrai rock phosphate deposit, Tori-Pisnori area, tehsil- Mehrauni, Lalitpur, U.P. (Cost Rs. 470.39 lakhs)

Committee recommended that as phosphorite is fertilizer mineral which is strategic for the country and this deposit was already mined by UPSMDC therefore, it can be explored uptoG-2 level to consider it for auction mining lease. (Quantum of work attached as Anx. V)

Committee recommended the approval of exploration proposals submitted by MECL in Block –II, Block-III &Block IV with following observations;

1. Recommended blocks can be clubbed in to one block.
2. Surface sampling is to be done in the block.
3. G-3 level of exploration at 200m grid interval may be carried out with a planning of 50m vertical depth of intersection.
4. In case of positive results, infilling boreholes need to be done at 100m interval.
5. For extension areas (Block I & Block-V), decision will be taken up by the committee after the results of Block-II, III & IV are available.

7. PROPOSAL FOR REGIONAL EXPLORATION OF KAMKU - SALUMILIMESTONE BLOCK (G3-LEVEL). (Cost Rs. 47.43 lakhs)

Committee recommended the proposal of DGM, Nagaland with the following observation -

1. Drilling for a target of 250m in 05 boreholes with 50m vertical depth is to be given.
2. Core sampling at 2 m interval – 125 nos.
3. Check samples – 10 nos.
4. Time line for completion of work will be 14 months (final report)

(Quantum of work attached as Anx. VI)

8. **Proposal for MOLLEN-JOPI-ZIPHU AREA Ni-Cr-Co MAGNETITE (G-4 LEVEL) (Cost Rs. 43.65 lakhs)**

Committee recommended the proposal of DGM, Nagaland with the following observation -

1. Geological mapping on 1:12,500 scale
2. Bed rock sampling 200 nos.
3. Pitting and trenching – 20 cu m.
4. Analysis of samples.
5. Time line for completion of work within 12 months (final report)

Quantum of work attached as Anx. VII

9. Regional Exploration Proposal For Potash mineralisation in Lakhasar Sub Basin, District-Bikaner, Rajasthan (Cost Rs. 843.84 lakhs)

Committee recommended the proposal of MECL, Nagpur with the following observations-

1. Approval of 07 boreholes in principle.
2. After drilling of 04 boreholes and with analytical results of at least two boreholes a review will done by this committee to decide the future work.
3. In H2 cycle sample length 0.20m
4. In H1 cycle sample length 1.0m.
5. Accordingly, quantum of work modified
6. Time line for completion of 04 boreholes with analytical results of two boreholes time is allowed 08 months.

Quantum of work attached as Anx. VIII

10. Regional Exploration Proposal for Mailaram copper block, Badradri-Kothagudem district, Telangana State.

Committee recommended the proposal of TSMDC with the following observations-

1. Bed rock, soil, stream samples and pitting & trenching may be followed as given in the table
2. Oxides and all trace elements may be analyed by XRF.
3. Spectrometric studies are not recommended
6. Time line for completion of work will be 12 months (including submission of final report)

11. **Regional Exploration Proposal for Limestone block at Jeteya, Buruborta & Dumurjowa in West Singhbhum District, Jarkhand State (G4)**

Committee recommended the proposal of TSMDC with the following observations-

1. Out crop map of the area before starting other work (1:12500 scale)
2. Pitting and trenching 50 cu m.
3. Bed rock – 200nos
4. Geophysical work not required
5. Core drilling 250m (5 Bhs. 50m depth), this will be after review of the work from point 1 to 3

Time line for completion of work 06 months.

12. **Regional Exploration Proposal for Limestone block at Gupteswar in Koraput District, Odisha State (G4)**

Committee recommended the proposal of TSMDC with the following observations-

1. Out crop map of the area before starting other work (1:12500 scale)
2. Pitting and trenching 50 cu m.
3. Bed rock – 200nos
4. Sampling for Tin 50nos.
5. Geophysical work not required
6. Core drilling 250m (5 Bhs. 50m depth), this will be after review of the work from point 1 to 4
7. Time line for completion of work 06 months

13. MERIT has submitted seven proposals for the exploration of cement grade limestone under G-2/G-3 stage.

A. Regional Exploration Proposal for Madinapadu Limestone block, district Guntur Andhra Pradesh. (G3/G2)

Committee recommend the proposal of MERIT with the following observations-
Committee recommend that the all the MERIT proposals should be come through DMG, AP to the NMET.

Committee recommended that exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – 400m in 10 boreholes with 800m spacing
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

B. Regional Exploration Proposal for Mutyalampadu - Tangeda Limestone block Dachepalli Mandal district Guntur Andhra Pradesh. (G3/G2)

Committee recommended that exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – 400m in 10 boreholes with 800m spacing
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

C. Regional Exploration Proposal for RamapuramLimestone block Dachepalli Mandal district Guntur, Andhra Pradesh. (G3/G2).

Committee recommended that exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – 240m in 06 boreholes with 800m spacing
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

D. Regional Exploration Proposal for Ramapuram Block Limestone block Dachepalli Mandal district Guntur, Andhra Pradesh. (G3/G2).

Committee recommended that exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – 400m in 10 boreholes with 800m spacing
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

E. Regional Exploration Proposal for Bhimagundam Block Limestone block district YSR Kadapa, Andhra Pradesh. (G3/G2).

Committee recommended that the block has to split in two parts and accordingly the quantum of work and cost may be revised. The exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – according to the boreholes in each block
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

F. Regional Exploration Proposal for Dommaranandyala-Veparala Block Limestone block district YSR Kadapa, Andhra Pradesh. (G3/G2).

Committee recommended that exploration in area of G2 followed by G3 level. Concurrence of technical committee needed for G-2 level of work.

1. Drilling – 1040m in 26bhs with 800m spacing
2. Sample interval 1m
3. Time line for completion of G-3 work 06 months and G-2 next 06 months (final report)

The modified proposals along with the break-up of budget will be submitted by DMG, AP for necessary approval.

Other points discussed-

1. All the data of exploration projects should be in GIS platform.
2. 40 samples of MECL (diamond prospects- Chellima & Bhimasamudram) for heavy mineral separation can be done from NMDC as the have the expertise in their domain and MECL does not have this facility.
3. One finance wing of NMET is required to streamline this vital part of NMET activities.
4. On the clarification sought by MECL, TCC clarified that Chemical analysis for exploration work can be done by Government labs or NABL accredited labs. The committee feel that in case the samples analysed from the private agencies by NABL accredited labs must be ensured for reliable data.
5. As per directives of JS (Dr. NKS), the issue raised by NLC regarding supervision charges for the projects was taken up for discussion. It was discussed that the NMET have the provision regarding this in technical rule 13 (i) which stipulates that this work can be done by NMET itself or by engaging any Govt. entity. As there is a TCC in place and MECL also has its own framework of technical supervision, the TCC decided that separate supervision charges are not justified and hence not recommended. However, the representation of CMPDI strongly supported NLC request for payment of technical supervision charges for coal/lignite exploration. He conveyed that CMPDI/NLC demarcate block boundaries for coal/lignite block, certify JMC (Joint Measurement certificate) of borehole completion, carry out feasibility study of exploration as per mining prospective etc. He therefore, stressed that in this aspect the technical supervision charges for coal / lignite exploration may paid to CMPDI/NLC. The meeting ended with vote of thanks.

The meeting ended with vote of thanks.

(Shri D. Mohan Raj)
Add. Director General, GSI Central Region,
Nagpur & Chairman, TCC, NMET

9/1/18
(Shri Musthaque)
HOD (Exploration), MECL, Nagpur
& Member Secretary, TCC, NMET

(Dr. Joyesh Bagchi)
Director (Technical), MoM, New Delhi &
Member, TCC, NMET

9/1/18
(Shri P. Tarafdar)
Deputy Director General, GSI, CHQ,
Kolkata & Member, TCC, NMET

9/1/18
(Shri Alok Sharma)
G.M. (Exploration), CMPDIL, Ranchi, &
Member, TCC, NMET

9/1/18
(Shri Mriganka Ghatak)
Director, GSI, NMET
Secretariat, DGCO, New Delhi &
Member, TCC, NMET

9/1/18
(Shri S. K. Adhikari)
Chief Mining Geologist, IBM, Nagpur &
Member, TCC, NMET

9/1/18
(Shri B.P. Raturi)
Dy General Manager (Exploration),
MECL, Nagpur &
Member, TCC, NMET

9/1/18
(Shri Prasant Kumar Maharana)
Asst. General Manager (Finance) , NALCO,
Bhubaneswar & Member,
TCC, NMET

9/1/18
(Shri H. K. Verma)
DGM (Finance), HCL, Malanjkhand &
Member, TCC, NMET

ANNEX.-I.

List of participant's present in 12th Meeting of Technical cum-Cost Committee (TCC) of NMET held on 8th & 9th January 2018 at GSI, Central Region, Nagpur

Sr No	Name of Participant's	Designation & Organisation	Participation	Mobile No	Email	Signature
1	Shri D. Mohan Raj	Add. Director General, GSI, Nagpur	In Chair	9765980957	hodnm2@gsi.gov.in	
2	Shri Mushtaque	HOD-Exploration, MECL, Nagpur	Member Secretory	7350003782	mdmushtaque2078@gmail.com	
3	Dr. Joyesh Bagchi	Director (Technical), Ministry of Mines, N. Delhi	Member	9868918087	dirtech.mom@nic.in	8/1/18
4	Shri Alok Sharma	G.M. (Exploration), CMPDIL, Ranchi	Member	9937298065	gm.exploration.cmpdil@gmail.com	8/1/18
5	Shri P. Tarafdar	Deputy Director, General GSI, Kolkata	Member	9830888847	tarafdar.pradipta@gmail.com	8/1/18
6	Shri S. K. Adhikari	Chief Mining Geologist, IBM, Nagpur	Member	7588690545	skadhikari@ibm.gov.in	8.1.18
7	Shri B. P. Raturi	Dy. GM (Exploration), MECL, Nagpur	Member	9422806417	bpraturi1@yahoo.co.in	8/1/18
8	Shri Prasant Kumar Maharana	Asst. GM (Finance), NALCO, Bhubaneswar	Member	8500669500	pmaharana@rediffmail.com	8.1.18
9	Shri. H. K. Verma	Dy. GM (Finance), HCL, Kolkata	Member	9752860983	verma_hk@hindustancopper.com	
10	MRIGANKA BHATAR	Director, GSI, New Delhi	Invitee	9650267682	nmet-mines@gov.in	8/1/18
11	Dr. S. Kamalakar	Sr Manager (Geo) MECL	—	9370621725	drskbmpatel@gmail.com	8/1/18
12	L. Pangeryadin	Jt. Dir. DGM, Nagaland	—	9729876214	geominenaga@gmail.com (DGM, Nagaland JD)	

ANNEX - I

Sr No	Name of Participant's	Designation & Organisation	Participation	Mobile No	Email	Signature
13	DAVID LHOUPENYI	Geologist, DGM Nagaland	invitee	9436434678	dlhoupenyi@gmail.com	
14	K. RAJASEKHAR REDDY	G. M. (Fin.)	M/s TSMDC Ltd Hyd.	8008558580	tsmdcltd@gmail.com	
15	Laxman Mamidi	Vice President (Geology)	Consultant TSMDC	7702749111	laxmangeo@gmail.com	
16	P. S. Ranga Reddy	DGM (Mines)	TSMDC	8332974639	tsmdc ltd@gmail.com	
17	E. Hanumantha Rao	CEO / MERIT GoAP	Govt. of AP (DMG)	7093273096	ceo.merit@gmail.com	
18	Dr. R.P. Singh	Deputy Manager (Geology)	CDPPDJ	8582289042	raghvendrapratapsingh@gmail.com	R.P.Singh
19	M.W. Wadaskar	Sr. Manager (Geology)	MECL.	9921870146	manojwadaskarmecl@gmail.com	
20	Saurabh Vivek	Asst. Manager (Geology) MECL	Invitee	9545425923	Saurabh.12181@gmail.com	07/01/2015
21	Dr. R CHOUDHURI	Adv. MECL (Retd.)	MECL	9983441856	ranjitchoudhuri@gmail.com	
22	K. K. KAUSHIK	Dy. G.M. (Exploration)	MECL	9422805475	kkaushik47@gmail.com	
23						
24						
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ANN. I-A-a

Table: 6.2 Cost Estimate for G-3 / G-2 level of Exploration of Limestone in Nahardih-Madhaipur Block, Distt. Raipur, Chhattisgarh

S.N	Item of Work	Unit	Base Rate as on 01-04-1990	Escalated rates (2016-17) G-3 Level of Exploration			Escalated rates (2017-18) G-2 Level of Exploration			Total Quantity	Total Amount (Rs.)
				Rate	Qunty	Amount (Rs)	Rate	Qunty	Amount (Rs)		
A	**DRILLING**										
1	Surface Drilling (2 Rigs)	m.	1714	6780	420	2847600	6780	980	6644400	1400	9492000
2	Transportation	Km.	8.8	31	800	24800	31	800	24800	1600	49600
3	Accomodation	One time/ Drill	185925	663715	2	1327430	663715	0	0	2	1327430
4	Camp Setting / Winding	Drill/ month	68606	244910	2	489820	244910	2	489820	4	979640
5	Road Making (Flat Terrain)	Km	5200	18563	10	185629.6	18563	10	185630	20	371260
	Sub Total A					**4875280**			**7344650**		**12219930**
B	**GEOLOGICAL WORK**										
1	Survey Party Days (1 party)	day	1180	5840	90	525600	5840	90	525600	180	1051200
2	Geologist Party days (1 party)	day	1541	7802	120	936240	7802	120	936240	240	1872480
3	Core Sampling Party days(1 party)	day	525	2809	90	252810	2809	90	252810	180	505620
	Sub-Total B					**1714650**			**1714650**		**3429300**
C	**LABORATORY STUDIES**										
a	**Chemical Analysis**										
1	Primary + Check Samples										
	i) for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 '(110+76x5)	2580	380	980400	2580	840	2167200	1220	3147600
	ii) for additional 2 radicals SO3 & P2O5	Nos	186 '(76+110)	972	40	38880	972	85	82620	125	121500
	iii) Check samples for analysis of for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 '(76x5+110)	2580	40	103200	2580	85	219300	125	322500
	iv) External Check (NABL) samples for analysis of for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 '(76x5+110)	2580	20	51600	2580	45	116100	65	167700
2	**Composite Samples**										
	i) for 12 radicals (CaO, MgO, Al2O3, SiO2, Fe2O3, SO3, P2O5 , LOI, MnO2, K2O, Na2O and Cl.)	Nos	946 '(76x11+110)	4992	65	324480	4992	140	698880	205	1023360
b	**Physical Analysis**										
1	X-RD Studies on composite	Nos	1137	5605	20	112100	5605	25	140125	45	252225
2	Spectroscopic Studies (Trace element)	Nos	1173	5388	20	107760	6861	25	171525	45	279285
3	Preparation of thin section	Nos	100	538	20	10760	538	25	13450	45	24210
4	Petrographic Studies	Nos	228	538	20	10760	538	25	13450	45	24210
5	Specific Gravity determination	Nos	32	377	20	7540	377	25	9425	45	16965
	Sub-Total C					**1747480**			**3632075**		**5379555**
	Total A+B+C					**8337410**			**12691375**		**21028785**
D	**EXPLORATION REPORT - 1% of (A+B+C)**					**0**			**210288**		**210288**
	GRAND TOTAL A to D					**8337410**			**12901663**		**21239072**
	GST 18%										**3823033**
	Grand Total : with GST 18%										**25062105**

Say Rs 250.50 Lakhs

1. Rates of Goel Committe based on actual escalation as per RBI index as on 31/3/16 and provisional escalation of @15 %points for drilling & 25% points for Geology +Laboratory studies for subsequnet year.
2. Phoshphorite rates have been considered as there is no rates for Lst. in Goel Committee report.

ANN. I-A-b

Table:6.2 COST ESTIMATE FOR EXPLORATION OF LIMESTONE IN PASUPULABODU BLOCK (G-3), TEHSIL - NEREDUCHERLA , DISTRICT- SURYAPET, TELANGANA

SL. N0.	Item of Work	Unit	Base Rate 1.4.90	Financial Year (2017-18) Esc.Rate	Qty.	Amount
A	**DRILLING**					
1	Surface Drilling (2 Rigs)	m.	1714	6780	108	732240
2	Transportation	Km.	8.8	31	2000	62000
3	Accomodation	One time / Drill	185925	663715	2	1327430
4	Camp Setting	Drill/ month	68606	244910	2	489820
5	Road Making (Hilly Terrain)	Km	7800	27844	5	139220
	Sub Total A					**2750710**
B	**GEOLOGICAL WORK**					
1	Survey Party Days (1 party)	day	1180	5840		
2	Geologist Party days (1 party)	day	1541	7802	60	0
3	Core Sampling Party days(1 party)	day	525	2809	60	468120
	Sub-Total B					168540
C	**LABORATORY STUDIES**					**636660**
a	**Chemical Analysis**					
1	Primary + Check Samples					
	i) for 6 radicals ($CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3$ & LOI)	Nos	490 76x5+110)	2580	95	245100
	ii) External Check Samples for 6 radicals (CaO,MgO,Al2O3,SiO2,Fe2O3 & LOI)	Nos	490 76x5+110)	2580	5	12900
	iii) For additional 2 Radicals SO3 & P2O5	Nos	186 (110 +76)	972	9	8748
2	Composite Samples					
	i) for 12 radicals ($CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3, SO_3, P_2O_5, Mn_2O_3, TiO_2, K_2O, Na_2O$ & LOI,)	Nos	946 (76x11+110)	4992	7	34944
b	**Physical Analysis**					
1	X-RD Studies on composite	Nos	1137	5605	6	33630
2	Spectroscopic Studies	Nos	1173	5388	6	32328
3	Preparation of thin section	Nos	100	538	12	6456
4	Petrographic Studies	Nos	228	1436	12	17232
5	Specific Gravity determination	Nos	32	188.5	12	2262
	Sub-Total C					**393600**
	Total A+B+C					**3780970**
D	**EXPLORATION REPORT (Rs.60000 or 2% of Value which is more)**					**75619**
	GRAND TOTAL A to D					**3856589**
	GST 18%					**694186**
	Grand Total : with GST 18%					**4550775**
						SAY 45.50 LAKH

Note:

1. Revised Rates of Promotional Work done by MECL on behalf of Govt. of India Vide letter No. 37(I) /2006-M.I. dated- 02_07_2014 and based on actual escalation as per RBI indices as on 31-03-2017 and the same has been considered for subsequent year.
2. Phoshphorite rates have been considered as there is no rates for Limestone in Revised Rates of Promotional Work of MoM Schedule of Rates.

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Table:6.2 COST ESTIMATE FOR EXPLORATION OF LIMESTONE IN SULTANPUR- BLOCK (G-3), TEHSIL - MATTAMPALLY, DISTRICT- SURYAPET, TELANGANA

SL. N0.	Item of Work	Unit	Base	Financial Year (2017-18)		
			Rate	Esc.Rate	Qty.	Amount
			1.4.90			
A	**DRILLING**					
1	Surface Drilling (2 Rigs)	m.	1714	6780	130	881400
2	Transportation	Km.	8.8	31	2000	62000
3	Accomodation	One time / Drill	185925	663715	2	1327430
4	Camp Winding	Drill/ month	68606	244910	2	489820
5	Road Making (Hilly Terrain)	Km	7800	27844	5	139220
	Sub Total A					**2899870**
B	**GEOLOGICAL WORK**					
1	Survey Party Days (1 party)	day	1180	5840		0
2	Geologist Party days (1 party)	day	1541	7802	60	468120
3	Core Sampling Party days(1 party)	day	525	2809	60	168540
	Sub-Total B					**636660**
C	**LABORATORY STUDIES**					
a	**Chemical Analysis**					
1	Primary + Check Samples					
	i) for 6 radicals ($CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3$ & LOI)	Nos	490 (76x5+110)	2580	139	358620
	ii) External Check Samples for 6 radicals ($CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3$ & LOI)	Nos	490 (76x5+110)	2580	6	15480
	iii) For additional 2 Radicals SO_3 & P_2O_5	Nos	186 (110 +76)	972	6	5832
2	Composite Samples					
	i) for 12 radicals (CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3, SO_3, P_2O_5, Mn_2O_3, TiO_2, K_2O, Na_2O & LOI.)	Nos	946 (76x11+110)	4992	13	64896
b	**Physical Analysis**					
1	X-RD Studies on composite	Nos	1137	5605	13	72865
2	Spectroscopic Studies	Nos	1173	5388	13	70044
3	Preparation of thin section	Nos	100	538	10	5380
4	Petrographic Studies	Nos	228	1436	10	14360
5	Specific Gravity determination	Nos	32	188.5	10	1885
	Sub-Total C					**609362**
	Total A+B+C					**4145892**
D	**EXPLORATION REPORT (Rs.60000 or 2% of Value which is more)**					**82918**
	GRAND TOTAL A to D					**4228810**
	GST 18%					**761186**
	Grand Total : with GST 18%					**4989996**
						SAY 49.90 LAKH

Note:

1. Revised Rates of Promotional Work done by MECL on behalf of Govt. of India Vide letter No. 37(I) /2006-M.I. dated-02_07_2014 and based on actual escalation as per RBI indices as on 31-03-2017 and the same has been considered for subsequent year.
2. Phoshphorite rates have been considered as there is no rates for Limestone in Revised Rates of Promotional Work of MoM Schedule of Rates.

ANN. IA d

Table:6.2 COST ESTIMATE FOR EXPLORATION OF LIMESTONE IN SAIDULNAMA BLOCK (G-3), TEHSIL - NEREDUCHERLA , DISTRICT-SURYAPET , TELANGANA

SL. N0.	Item of Work	Unit	Base	Financial Year (2017-18)		
			Rate	Esc.Rate	Qty.	Amount
A	**DRILLING**		**1.4.90**			
1	Surface Drilling (2 Rigs)	m.	1714	6780	127	861060
2	Transportation	Km.	8.8	31	2000	62000
3	Accomodation	One time / Drill	185925	663715	2	1327430
4	Camp Setting / Winding	Drill/ month	68606	244910	0	0
5	Road Making (Hilly Terrain)	Km	7800	27844	5	139220
	Sub Total A					**2389710**
B	**GEOLOGICAL WORK**					
1	Survey Party Days (1 party)	day	1180	5840		0
2	Geologist Party days (1 party)	day	1541	7802	60	468120
3	Core Sampling Party days(1 party)	day	525	2809	60	168540
	Sub-Total B					**636660**
C	**LABORATORY STUDIES**					
a	**Chemical Analysis**					
1	Primary + Check Samples					
	i) for 6 radicals (CaO,MgO,Al_2O_3,SiO_2,Fe_2O_3 & LOI)	Nos	490 76x5+110)	2580	138	356040
	ii) External Check Samples for 6 radicals (CaO,MgO,Al2O3,SiO2,Fe2O3 & LOI)	Nos	490 76x5+110)	2580	7	18060
	iii) For additional 2 Radicals SO3 & P2O5	Nos	186 (110 +76)	972	7	6804
2	Composite Samples					
	i) for 12 radicals (CaO, MgO, Al_2O_3, SiO_2, Fe_2O_3, SO_3, P_2O_5, Mn_2O_3, TiO_2, K_2O, Na_2O & LOI,)	Nos	946 (76x11+110)	4992	11	54912
b	**Physical Analysis**					
1	X-RD Studies on composite	Nos	1137	5605	11	61655
2	Spectroscopic Studies	Nos	1173	5388	11	59268
3	Preparation of thin section	Nos	100	538	11	5918
4	Petrographic Studies	Nos	228	1436	11	15796
5	Specific Gravity determination	Nos	32	188.5	11	2074
	Sub-Total C					**580527**
	Total A+B+C					**3606897**
D	**EXPLORATION REPORT (Rs.60000 or 2% of Value which is more)**					**72138**
	GRAND TOTAL A to D					**3679034**
	GST 18%					**662226**
	Grand Total : with GST 18%					**4341261**
						SAY 43.41 LAKH

Note:

1. Revised Rates of Promotional Work done by MECL on behalf of Govt. of India Vide letter No. 37(I) /2006-M.I. dated- 02_07_2014 and based on actual escalation as per RBI indices as on 31-03-2017 and the same has been considered for subsequent year.
2. Phoshphorite rates have been considered as there is no rates for Limestone in Revised Rates of Promotional Work of MoM Schedule of Rates.

ANN. I-A.e

TABLE-7.2 COST FOR IRON ORE MINERALISATION IN RMMPL - BLOCK (ML NO. 2010), DISTRICT- BELLARY, KARNATAKA

SL. No.	Item of Work	Unit	Base Rate 1.4.90	Escalated rates (2017-18) (PHASE-I Work)			Escalated rates (2018-19) (PHASE-II Work)			Grand Total	
				Esc. Rate (Rs)	Qty.	Amount (Rs)	Esc. Rate (Rs)	Qty.	Amount (Rs)	Qty.	Amount (Rs)
A	DRILLING										
1	Surface Drilling (3 rig)										
	a) RC Drilling (1 Drill)	m	6130*	9330	600	5598700	9180	0	0	600	5598700
	b) Core Drilling (2 Drill)	m	19716*	20702	2538	51756000	20707	305	6314110	2806	58069110
2	Transportation	Km	6.8	31.0	3000	93000	31.0	0	0	3000	93000
3	Accomodation (One time Drill)	Nos	165925	863715	3	1591145	863715	0	0	3	1991145
4	Camp Setting / Winding	- do-	69639	244910	2	734730	244910	3	734730	5	1469460
5	Road Making (hilly Terrain)	Km	7800	27844	15	417660	27844	10	278440	25	696100
	Sub Total A					60801235			7327280		67828515
B	GEOLOGICAL WORK										
1	Survey Party days (2 party)	day	1180	5840	90	525600	5840	30	175200	120	700800
2	Geologist Party days (2 party)	day	1541	7622	300	2286600	7622	120	914640	420	3201240
3	Core Sampling Party days (2 party)	day	525	2899	240	674160	2899	120	337080	360	1011240
4	Bulk Sampling Party Days	days	2586	13439	80	905340	13439	0	0	60	806340
5	Pitting / Excavation	Cu.m	355	1783	10	17830	1783	0	0	10	17830
	Sub-Total C					4364630			1448520		5813150
C	LABORATORY STUDIES										
1	Chemical Analysis										
	i) Primary & Check samples										
	a. For 3 radical (Fe%, SiO2% & Al2O3%)	Nos	262 (110+76x2)	1374	1650	2679300	1374	1500	2061000	3450	4740300
	(b) Check Samples for 3 radical (Fe% SiO2% & Al2O3%)	Nos	262 (110 +76x2)	1374	195	267930	1374	150	206100	345	474030
	d) External Check Samples from NABL Labs for 3radical (Fe%, SiO_2% & Al_2O_3%)	Nos	262 (110 +76x2)	1374	100	137400	1374	75	103050	175	240450
	ii) Composite Samples										
	a) Composite Samples for 7 Radicals (Fe%, SiO_2%, Al_2O_3%, P%, Mn%, S% & LOR%).	Nos	586 (110 +76x6)	2662	275	829050	2662	225	670050	500	1491000
2	Physical Analysis								0	0	0
	i) a) X-RD Studies on composite	Nos	1137	9800	12	67200	5866	8	44840	20	112100
	b) Spectroscopic studies (15 elements Cd,Sn,W,Sb,Mo,Ce,Mn,Ba,La,Bi,Cr & N)	Nos	1173	5388	12	64656	5386	8	43104	20	107760
	(ii) Preparation of thin section	Nos	100	538	10	5380	538	5	2690	15	8070
	iv) Petrographic Studies	Nos	228	1438	10	14380	1438	5	7190	15	21570
	v) Preparation of polished section	Nos	100	538	10	5380	538	5	2690	15	8070
	vi) Mineragraphic Studies	Nos	364	2023	10	20230	2023	5	10115	15	30345
	vii) Specific Gravity determination	Nos	32	186.5	12	2262	186.9	8	1008	20	3770
	viii) Fitting	Nos	-						0	0	0
	ix) Lumpi Fine Ratio Determinations	Nos	24	6523	10	65230	6523	0	0	10	65230
	x) Bulk Density			139	10	1390	139	0	0	10	1390
	Sub-Total C					4150828			315227		7304055
	Total A+B+C					69118693			11929027		81045720
D	EXPLORATION REPORT - 1% of (A+B+C)					0				1	810457
E	Environmental Studies										
1	Satellite Imagery Study	Scene	99567	0	0	0	457948	1	457948	1	457948
2	Baseline data collection (10km radius area)		151273	0	0	0	694857	1	694857	1	694857
3	Chemical Analysis	Nos	2974pc**	0	0	0	804478	1	804478	1	804478
4	Report writing	Nos	50000	0	0	0	50000	1	50000	1	50000
	Sub-Total E					0			1807283		1807283
F	a) Core Preservation Charges in GI Sheets Core Boxes (@ RS 2000 Core Box G/ 22 gauge)	Nos	2000	2000	600	1200000	2000	110	220000	710	1420000
	b) Transportation Charges of Core Boxes	Km	6.8	31	0	0	31	500	15500	500	15500
	Total F					1200000			235500		1435500
	Grand Total : A to F										85098960
	GST 18%										15317813
	Grand Total : with GST 18%										100416773
Note:										Say Rs 1004.16 Lakhs	

1. Goa Committee rates for iron ore are not available , hence Copper rates are taken on actual escalation as per RBI indices as on 31.03.2017 and same has been considered for subsequent years
2. * DMG Karnataka Rates has been considered for drilling as rate for Iron is not available in the schedule rate of MECL approved by MoM
3. ** Negotiated Committee Rates with actual escalation as per RBI Index as on 31.3.2017 and same has been considered for the subsequent year

Mineral Exploration and evaluation 18%(SAC Code: 998343)

ANNEXURE II

DETAILS OF BOREHOLES PROPOSED BY MECL

RAJ-02

SL. NO	BLOCK NAME	SECTION NO	PBH NO	DEPTH (IN M)	INCLINATION	BEARING
1	Bansra	S1-S1'	PBH-01	70	60°	S76°W
2	Bansra	S2-S2'	PBH-02	70	60°	S74°W
3	Bansra	S3-S3'	PBH-03	70	60°	S68°W
4	Bansra	S4-S4'	PBH-04	65	60°	S67°W
			Total	275	in 4 Bhs.	
Sr	Block Name	Section No	PBH No	Depth	Inclination	Bearing
1	Deravad	S1-S1'	PBH-01	65	60°	S87°W
2	Deravad	S2-S2'	PBH-02	60	65°	S64°W
3	Deravad	S3-S3'	PBH-03	65	55°	S88°W
4	Deravad	S4-S4'	PBH-04	85	50°	S73°W
5	Deravad	S5-S5'	PBH-05	75	50°	S83°W
			Total	350	in 5 Bhs.	
			Grant Total	625	in 9 BHs.	

ANNEXURE-III

PROPOSED BOREHOLES IN THE BLOCK

DETAILS OF PROPOSED BOREHOLE IN KANAWAT-CHALA-KARATH-BAGHOLI AREA BLOCK ID (RAJ-07)

Sl. No	Block	Sections	PBH No	Depth (in m)	Inclination	Bearing
1.	RAJ-07	L3-L3'	PBH-01	60	50^0	305^0
2.	RAJ-07	L4-L4'	PBH-02	70	50^0	305^0
3.	RAJ-07	L5-L5'	PBH-03	60	50^0	305^0
4.	RAJ-07	L19-L19'	PBH-04	80	50^0	284^0
5.	RAJ-07	L30-L30'	PBH-05	60	55^0	280^0
6.	RAJ-07	L43-L43'	PBH-06	95	65^0	302^0
7.	RAJ-07	L72-L72'	PBH-07	40	50^0	296^0
8.	RAJ-07	L76-L76'	PBH-08	40	50^0	296^0
9.	RAJ-07	L79-L79'	PBH-09	40	55^0	296^0
10.	RAJ-07	L83-L83'	PBH-10	70	50^0	276^0

Annexure IV

Sl. No.	Block No	Name of the Block	District	Sate	Commodity	No of samples proposed	Additional samples	Element	Quantity	Rate	Amount
1	MH-02	Dhanoli Bazar Block	Sindhudurg	Maharastra	Fe, Ni, Cr, PGE & Au.	50 soil samples	42 additional soil samples taken, No financial implication in analysis				
2	MH-03	Aurala-Sawali Block	Nanded	Maharashtra	Ba, Au, Pb, Cu & W.	For Au/Ag: 30 each for BR/Soil/Stream, Total 90	For Au/Ag: 31-BR, 26-Soil & 35 Stream, total 92, Extra-2 samples	Au/Ag	2.00	1,460.00	2,920.00
3	MH-04	Pathri-Saoli Area	Chandarpur	Maharashtra	PGE Mineralisation	100 BR & 100 Stream sediments	19 no of stream sediments for PGE & 6 bed rock samples for Au	PGE	19.00	10,000.00	1,90,000.00
								Au/Ag	6.00	1,460.00	8,760.00
4	MP-01	Udwara Area	Aliraj pur	Madhya Pradesh	Mn, Phosphorite and Graphite	350 for P_2O_5 & Mn each, 30 for graphite	14 samples for Ni, Cr, PGE & 7 samples for Au, Pb, Zn	Ni/Cr	14.00	1,121.00	15,694.00
								PGE	14.00	10,000.00	1,40,000.00
								Au	7.00	1,127.00	7,889.00
								Pb/Zn	7.00	1,443.00	10,101.00
5	MP-08	Mohar Cauldron Area	Shivpuri	Madhya Pradesh	Base Metals & Gold	W & Mo was not proposed	Additional 6 samples for Au & Ag, 8 samples for U & REE, 9 samples for W and 3 samples for Mo	Au/Ag	6.00	1,460.00	8,760.00
								U	8.00	4,550.00	36,400.00
								REE	8.00	4,870.00	38,960.00
								W	9.00	599.00	5,391.00
								Mo	3.00	570.00	1,710.00
6	ODS-09	South of Kesarpur	Mayurbhanj	Odisha	Copper	No Gold was proposed	5 Au samples (BR) including check	Au	5.00	1,127.00	5,635.00
7	RAJ-02	Deravad-Chargarhia-Bansra Area	Udaipur	Rajasthan	Copper, Gold	BR-75, SS-150, SSS-75 for Cu, Pb, Zn	23 Au Samples (BR) including check	Au	23.00	1,127.00	25,921.00
8	RAJ-03	Jhalara-Matasula-Manpur-	Udaipur/ Duganpur	Rajasthan	Copper, Gold & REE		11 additional REE & 21 additional in CaF_2 in BR, 20 additional	REE	11.00	4,870.00	53,570.00
								CaFz	21.00	978.00	20,538.00

Ann IV

		Bhabra na-Amalva Area					Au in soil and 20 additional in stream.	Au-Soil	20.00	1,127.00	22,540.00
								Au-Stream	20.00	1,127.00	22,540.00
9	RAJ-04	Kukra-Padwa-Ven Area	Udaipur	Rajasthan	Copper, Gold	For Au, 20 BR Check samples	24 Check of BR for Au & 5 Check of Soil for Au, Total 9 Au Check samples are extra.	Au	9.00	1,127.00	10,143.00
10	RAJ-07	Kanawat-Chala - Karath-Bagholi Area	Jhunjhunu & Sikar	Rajasthan	Iron	Whole rock-10 nos	3 additional, total 13 analysed.	WR	3.00	6,386.00	19,158.00
11	RAJ-09	Karoli-Nathdwara Area	Udaipur & Rajsamand	Rajasthan	Copper, Gold & Molybdenum	No Mn was proposed	11 no of bed rock & 15 soil samples for Mn	Mn	26.00	599.00	15,574.00
12	RAJ-13	Isarwas - Karavalli - Baroliya - Angeni-Beras Area	Udaipur	Rajasthan	Copper	No Au/Ag proposed	Additional 71 samples for Au & 53 samples for Ag analysed (including check)	Au	71.00	1,127.00	80,017.00
								Ag	53.00	1,127.00	59,731.00
13	AP-09	Agnigundala North Block	Guntur	Andhra Pradesh	Base Metals	BR-80, SS-160, SSS-80 for Cu, Pb, Zn	BR-80, SS-77, SSS-163 for Cu, Pb, Zn, No financial implication				-
14	AP-10	Agnigundala South Block	Guntur	Andhra Pradesh	Base Metals	BR-100, SS-200, SSS-100 for Cu, Pb, Zn	BR-65, SS-143, SSS-192 for Cu, Pb, Zn, No financial implication				-
15	TN-05	Andipatti-Jambumadai-Urakari Sector	Namakkal	Tamil Nadu	Dunite, Ni, Cr & PGE.	10 Petrographic samples	4 additional petrographic samples	PG	4.00	2,040.00	8,160.00
	TOTAL										8,10,112/-

8.10
23.91
32.01

Ann IV

COST ESTIMATE FOR SAMPLING WORK OF RAJ-14								
S.N.	Item of Work	Unit	Base Rate as on 01-04-1990	Escalated rates (2017-18)			Total	
				Rate	Qunty	Amount (Rs)	Qty	Amount (Rs)
	LABORATORY STUDIES							
a	Chemical Analysis							
1	Primary + Check Samples							
	i) for 6 radicals i.e. CaO, MgO, Al2O3, SiO2, Fe2O3 and LOI	Nos	490 (76x5+110)	2,580	550	14,19,000	550	14,19,000.
	ii) for additional 2 radicals SO3 & P2O5	Nos	186					

Ann-V

Table:6.2 COST ESTIMATE FOR EXPLORATION (G-2) OF PHOSPHORITE BLOCK(Combined-II,III,IV) SONRAI ROCK PHOSPHATE DEPOSIT, TEHSIL - MEHRAUNI, DISTRICT- LALITPUR , UTTAR PRADESH

SL No.	Item of Work	Unit	Base	Financial Year (2017-18)			Financial Year (2018-19)			Total	
			Rate	Esc.Rate	Qty.	Amount	Esc. Rate	Qty.	Amount	Qty	Amount
			1.4.90	(Rs)		(Rs)			(Rs)		(Rs)
A	**DRILLING**										
1	Surface Drilling (2 Rigs)	m	1714	6780	1800	12204000	6780	915	6203700	2715	18407700
2	Transportation	Km.	8.8	31	4500	139500	31	4500	139500	9000	279000
3	Accomodation	One time / Drill	186925	663715	6	3982290	663715	0	0	6	3982290
4	Camp Setting / Winding	Drill/ month	68006	244910	6	1469460	244910	6	1469460	12	2938920
5	Road Making (Hilly Terrain)	Km	7900	27844	15	417660	27844	30	835320	45	1252980
	Sub Total A				0	**18212910**		0	**8647980**		**26860890**
B	**GEOLOGICAL WORK**				0			0			
1	Survey Party Days (1 party)	day	1160	5840	180	1051200	5840	90	525600	270	1576800
2	Geologist Party days (1 partys)	day	1541	7802	180	1404360	7802	180	1404360	360	2808720
3	Core Sampling Party days(1 party)	day	525	2809	190	505620	2809	180	505620	360	1011240
	Sub-Total B					**2961180**			**2435580**		**5396760**
C	**LABORATORY STUDIES**										
a	**Chemical Analysis**										
1	Primary + Check Samples										
	i) for 5 radicals (P_2O_5, SiO_2, Al_2O_3, Fe_2O_3 and LOI)	Nos	414 (76x4+110)	2378		0	2378	1260	2996280	1260	2996280
	ii) External Check Samples for 5 radicals (P_2O_5, SiO_2, Al_2O_3, Fe_2O_3 and LOI)	Nos	414 (76x4+110)	2378		0	2378	55	130790	55	130790
2	Composite Samples										
	i) for 14 radicals (P_2O_5, SiO_2, Al_2O_3, Fe_2O_3, LOI, CaO, MgO, TiO_2, Na_2O, K_2O, F, Cl, V_2O_5 and organic carbon)	Nos	1095 (76x13+110)	5997		0	5997	75	449775	75	449775
b	**Physical Analysis**										
1	X-RD Studies on composite	Nos	1137	5605		0	5605	30	168150	30	168150
2	Spectroscopic Studies	Nos	1173	5386		0	5386	30	161640	30	161640
3	Preparation of thin section	Nos	100	538		0	538	45	24210	45	24210
4	Petrographic Studies	Nos	228	1436		0	1436	45	64620	45	64620
5	Preparation of polished section	Nos	100	538		0	538	45	24210	45	24210
6	Mineragraphic Studies	Nos	364	2023		0	2023	45	91035	45	91035
7	Specific Gravity determination	Nos	32	166.5		0	166.5	45	8482.5	45	8482.5
8	Transportation of bulk sample to IBM, Nagpur	Km.	8.8	31	0	0	31	4500	139500	4500	139500
9	Beneficiation Studies (IBM Lab.)	Nos		280900	0	0	280900	3	842700	3	842700
	Sub-Total C					0			**5101392.5**		**5101393**
	Total A+B+C					**21174090**			**16184892.5**		**37358983**
D	**EXPLORATION REPORT - 1% of (A+B+C)**				0	**0**		**0**	**0**	**1**	**373590**
E	**PEER REVIEW OF DGR (Lump Sum)**	Nos			0	**0**	**10000**	**1**	**10000**	**1**	**10000**
F	**Environmental Studies**										
1	**Satelite Imagery Study**	**Scene**	**99697**	**457948.2**	**0**	**0**	**457948.2**	**1**	**457948.1998**	**1**	**457948**
2	**Base line Data Collection**	**(10 km radius area)**	**151273**	**694857.4**	**0**	**0**	**694857.4**	**1**	**694857.3982**	**1**	**694857**
3	**Chemical Analysis**	**Nos**	**257400****	**1182341.2**	**0**	**0**	**1182341.2**	**1**	**1182341.16**	**1**	**1182341**
4	**Report Writing**	**Nos**	**50000**	**50000**	**0**	**0**	**50000**	**1**	**50000**	**1**	**50000**
	Sub Total F					**0**			**2388146.798**		**3286147**
	GRAND TOTAL A to F					**21174090**			**18580089**		**40127780**
	GST 18%										**7223000**
	Grand Total : with GST 18%										**47350780**
						Total					**Says 473.50 Lakhs**

Note:

1. Revised Rates of Promotional Work done by MECL on behalf of Govt. of India Vide letter No. 37(i) /2006-M.I. dated- 02/07/2014 and based on actual escalation as per RBI indices as on 31-03-2017 and the same has been considered for subsequent year.
2. Phosphorite rates have been considered as there is no rates for Limestone in Revised Rates of Promotional Work of MoM Schedule of Rates.
3. **Nityanad Committee Rates with actual escalation as per RBI index as on 31.3.2017 and the same for subsequent year.

ANX – VI

Cost estimate for G-3 Level of exploration for Limestone in Salumi Block (5 sq.km), Kiphire district, Nagaland

Sl. No	Item of work	Unit	Base Rate 04-01-90	Escalated Rates 2018-19		
				Rate (Rs)	Qty	Amount (Rs)
A	**GEOLOGICAL WORK**					
1	a) Geological party (1 party) for core	days	1541	7802	60	468120
	b) Sample preparation drill core (1	days	525	2809	45	126405
	b)Transportation of samples from site to laboratory & back	km	8.8	31	950	29450
	Sub-Total A					**623975**
B	**CORE DRILLING (5 BH)**					
1	Surface drilling (1 rig)	m	1714	6780	250	1695000
2	Transportation (1 rig)	km	8.8	31	701	21731
3	Accomodation (one time/drill)	Nos	185925	663715	1	663715
4	Camp setting/Winding	Nos	68606	244910	1	244910
5	Road making (Hilly terrain)	km	7800	27844	2	55688
6	Core preservation Charges in GI Sheets Core Boxes @ Rs.2000 Core boxes**	Nos	2000	2000	20	40000
7	Transportation charges of core boxes	km	8.8	31	700	21700
	Sub-Total B					**2742744**
C	**LABORATORY STUDIES**					
1	**Chemical analysis**					
	i) Primary samples (6 radicals)	Nos	490	2580	125	322500
	ii) Check samples (6 radicals)	Nos	490	2580	10	25800
	iii) Composite samples (14 radicals)	Nos	1098	5997	10	59970
	iv) Composite samples (6 radicals)	Nos	490	2580	25	64500
	v) Outcrop samples-Primary (6	Nos	490	2580	10	25800
2	**Physical analysis**					
	i) Petrographic studies (BH core - surface samples)					
	a) Preparation of thin section	Nos	100	538	10	5380
	b) Study of thin section	Nos	228	1436	10	14360
	iii) Specific gravity determination (BH	Nos	32	188	10	1880
	iv) Spectroscopic studies on composite samples (15 elements)	Nos	1173	5388	10	53880
	Sub-total C					**574070**
	Grand Total (A+B+C)					**3940789**
D	**Exploration Report - 2% of (A+B+C)**					**78816**
	TOTAL(A+B+C+D)					**4019605**
E	**Add:GST@18%*** **					**723529**
F	**TOTAL(A+B+C+D)**					**4743134**
					SAY Rs.	**47.43 Lacs**

The applicable GST Rates

** Mineral Exploration and Evaluation 18% (SAC Code:9C)

ANX – VII

Cost Estimate for G-4 Level Exploration of Magnetite in Mollen-Jopi-Ziphu Ridge and adjoining Area, Naga Hills Ophiolite, Phek District, Nagaland

Sl. No	Item of Works	Unit	Base rate as on 01.04.1990	Financial Year 2018-19		
				ESC Rate (Rs)	Qty	Amount (Rs)
A	**GEOLOGICAL WORK**					
1	Geological Party days (1 Party) for Geological Mapping on 1:12500 scale	days	1541	7802	300	2340600
2	*Sampling Party Days*					
	a) Sample Preparation for Bed rock	days	525	2809	180	505620
3	*Transportation (Light vehicles 1nos)*	Km	8.8	31	3000	93000
	Sub-Total A					**2939220**
B	**Pitting /Trenching**					
1	Excavation (Pitting & Trenching)	Cu.m	395	1673	20	33467
2	Trench/Pit Sampling Party days (1 Party)	Nos	994	5227	6	31361
	Sub-Total B					**64828**
C	**LABORATORY STUDIES**					
1	**Chemical Analysis**					
	i) Channel Sampling (Bed Rock Samples)					
	a) Ni, Co, Cr, Fe, Ti & Va (6 radicals)	Nos	110+(76*5)= 490	2580	100	258000
	b) Au & Ag (Fire Assay)	Nos	268	1390	5	6950
	v) *Trench & Pit samples*					
	a) Ni, Co, Cr, Fe, Ti & V (6 radicals)	Nos	110+(76*5)= 490	2580	20	51600
2	**Physical analysis**					
	i) *Petrographic studies* (Core+Surface Samples)					
	a) Preparation of thin section	Nos	100	538	10	5380
	b) Study of thin section	Nos	228	1436	10	14360
	ii) *Minerographic studies* (Core + Surface Samp					
	a) Preparation of Polished section	Nos	100	538	10	5380
	b) Study of Polish section	Nos	364	2024	10	20240
	iii) *Whole rock analysis* (SiO_2, Al_2O_3, Fe_2O_3, TiO2, MnO, CaO Na2O, K2O+H2O, MgO, P2O5, CO2 & S)	Nos	1316	6486	10	64859
	iv) *Specific Gravity Determination* (BH)	Nos	32	188	20	3760
	v) *XRD Studies on composite samples*	Nos	1137	5605	10	56050
	vi) Spectroscopic Studies					
	a)For 6 PGE radicals (Pt, Pl, Ir, Os, Rh, Ru)*	Nos	6800	6800	20	136000
	Sub-Total C					**622579**
	TOTAL(A+B+C)					**3626627**
D	**Exploration Report - 2% of (A+B+C)**					**72533**
	Grand Total (A+B+C+D)					**3699160**
E	**Add:GST @ 18%**					**665849**
F	**TOTAL(A+B+C+D+E)**					**4365009**
					SAY Rs.	**43.65 Lacs**

Anx - VIII

Table : 6.2 Cost Estimate for Detailed Exploration of Potash Mineralisation in Lakhasar Block, Distt. Bikaner, Rajasthan

S.N	Item of Work	Unit	Base Rate as on 1.4.90	Escalated rates (2017-18)			Escalated rates (2018-19)				
				Esc. Rate (Rs)	Qty.	Amount (Rs)	Esc. Rate (Rs)	Qty.	Amount (Rs)	Qty.	Amount (Rs)
A	**DRILLING**										
1	Drilling (3 rigs)	m	2551	9847	1800	17904600	9847	2975	29582325	4775	47490979
2	Transportation	Km	8.6	31	4500	139500	31	4500	139500	9000	278999
3	Accomodation (One time/ Drill)		195625	663715	3	1991145	663715	0	0	3	1991145
4	Camp Setting / Winding	Nos	68500	244910	3	734730	244910	3	734730	6	1469460
5	Road Making (Flat Terrain)	Km	5200	18563	10	185630	18563	10	185630	20	371260
	Sub Total A					**20955605**			**30652185**		**51607790**
B	**GEOLOGICAL WORK**										
1	Survey Party days (1 party)	day	1180	5640	90	525600	5640	150	876000	240	1401600
2	Geologist Party days (2 party)	day	1541	7802	180	1404360	7802	420	3276840	600	4681200
3	Core Sampling Party days (2 party)	day	526	2809	120	337080	2809	420	1179780	540	1516860
	Sub-Total B					**2267040**			**5332620**		**7599660**
C	**Geophysical studies**										0
	a) Borehole Geophysical logging	m	153	511	1800	920022	541	2975	1609475	4775	2529496.5
	Sub-Total C					**920022**			**1609475**		**2529497**
D	**LABORATORY STUDIES**										
	1- Chemical Analysis										
	i) Primary & Check samples										
	a Analysis for 3 Radicals i.e. K, Na & WI (BH core samples)	Nos	262 (76x2+110)	1374	1100	1511400	1374	2600	3572400	3700	5083800
	b-Internal (10%) and External(5%) Check samples from NABL Lab for 3 Radicals i.e. K, Na & WI (BH core samples)	Nos	262 (76x2+110)	1374	240	329760	1374	390	535860	630	865020
	c 7 Radicals (Na, K, CaO, MgO, SO3, Cl, CaSO4)	Nos	566 (76x6+110)	2982	190	566580	2982	310	924420	500	1491000
	ii) Composite Samples										
	7 Radicals (Na, K, CaO, MgO, SO3, Cl, CaSO4)	Nos	566 (76x6+110)	2982	50	149100	2982	90	268380	140	417480
	2- Physical & Petrological Studies										
i)	X-RD Studies on composite	Nos	1137	5605	75	420375	5605	125	700625	200	1121000
ii)	Thinsection Preparation	Nos	100	538	15	8070	538	25	13450	40	21520
iii)	Thin Section Studies (Petrographic Studies)	Nos	228	1436	15	21540	1436	25	35900	40	57440
iv)	Specific Gravity determination	Nos	32	188	20	3760	188	30	5640	50	9400
	Sub-Total -D					**3010585**			**6007325**		**9067260**
	Total A+B+C+D					**27153252**			**43601605**		**70604207**
E	**Exploration Report-1%of (A+B+C+D)**					0			0		708042
F	**Grand Total : A to E**					**27153252**			**49608930**		**71512249**
G	**GST 18%**										**12872205**
H	**Grand Total : A to G**										**84384453**

Note:

1. Rates of Govt Committe based on actual escalation as per RBI index as on 31.3.17 and same has been considered for subsequnet years. say Rs. 843.84 lacs
2. Copper Ratesof Govt Committee have been cosidered, as there is no rateafor Potash and the boreholes are to be drilled upto a depth range of 660-700m and there is no factor of esclation of rates at deeper level on pro-rata basis in MoM rates.