

**REGIONAL EXPLORATION PROPOSAL (G-4 LEVEL) FOR COPPER IN THE
AREA SOUTH OF KESHARPUR (BLOCK ID: ER ODS-09) DISTRICT-
MAYURBHANJ, ODISHA**

SYNOPSIS

Mineral	COPPER																	
Location	The study area is located towards south of Kesharpur village in District-Mayurbhanj, Odisha. The National Highway NH – 5 and rail line of South Eastern Railways passes through the south west portion of the block.																	
Bounding coordinates	The corner points of the block are as below <table><tr><td></td><td>Longitude</td><td>Latitude</td></tr><tr><td>A)</td><td>86°38'40" E</td><td>22° 00' 00"N</td></tr><tr><td>B)</td><td>86°45'00" E</td><td>22° 00' 00"N</td></tr><tr><td>C)</td><td>86°38'40" E</td><td>22° 05' 30"N</td></tr><tr><td>D)</td><td>86°45'00" E</td><td>22° 05' 30"N</td></tr></table> (Survey of India Toposheet No 73 J/12)				Longitude	Latitude	A)	86°38'40" E	22° 00' 00"N	B)	86°45'00" E	22° 00' 00"N	C)	86°38'40" E	22° 05' 30"N	D)	86°45'00" E	22° 05' 30"N
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Total area	100 Sq Km																	
Background information	The area was systematically mapped by Shri S. C. Patnaik& A. Gupta in 1:50000 scale during field season 1969-70. During field season 1973-77 detailed investigation has been carried out including drilling in Kesharpur area adjacent to the proposed area which proved to be a potential area. The estimated probable resources in Kesharpur block is 2.16 million tonnes at an average grade of 1.54% Cu as estimated by GSI. Geologically the area forms southern ends of Singhbhum shear zone. The area is traversed by number of parallel shear zones trending NNW-SSE. The rock type exposed in the area belongs to Singhbhum Group of rocks comprising Quartzite, Mica Schist, Phyllite, Hornblende Schist and Chlorite Schist which have been intruded gabbro, anorthosite Rampahari granites & newer dolerites. The Copper mineralization occurs in the form of dissemination, stringers, veinlets and locally in massive form. Chalcopyrite is the chief ore mineral. The host rock for mineralization is Hornblende biotite schist and its silicified members & metabasics. The generalized stratigraphic sequence of lithounits in the block (after GSI) is as below <u>Stratigraphic sequence of lithounits (after GSI) in the block area</u> <table><tr><td>Age</td><td>Group</td><td>Lithounits</td></tr><tr><td>Recent</td><td>-</td><td>Lateritic soil, oxidised sand, Silt, Clay with caliche Nodules.</td></tr><tr><td rowspan="2">Archaean</td><td rowspan="2">Singhbhum</td><td>Intrusion of gabbro, anorthosite, Rampahari granites & newer dolerites</td></tr><tr><td>Quartzite Mica schist, phyllite, Hornblende schist and chlorite schist</td></tr></table>			Age	Group	Lithounits	Recent	-	Lateritic soil, oxidised sand, Silt, Clay with caliche Nodules.	Archaean	Singhbhum	Intrusion of gabbro, anorthosite, Rampahari granites & newer dolerites	Quartzite Mica schist, phyllite, Hornblende schist and chlorite schist					
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Objectives	i) To carry out geological Mapping on 1:12,500 scale and demarcate the rock types with structural features, shear zones and surface manifestations of mineralization in the block area for localization of the area of interest within 100 sq. km. area of the block. ii) To collect surface samples for analysis of Cu and decide further course of exploration programme. iii) In case surface samples give positive results then Geophysical Survey to be carried out for delineation of mineralised zone area. Based on the results of surface samples and Geophysical Survey studies 5 Scout boreholes shall be drilled if the mineralised zones are parallel and are apart from each other in an area of 229 sq. km. This will decide the future course of exploration programme at G-3/G-2 category of UNFC. iv) To estimate reconnaissance copper resources in the block area as per UNFC norms & minerals (evidence of mineral contents) Rules – 2015 at G-4 level.
Time schedule	12 months
Cost estimate	Rs. 276.93 Lakhs
Exploration agency	MECL
Date of commencement	15TH October-2016

5	Drilling (coring)	m	600m (5 Bhs)
6	Proposed Quantum of Work for Copper Exploration in South of Kesharpur (Block ID-ER-ODS-09), Block Area-100 Sq. Km., District Mayurbhanj, Odisha		
Sl. No.	Item of work	Unit (m)	Proposed Quantum of Work
1	Mineral Targeting and Structural Mapping through Remote Sensing	1 Scene Nos	100 Sq. Km 75 Nos
2	Geological Mapping (on 1:12500 Scale)	Sq. Km	100 sq km
	i) For 5 radicals Cu, Pb, Zn, Co & Ni	Nos	150 Nos
	ii) Stream Sediment Samples (on 1:12500 Scale in potential zone areas)	Sq. Km	As per requirement
	For 5 radicals Cu, Pb, Zn, Co & Ni	Nos.	75 Nos.
	Bore Hole Fixation (Scout Boreholes)	Nos	5 Nos
	Check Samples (Bed Rock / Soil / Stream sediment)	Nos	5 Nos
	RL & Coordinate Determination	Nos	5 Nos
3	Geochemical Sampling		
	i) For 5 radicals Primary & Check Samples		
	a) Bed Rock Sampling	Nos.	75 Nos
	b) Composite Samples for 7 radicals	Nos.	150 Nos *
	c) Soil Sampling	Nos	20 Nos
	a) For (Cu, Pb, Zn Co, Ni, Se & Mo)	Nos	25 Nos*
	b) Stream Sediment Sampling	Nos	
	c) For Au & Ag by Fire Assay		
8	Physical Geophysical Survey		
	a) Gravity Survey on Composite samples	No of Sts.	10 Nos
4	b) Magnetic Survey	No of Sts.	1020 Nos
	c) Self Potential	No of Sts.	1520 Nos
	d) Resistivity		
9	Petrological Samples (Surface & Bh Core Samples)	Line Km	20 Line Km
	e) Preparation of Thin Section	Nos Km.	40 Nos Km

	b) Study of Thin Section	N0s	40Nos
10	Mineragraphic Studies (Surface & Bh Core Samples)		
	a) Preparation of Polished Section	N0s	30 Nos
	b) Study of Polished Section	N0s	30 Nos
11	Whole Rock Analysis	Nos	10 Nos
12	Specific gravity Determination	Nos.	30 Nos
13	Report Preparation [As per Mineral (Evidence of Mineral Contents) Rule-2015]	Nos.	1
Note	* As per point b) in minutes		

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Government of India
Ministry of Mines
National Mineral Exploration Trust

F.No. 6/1/NMET-2015

New Delhi, 23rd Feb. 2017

OFFICE MEMORANDUM

Sub: - Approval of mineral exploration projects in 10 blocks

On the recommendations of the Technical Committee of NMET, the Executive Committee in its third meeting held on 25.10.2016 has approved ten (10) mineral exploration projects in five states at a cost of Rs. 2620.00 lakhs. (List enclosed)

2. The ten exploration projects will be funded by NMET as per the costing recommended by the Technical Committee and approved by the Executive Committee. MECL will undertake exploration in these ten blocks under a Tripartite Agreement among (Ministry of Mines (NMET), MECL and the respective State Governments and complete the same as per the approved work plan and time schedule.

5. The execution of work will be continuously monitored and periodically reviewed by the NMET Technical Committee/regional Sub-committees and MECL shall submit monthly progress report to NMET Secretariat.


(M. Koshy John) 23/2/17
DDG, NMET Secretariat
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To

The Chairman-cum-Managing Director, MECL, Dr. Bhabasaheb Ambedkar Bhawan,
Seminary Hills, Nagpur – 440 006

Copy to

1. Dr. P.R. Golani, DDG, GSI TI, Hyderabad and Chairman, NMET Technical Committee
2. Dr. Joyesh Bagchi, Director, MoM, N.Delhi and Member, NMET Technical Committee

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MINERAL EXPLORATION PROJECTS /BLOCKS APPROVED BY NMET EXECUTIVE COMMITTEE ON 25.10.2016 FOR EXECUTION BY MECL						
Sl. No	Name of the Block (Location, District, State)	Mineral	Area of the Block	Work Already done in the Block	Work Proposed in the Block	Estimated Cost (Rs in Lakhs)
1.	BRH Iron Ore Mines, NEB Range M/s RMMPL, ML NO. 2010, Village – Papinayakanahalli, District- Ballary, Karnataka	Iron	8.00 Sq. Km	Area Falls in the extension area of mine lease of M/s RMMPL	Geological Mapping, Topographical work G-4	13.99
2	Regional Exploration proposal for Manganese ore in Kalakhunta Block, Khushalgarh Tehsil District Banswara, Rajasthan	Manganese	5.17 Sq. Km	Reconnaissance By DMG Rajasthan	Geological Mapping Trenching, Geophysical Survey Drilling – 550m in 5 Scout Borehole G-4	274.83
3.	Regional Exploration proposal for Manganese ore in Tambesara Block, Khushalgarh Tehsil, District: Banswara, Rajasthan	Manganese	1.15 Sq. km	Reconnaissance By DMG, Rajasthan	Geological Mapping Trenching, Geophysical Survey, Drilling – 515m in 5 Scout Borehole G-4	180.18
4	Regional Exploration proposal for Limestone in Gothra-Parasrampura Block, Tehsil- Nawaigarh, District-Jhunjhunu, Rajasthan	Limestone	8.25 Sq. km	Reconnaissance By DMG, Rajasthan North Eastern Continuation of Explored Block of DMG, Rajasthan Reconnaissance	Drilling- 3600m (40 Boreholes), Geological Mapping Sampling, Analytical & Report Preparation Work G-3	424.52
5.	Regional Exploration proposal (G-4 level) for Copper & Gold in Deravad-Chargaria-Bansra Area (Block-ID-Raj-02), District-Udaipur, Rajasthan	Copper & Gold	108 Sq. Km.		Geological Mapping, Geochemical Sampling, Geophysical Survey Drilling – 600m. Sampling, Analytical & Report Preparation work, G-4	276.93
6.	Regional Exploration proposal (G-4 level) for Copper in Isarwas-Karavalli - Baroliya-Angeni-Beras Area (Block-ID-WR, Raj-13), District-Udaipur, Rajasthan.	Copper	209 Sq. Km	Reconnaissance	Geological Mapping, Geochemical Sampling, Geophysical Survey Drilling – 600m. Sampling, Analytical & Report Preparation work, G-4	353.29
7.	Regional Exploration (G-3 Level) for Limestone in Ghunchihai Block, District- Satna, Madhya Pradesh. (Upgradation of the G-4 Exploration Block sanctioned earlier.)	Limestone	6.5 Sq. Km	G-4	Drilling- 1330m (in 38 Boreholes) Sampling, Analytical & Report Preparation Work G-3	182.05