



# MODIFICATION IN THE APPROVED REVIEW & UPDATION OF MINING PLAN

(SUBMITTED FOR APPROVAL UNDER RULE 17(3) OF MCR – 2016)

## INCLUDING PROGRESSIVE MINE CLOSURE PLAN

(SUBMITTED UNDER RULE 23 OF MCDR 2017)

SCHEME OF MINING APPROVED FROM 2016-17 TO 2020-21  
MODIFICATION PERIOD FROM :2019-20 TO 2020-21


Name of the Mine	:	Thimmappanagudi Iron Ore Mine
ML.No.	:	2605
Name of the company	:	M/s Mysore Minerals Limited
Type of Land	:	Reserve Forest
Extent	:	136.97Ha (136.94Ha as per CEC)
Grant of Mining Lease	:	27.12.1985
Expiry Date	:	26.12.2025 as per lease deed
Village	:	Krishnanagar
Taluk	:	Sandur
District	:	Ballari
State	:	Karnataka
Category of the mine	:	A (Fully Mechanized)/Open cast /State Public Sector Undertaking/Forest/Non captive
IBM Registration	:	IBM/4369/2011
Mine Code	:	30KAR03103

PART I - TEXT ANNEXURES

Prepared By

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QUALIFIED PERSON

  
GENERAL MANAGER (LEE)  
Karnataka State Minerals Corporation Limited  
BMTCL, Shanthinagar, Bengaluru-560 027



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k. Reserve estimation by Cross sectional area method: Furnish detailed calculation of reserves /resources section wise (When the mine is fully mechanized and deposit is of complex nature with variation of size , shape of mineralized zones, grade due to intrusion within ore zone etc, an attempt may be made to estimate reserves /resources by slice plan method). In case of deposits where underground mining is proposed, reserve/resources may be estimated by level plan method, as applicable, as per the proposed mining parameters.

Based on the confidence level of exploration, the reserve/ resources were re-estimated considering the past mining data, exploration data etc. Reserve estimation is carried out separately considering both the plans and sections. And the variance is analyzed and the deviations are tabulated as given above.

The detailed calculation of Mineable Reserves is enclosed as ANNEXURE -20 & 20A.

- a) Geological/Mineable Mineral Reserves as on 01.04.2019 calculated using the Cross Sectional method is tabulated below: (Threshold value is considered at +45% Fe)

Table No.22

Sl.No.	Sections	Sectional Area(MI2)		Strike influence ( in Mtrs )	Bulk Density	Recovery percentage 90%	Proved Reserves in Tonnes	Probable Reserves in Tonnes	Total
		Proved	Probable						
1	A-A'	52.73	0	50	2.88	90	6833.81	0	6833.81
2	B-B'	471.51	0	50	2.88	90	61107.70	0	61107.70
3	C-C'	2262.91	105.15	50	2.88	90	293273.14	13627.44	306900.58
4	D-D'	1808.78	0	50	2.88	90	234417.89	0	234417.89
5	E-E'	3626.57	0	50	2.88	90	470003.47	0	470003.47
6	F-F'	2415.52	0	50	2.88	90	313051.39	0	313051.39
7	G-G'	4532.778	304.87	50	2.88	90	587448.03	39511.152	626959.18
8	H-H'	508.083	220.92	50	2.88	90	65847.56	28631.232	94478.79
9	I-I'	2972.69	0	50	2.88	90	385260.62	0	385260.62
10	J-J'	1545.59	0	50	2.88	90	200308.46	0	200308.46
11	K-K'	774.42	0	50	2.88	90	100364.83	0	100364.83
12	L-L'	1443.77	0	50	2.88	90	187112.59	0	187112.59
13	M-M'	2616.588	144.952	50	2.88	90	339109.80	18785.779	357895.58
14	N-N'	28.636	126.664	50	2.88	90	3711.23	16415.654	20126.88
15	O-O'	2150.163	359.256	50	2.88	90	278661.12	46559.578	325220.70
16	P-P'	4980.19	1286.3	50	2.88	90	645432.62	166704.48	812137.10
17	Q-Q'	1410	0	50	2.88	90	182736.00	0	182736.00
18	R-R'	1325.716	269.28	50	2.88	90	171812.79	34898.688	206711.48
19	S-S'	1525	0	50	2.88	90	197640.00	0	197640.00
Total		36451.64	2817.392	50	2.88	90	4724133.06	365134	5089267.07

#### L) Mineral Reserves/Resources

The details of reserves/resources re-estimated as per UNFC are as follows:

Mineral Resources (Mineral resources may be estimated purely based on level of exploration, with reference to the threshold value of minerals declared by IBM)

*[Signature]*  
GENERAL MANAGER (LEE)  
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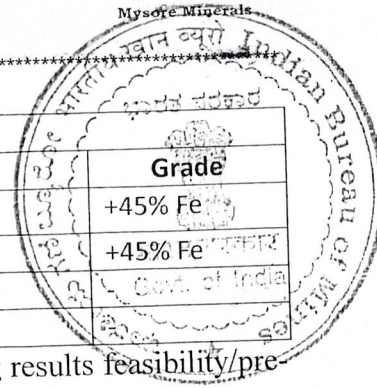


Table-23

Level of Exploration	Reserves in million tons	Grade
G1- Detailed Exploration	4.72	+45% Fe
G2- General Exploration	0.365	+45% Fe
G3-Prospecting	-	
G4- Reconnaissance	-	

Resources and Reserves within the lease may be arrived after applying results feasibility/pre-feasibility study and economic evaluation of deposit based on various factors such as:

- Mining method, Recovery factor, mining losses, processing loss etc.
- Cut off grade, ultimate pit depth proposed.
- Mineral /ore blocked dues to benches, barriers, pillars, road, railway, river, nallah, reservoir, electric line and other statutory barriers etc. under forest, sanctuaries etc, where necessary permissions are not available.

The entire geological reserves are considered as mineable reserves, because the Mineralized Zone is located in the centre of the lease and entire mineral could be mined. The actual mineable reserves available for mining as on 01.04.2019 are as follows:

Table-24

Classification	UNFC Code	Quantity in Million Tones	Grade
1	2	3	5
<b>Total Mineral Resources (A+B)</b>	---	5.08	+45% Fe
<b>A) Mineral Reserve</b>			
1.Proved Mineral reserves	111	4.72	+45% Fe
2.Probable Mineral Reserve	121&122	0.36	+45% Fe
<b>Total (A)</b>		5.08	+45% Fe
<b>B. Remaining Resources</b>	-	-	
1..Feasibility Mineral Resource	211*	-	
2.Prefessibility Mineral resource	211&222	-	
3.Measured Mineral resource	331	-	
4.Indicated Mineral resource	332	-	
5.Inferred Mineral resource	333	-	
6.Reconnaissance Mineral resource	334	-	
<b>Total (B)</b>		-	0.00

\*The Mineralized Zone is located in the centre of the lease and entire mineral could be mined. Therefore the mineral under (211) does not arise in this lease.

Note: It may not be possible to quantify grade wise reserves, as normally there is considerable variation in size and grade distribution within the ore zone, which results variable recovery factor and bulk density. Thus tonnages arrived are tentative.