

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/376/BNG

Mine code : 30KAR03103

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : 1. Sri.Ningappa , Agent/Deputy General Manager (P)
Official with
Designation
- (iv) Date of Inspection : 06/12/2017
- (v) Prev.inspection date : 20/01/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **THIMMAPPANAGUDI**
- (b) **Registration NO.** : **IBM/4369/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **KRISHNA NAGAR**
- Taluka : **SANDUR**
- Post office : **VIDYA NAGAR**
- Pin Code :
- FAX No. : **080-25583172 (F),ningappaag**
- E-mail : **info.mml@nic.in,hdrajuchna**
- Phone : **080-25580373, 9845300022 (I**
- (f) **Police Station** : **Sandur**
- (g) **First opening date** : **27/12/1985**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **MYSORE MINERALS LTD,**
TTMC BUILDING A BLOCK 5th FLOOR
BMTC SHANTINAGAR BANGALORE - 560027.
3. (a) **Lease Number** : **KAR0200**
- (b) **Lease area** : **136.27**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **26/12/2025**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : MYSORE MINERALS LTD
 TTMC BUILDING A BLOCK 5th
 FLOOR BMTc SHANTINAGAR
 BANGALORE KARNATAKA
 Phone:080-25580373
 FAX :080-25580372

Owner : S.ZIAULLAH, IAS
 # 39,M.G.ROAD,BANGALORE,
 KARNATAKA-560001.
 BANGALORE KARNATAKA
 Phone: 08395-60401,080
 FAX : 080-25583172, 0

Agent : H.D.RAJU
 BELLARY KARNATAKA
 Phone: 9448303626
 FAX :

Manager
 Name : H.D.RAJU
 Qualification : DIP (MINING) & FCC
 Appointment/ : 01/08/2012
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	29/02/2000
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	27/12/2001
	:	Mining Scheme rule 12 MCDR1988	05/02/2004
	:	Modif.approved Mining Scheme	12/09/2005
	:	Mining Scheme rule 12 MCDR1988	23/03/2006
	:	Modif.approved Mining Scheme	02/12/2008
	:	Mining Scheme rule 12 MCDR1988	10/08/2012
	:	Modif.approved Mining Scheme	06/01/2015
	:	Mining Scheme rule 12 MCDR1988	28/03/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Not applicable	14 Bore Holes completed to a total depth of 483.50 mtrs & exploration completed on 30.06.2015
1b	Exploration over lease area for geological axis 1 or 2	-	G1- 18.00Ha	Mineralized area - 18.00 ha, Non Mineralized area-118.94 ha. Explored Area - 136.94 ha
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	NA	Exploration completed on 30.06.2015 by the agency M/s Soil Tech (India) Pvt Ltd., Pune. & cost incurred Rs. 18.61Lakhs
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	NA	Exploration already covered entire area of 136.94ha, Further exploration is not proposed in the scheme Period.
1e	Balance reserve as on 01/04/20	-	7.23 million Tons.	-
1f	General remarks of inspecting officers on geology, exploration etc			136.94 Ha have been explored and 18 Ha have been proved to be mineralized. In the year 2015, 14 Bore Holes were drilled to a total depth of 483.50 mtrs. Total cost incurred Rs. 18.61Lakhs

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	The benches area proposed to be formed between 956 & 888 MRL. The total area 16.14Ha proposed for mining & 1.34Ha for dumping and working proposed in section A-A' to S-S' .	Actual worked coordinates E-5304.12 to E-6735.28 & N-4381.62 to N-4878.25.Working in between section A-A' to S-S' .	Location of the development within the proposed grids.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in mineral proposed	Separate benches in topsoil, overburden and mineral maintained.	All benches are in ore & over burden
2c	Stripping ratio or ore to OB ratio	1:1.16	1:1.29	Due to lower recovery
2d	Quantity of topsoil generation in m3	No proposal	NA	No generation of top soil
2e	Quantity of overburden generation in m3	1121740 Tonnes	1323615 Tonnes	Higher OB generated due to lower recovery
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The pit development was as per the proposal. There are no separate benches of OB, as all the benches contain ore. The stripping ratio is on the higher side due to lower recovery. Selective mining was done as the BHQ mound was not excavated. Violation pointed out.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	On pit	working in one pit only	Approx. dimension of the pit L= 1431M, w=440M,D=86M

3b	Quantity of ROM mineral production proposed	1038840Tones	1020000 Tonnes	967140 Metric tones proposed for production and 71700 MTS re-handling of waste dump
3c	Recovery of sailable/usable mineral from ROM production	1038840Tones	1020000 Tonnes	-
3d	Quantity of mineral reject generation	No proposal	NA	-
3e	Grade of mineral rejects generation and threshold value declared.	NA	Nil	-
3f	Quantity of sub grade mineral generation.	No proposal	NA	-
3g	Grade of sub grade mineral generation	NA	Nil	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed for segregating ore from ROM	The method of working is by opencast mechanized method.	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NA	Only dry crushing & Screening is being done
3j	Provision of drilling and blasting in mineral benches	Yes, Provision of drilling & blasting in mineral benches	The mine operation involved are drilling by using down the hole drilling machine and blasting in hard zone with 3.0m X2.5m spacing and burden the oversized boulders are broken with rock breaker. Blasting is done using slurry and 80% of ANFO, in conjunction with non electrical detonators and detonating Fuse.	In the mine, 40% of overall handling required blasting either ore or waste.

3k	Provision of mining machineries in mineral benches	Yes, Provision of mining machineries in mineral benches 1. Excavator :5 2. Wheel Loader:3 3. Dumper/Tipper: 22 4. Water Tanker:8 5. Crushing & Screening: 2 6. Rock Drill :2	Heavy machineries like excavator, wheel loaders, tippers and drills were used in mineral benches	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height 8Mtrs Bench Width 10Mtrs	Bench height was found to be suitable for mining .Bench Height 5 Mtrs to 8Mtrs	-
3m	Total area covered under excavation/pits	16.14Ha	16.14Ha	-
3n	Ore to OB ratio for the pit/mine during the year.	1:1.16	1:1.29	Due to lower recovery
3o	Total area put in use under different heads at the end of year	Area under mining: 42.22 Ha Waste dump: 25 Ha Back Filled area D-4:12.6 Ha Mineral Storage:3.00 Ha Un touched Area: 42.71	Open cast working:41.90 Ha Reclaimed & Rehabilitated:17.75 Ha Waste dump:18.24 Ha Infrastructure: 3.70 Ha Others:55.35 Ha	-
3p	Production of ROM mineral during the last five year period as applicable	2012-13 0.65MTPA 2013-14 1.06MTPA 2014-15 1.06MTPA 2015-16 1.06 MTPA 2016-17 1.06 MTPA	2012-13 0.50 MTPA 2013-14 0.62 MTPA 2014-15 1.06MTPA 2015-16 1.06 MTPA 2016-17 1.02 MTPA	Achieved production quantity is within the limits of proposed production capacity

3q General remarks of inspecting officers on method of mining etc.

The mineral is worked from one pit as per proposal. Drilling & blasting is carried out in few of the benches. In the mine, 40% of overall handling required blasting either ore or waste. The productions are well below the quantity approved in the document.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB proposed	Separate dumping of OB done as per proposal	No top soil generated and overburden dumped in the Dump D4
4b	Location of topsoil, OB and mineral reject dumps	OB proposed to be dumped in D4 for back filling and D3 dump	Location of OB Extension of Dump D4,for backfilling Northing - 4905.245 Easting - 6167.865 Dump D3 Northing - 4974.226 Easting - 6527.745	The entire dump material in the back filled area of Dump D4
4c	Number of dumps within lease area and outside of lease area	Within lease area :4 Dumps Outside lease area :Nil	Within lease area :4 Dumps Outside lease area :Nil	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps are outside the UPL	Dumps are outside the UPL	-
4e	Number of active and alive dumps.	2 dumps proposed to be active (D4 & D3)	2 dumps are active (D4 & D3)	-
4f	Number of dead dumps.	2 Dumps proposed as inactive (D2 & D1	2 Dumps are inactive (D2 & D1	-

4g	Number of dumps established.	2 Dumps (D2 & D1)	2 Dumps (D2 & D1)	Dumps stabilized by geo textile coir matting & plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain all along dumps proposed	In the dump No D4, Retaining wall and garland drain is constructed partially.	Dump-D3: Retaining wall of 300 Mts constructed and Garland drain is under progress. Dump-D4 200Mtrs Retaining Wall is constructed.
4i	Length of Retaining wall or garland drain all along dumps	Retaining Wall Dump D2: 411Mts Dump D3: 1320 Mts Dump D4: 885 Mts Garland Drain Dump D2: 411Mts Dump D3: 1320 Mts Dump D4: 370 Mts	Retaining Wall Dump D2: 411Mts Dump D3: 1320 Mts Dump D4: 200 Mts Garland Drain Dump D2: 454 Mts Dump D3: 220 Mts Dump D4: 370 Mts	Only 200Mtrs Retaining Wall is constructed at the toe of D4 against 885 Mts planned. Construction of Garland drain in Dump-D3 is in progress.
4j	Number of settling ponds	1 No.	1 No.	1 No. settling tanks are constructed as per R&R in previous year
4k	Specific comments of inspecting officer on waste dump management			The dumping and location of solid waste was done as per the proposal. Construction of Garland drain in Dump-D3 was in progress Only 200Mtrs retaining Wall was constructed at the toe of D4 against 885 Mts planned. Settling tank was constructed as per approved R & R plan in the previous year. The total area covered by dumping is 18.24 Ha.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling proposedl	17.75Ha already back filled as dump D2. In Dump D4 during 2016-17 the area of 1.34Ha back filled in proposed area of 6.75Ha.	During 2016-17 1.34Ha utilized.
5b	Area under backfilling of mined out area	1.34Ha	1.34Ha	During 2016-17 the area of 1.34Ha was used for back filling out of 6.75Ha
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Top soil not generated	Mining operations are proposed to work within the broken up area. Hence generation of top soil does not arise.
5d	Total area fully reclaimed and rehabilitated	17.75Ha	17.75Ha	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling was carried out in the already mined out area as per proposal. 17.75Ha already back filled as dump D2. In Dump D4 during 2016-17 the area of 1.34Ha back filled in proposed area of 6.75Ha in the plan period.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Submitted	Annual report on PMCP submitted on 20.06.2017	-
6b	Area available for rehabilitation (ha) .	1.00Ha	1.00Ha	-
6c	afforestation done (ha).	1.00Ha	1.00Ha	-

6d	No. of saplings planted during the year	No information	2000 saplings planted	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1.00Ha	Back filling under progress	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	8000 saplings	8000 saplings	Plantation on the surface of the back filled area in dump d4.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	NA	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular Environmental monitoring proposed .	Environmental Monitoring carried out in the core zone & buffer Zone regularly.1. Core Zone a) Air- 3 location b) Noise - 2 Location c) Water - 1 location 2. Buffer Zone:- a) Air - 4 location b) Noise - 5 location c) Water - 8 location	Environmental Parameters within the permissible limits
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP activities were carried out as per the approved plan. Backfilling was in progress on the area devoid of mineral. Plantation done and construction of garland drains were in Process. Environmental Monitoring carried out in the core zone & buffer Zone regularly. Parameters within the permissible limits

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area proposed	Grade wise sorting is done within lease area	Sorting and sizing is being carried out by crushing and screening of the ore to the required physical specification.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical, grade-wise sorting proposed	As per proposal	-
7c	Different grade of mineral sorted out at mines.	0-10mm - Fines 10-40mm - Lumps with a grade of +55% Fe	0-10mm - Fines 10-20mm - C'ore 20-40mm - Lumps with a grade of +55% Fe	The fines & lumps average is 80 :20 In view of demand for iron ore in the market, +50 Fe % is also treated as saleable and below 50 Fe % considered as non-saleable.
7d	Any beneficiation process at mines	No proposal of beneficiation	NA	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation is done in the mine. Old dump working is carried out for the purpose of recovery of mineral. Iron ore of +50 Fe % is also treated as saleable and below 50 Fe % considered as non-saleable, which is blended with high grade ore.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No Top Soil is generated	-

8b	Concurrent use or storage of topsoil	No proposal	No Top Soil is generated	Proposed to work within the broken up area for plan period.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for OB proposed	Separate dump for OB maintained	2 dump yard identified for dumping of waste material namely D4 & D3 .
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Back filling is proposed in the mineral exhausted pit	Back filling is under progress	Waste material is dumped in the dump D4
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Back filling proposed in the worked out pit	Working as per proposal	Back filling is done
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Available	Plantation done: within the mining lease - 2000 Nos Outside the mining lease - Nil	-
8g	Survival rate	75%	75%	-
8h	Water sprinkling on roads to control airborne dust	Suppression of dust on the haulage roads by the sprinkling of water through water tankers	8 Tankers with a capacity of 8000 Ltrs are utilized for sprinkling of water for dust suppression, plantation & drinking purpose	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good as licensee carried out R & R works and other environment protection measures. Back filling is under progress in the dump D4.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		M.R. Submitted up to Oct-2017 Annual Returns submitted for the year 2016-17	Annual Report submitted on 21.06.2017
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager . Sri.R.Nirmal Kumar Mining Engineer : Sri.R.Nirmal Kumar Geologist : Sri.Rameshappa	Mining Manager & Mining Engineer are the same	Violation pointed out for non appointment of Mining Engineer
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under opencast working;41.90 Ha Reclaimed/Rehabilitated area: 17.75 Ha Waste disposal: 18.24 Ha Infrastructure : 3.7 Ha Others(Unutilized area, EMP, Backfilling area): 55.35 Ha	Appeared to be correct	
9d	Scrutiny of Annual return on afforestation	2000 Nos of sampling are planted within mining lease with 75% survival rate	Appeared to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	-	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Stock: 286970 Tons Production: 102000 Tons Closing Stock: 312970 Tons	Appeared to be correct	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Price:1605 Rs/ton Ex-Mine Price: Lumps;1370.69, Fines;1674.97 Production cost Rs.259.60/Ton	Appeared to be correct
9h	Scrutiny of Annual return on fixed assets	8.23 Crores	Appeared to be correct
9k	Scrutiny of Annual return on mining machineries	1. Excavator = 8 2. Wheel Loader = 5 3. Dumper/Tipper = 16 4. Water Tanker = 8 5. Crushing & Screening (others = 4 6. Rock Drill = 1	Appeared to be correct

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed			Show cause position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	20/12/2017			
MCDR17	Rule 26(1)	20/12/2017			
MCDR17	Rule 55(1)(3)	20/12/2017			

Date :

(ARUN KUMAR)

Indian Bureau of Mines