

**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 : **S006** ) **SURESH PRASAD**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri. H.J.Basavarajappa , Mines Manager & Sri. Gurupr  
Official with  
Designation
- (iv) Date of Inspection : 14/02/2022
- (v) Prev.inspection date : 06/12/2017

**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** : **Karnataka State Minerals Corp. Ltd**  
**correspondance** **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 : Karnataka State Minerals Corp. Ltd  
 TTMC, A Block, 5th Floor,  
 BMTC Building, K.H.Road,  
 Shanthinagar Bengaluru  
 BANGALORE KARNATAKA  
 Phone:080-22278813-14-15-16  
 FAX :080-22213172

Owner : B. B. CAUVERY, IAS (Nominated Owner)  
 BMTC Shanthinagar, TTMC  
 Building, "A" Block, 5th  
 Floor, Shanthinagar,  
 Bangalore, Karnataka  
 BANGLORE URBAN KARNATAKA  
 Phone: 9448456789  
 FAX : 08022213172

Agent : MALLIKARJUN SARAPUR  
 BMTC Shanthinagar, TTMC  
 Building, "A" Block, 5th  
 Floor, Shanthinagar,  
 Bengaluru, Karnataka  
 BANGLORE URBAN KARNATAKA  
 Phone: 8763673728  
 FAX : 08022213172

## Mining Engineer

Name : SHIVAPUTRA, Full Time  
 Qualification : MINING ENGINEER  
 Appointment/ : 21/12/2020  
 Termination date

## Geologist

Name : GURUPRASAD M N, Full Time  
 Qualification : MSc. Geology  
 Appointment/ : 05/01/2022  
 Termination date

## Manager

Name : H.J.BASAVARAJAPPA  
 Qualification :  
 Appointment/ : 12/06/2020  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	29/02/2000
		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
		Modif.approved Mining Scheme	16/05/2019
		MP modif under 17(3) MCR 2016	22/01/2021
		MP review under 17(1) MCR 2016	01/02/2021

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	27 Bore Holes were drilled total Meterage 611Mtrs in FY 2020-21.	The area is highly disturbed and non-homogenous in nature. Concurrent to mining operation, it appears further exploration is also essential to assess the quality, size, shape and location of the mineral.
1b	Exploration over lease area for geological axis 1 or 2	G1-41.53Ha	G1-41.53Ha, G2-2.00, G3 - Nil	Mineralized area 41.53Ha, Non Mineralized area- 93.41Ha. as per approved document, Mining Area- 136.94Ha.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal	M/s APC Drilling &Construction Pvt. Ltd.	As per the information furnished by mine management, Rs. 54.49 Lakhs for 36 nos. of holes.
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal	Not applicable	-
1e	Balance reserve as on 01/04/20	-	Proved : 3.65 MillionTonnes Probable : 0.36Million Tonnes	As per the Annual Returns for the Year 2020-21.

1f	General remarks of inspecting officers on geology, exploration etc	The area is highly disturbed and non-homogenous in nature. Concurrent to mining operation, it appears further exploration is also essential to assess the quality, size, shape and location of the mineral. Further, as per the information submitted by the lessee representative, 27 bore holes has been completed to a total depth of 611mtrs in FY 2020-21.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Development was proposed in grids E-5346 to E-6390 & N-4546 to N-4899. The benches were proposed to be formed between 943 & 891 above MSL	Development work was carried out in grids E-5340 to E-6370 & N-4530 to N-4891.	Working was carried out in between 943 & 890 above MSL
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden & mineral proposed	Separate benches in overburden & Mineral maintained .	Top Soil-Nil, OB-3Nos. and Mineral Bench-7 Nos.
2c	Stripping ratio or ore to OB ratio	1:2.90 ( in Tonnes)	1:1.59 (in Tonnes)	Violation issued under rule 11(1) of MCDR, 2017.
2d	Quantity of topsoil generation in m3	No proposal	NIL	No generation of top soil in the reporting year 2020-21.

2e	Quantity of overburden generation in m3	681232	412511	(Bulk Density considered for ore is 2.88 & waste 2.5 tons/Cum) Hence, violation issued under rule 11(1) of MCDR, 2017.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			40% Less development was carried out from the proposed quantity. hence not achieving the stripping ratio. Thus, violation issued under rule 11(1) of MCDR, 2017.

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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit proposed.	Actual mining carried out in one pit.	Approximate dimension of the pit L-1426m x W-400m x H-77m
3b	Quantity of ROM mineral production proposed	6,50,000MTs	Total quantity of ROM production from mining pit 6,50,000MTs.	As per Modification to approved modified Review and Updation of Mining Plan , vide letter No.279/629/99/BNG Dated:22.01.2021 (Production in Mines)
3c	Recovery of sailable/usable mineral from ROM production	Recovery 90%	Recovery 90%	Nil.
3d	Quantity of mineral reject generation	No Proposal.	Nil.	Nil.
3e	Grade of mineral rejects generation and threshold value declared.	+35% Fe for Hematite Siliceous	Nil.	Nil.
3f	Quantity of sub grade mineral generation.	No proposal.	Not Applicable.	Nil.

3g	Grade of sub grade mineral generation	No proposal.	Not Applicable.	Nil.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed for segregation from ROM.	Mechanized method adopted for segregation from ROM.	Dry crushing & Screening was done.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal.	Not Applicable.	Nil.
3j	Provision of drilling and blasting in mineral benches	Deep hole Drilling & Blasting is proposed for removal of hard strata in overburden & mineral benches.	Drilling & Blasting carried out in hard strata. Direct excavation in fines ore and clay benches.	90% of the total material handled is blasted in the mine.
3k	Provision of mining machineries in mineral benches	Mining Machineries proposed: Excavator-8Nos., Wheel loader-5Nos., Dumpers/Tipper s 27Nos., water Tankers-10Nos., Crushing - 1No. Screening - 2Nos., Rock Drill-3Nos.	Mining was carried out with Excavator-14Nos., Wheel loader-10Nos., Dumpers/Tipper s 41Nos., water Tankers-9Nos., Crushing - 1No. Screening - 3Nos., Rock Drill- 1No. Dozer- 1No.	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Maximum bench height 8Mtrs & minimum bench width 10Mtrs proposed.	Bench Height 8Mtrs and bench width 10Mtrs (Agv.)	It is observed during the inspection that the working between section line 22-22' & 29-29' at few places bench height and maximum proposal of working depth are exceeding the approved proposal. Thus, violation issued under rule 11(1).

3m	Total area covered under excavation/pits	25.01 Ha.	25.01Ha.	The work is carried out within broken up area.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.90	1:1.59	Not achieved the proposed development. Violation issued under rule 11(1).
3o	Total area put in use under different heads at the end of year	Opencast working-43.50Ha., Reclaimed & rehabilitated-17.75Ha, OB Dumps-17.65Ha., , Mineral Storage -3.00 Infrastructure & roads-3.70Ha. others (RW,GD,ST etc.,) 5.94, untouched area-45.4Ha.	Opencast working-43.5Ha. Reclaimed & rehabilitated-17.75Ha. OB Dumps-13.00Ha., Infrastructure-3.70Ha., others-58.99Ha.	Nil.
3p	Production of ROM mineral during the last five year period as applicable	( in tonnes) 2016-17 1060000 2017-18 650000 2018-19 650000 2019-20 650000 2020-21 650000	( in tonnes) 2016-17 1020000 2017-18 492845 2018-19 101778 2019-20 421483 2020-21 650000	As per the approved MP and Annual returns.
3q	General remarks of inspecting officers on method of mining etc.			Open cast method of mining with excavator tipper combination along with deep hole drilling & blasting carried out.

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	OB generated was proposed to be backfilled	OB & mineral reject is backfilled in dump No.D4	No top soil generated and overburden dumped in back fill dump (D4)
4b	Location of topsoil, OB and mineral reject dumps	Back filling proposed.	Back filling was carried out in D4 (Northing-5188 to 5412 Easting - 4814 to 5428)	The entire rejection material was back filled in Dump D4.

4c	Number of dumps within lease area and outside of lease area	Within lease area -4Nos. Outside the lease area - Nil.	Within lease area -4Nos. Outside the lease area - Nil.	Nil.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps are proposed outside the UPL.	Dumping were done outside the UPL.	Nil.
4e	Number of active and alive dumps.	2 Dumps are active (D4 & D3)	2 Dumps are active (D4 & D3)	Nil.
4f	Number of dead dumps.	2 Dumps are inactive (D2 & D1)	2 Dumps are inactive (D2 & D1)	Nil.
4g	Number of dumps established.	2 Dumps (D2 & D1)	2 Dumps (D2 & D1)	Stabilized with plantation and partially coir matting.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain all along the dump proposed .	The retaining wall & garland drain constructed.	The retention walls and garland drains are constructed as per approved R&R.
4i	Length of Retaining wall or garland drain all along dumps	Retention wall : 415Mtrs Garland Drain : 415Mtrs	Retention wall : 415Mtrs Garland Drain : 415 Mtrs Garland Drain : 415Mtrs	Nil.
4j	Number of settling ponds	No proposal.	Nil	1 No. settling tanks are constructed as per approved R&R ICFRE in the past.
4k	Specific comments of inspecting officer on waste dump management			The retention walls and garland drains are being observed to be constructed as per approved R&R.

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Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Part backfilling proposed.	Before starting of backfilling the area was fully extracted of available mineral. 17.75Ha. already back filled in dump D2. Backfilling as per the approval.	Backfilling was carried out at the earmarked place as proposed.
5b	Area under backfilling of mined out area	6.75Ha.	3.27Ha.	3.27Ha. utilized in Dump-D4.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	No generation of top soil.	Mining operations are proposed to work within the broken up area. Hence no generation of top soil.
5d	Total area fully reclaimed and rehabilitated	17.75Ha.	17.75Ha.	As per the information furnished by Mine management.
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling proposal area has not achieved due to less development quantity achieved.

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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).	To be submitted before 1st July of every year	Submitted for the year 2020-21 on 12.07.2021.	-
6b	Area available for rehabilitation (ha) .	No Proposal.	Nil.	-
6c	afforestation done (ha).	1.50	For development of green belt along the approaching haul road.	For development of green belt along the approaching haul road.
6d	No. of saplings planted during the year	1500Nos.	500Nos	-
6e	Cumulative no .of plants	No Proposal.	39500Nos	-

6f	Any other method of rehabilitation	No Proposal.	Nil.	-
6g	Cost incurred on watch and care during the year	No Proposal.	Nil.	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	6.75Ha.	3.27Ha. back filled.	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	6.75Ha	3.27Ha. back filled	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	6.75Ha	3.27Ha. back filled	-
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	6.75Ha	3.27Ha. back filled	-
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	6.75Ha	3.27Ha. back filled	-
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	-
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	-

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed in the core zone & buffer zone	Environmental monitoring carried out in the core zone & buffer zone regularly. Location Core zone: Location Air-3 Location, Noise-3 Location Buffer zone: Air-3, Location Noise-3 location, Ground water-3 Surface water-2 (March-21 Monitoring report obtained)	Monitoring done by SUMS Techno labs Pvt. Ltd., Hospet.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Achieved only 3.27 ha of backfilling area with respect to the proposal of 6.75 ha due to less achievement of development proposal. Hence, V/L Issued.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting proposed within lease area.	Grade wise sorting done within lease area.	-10mm of Fines, 10-40mm, of Lumps with a grade of +52% Fe.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Sorting and sizing proposed.	Mechanical Sorting and sizing done within the ML area.	Dry crushing & Screening adopted.
7c	Different grade of mineral sorted out at mines.	Different grade of mineral sorted (Fe): 45%-50%, 50%-55% , 55% , 55% -60% , 60% -65% +65% +45% - 65%	Different grade of mineral sorted (Fe) at the mine: 45% -50%, 50%-55%, 55%-60%, +65%	

7d	Any beneficiation process at mines	No Proposal	No such study carried out.	Nil.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mechanized method of mining adopted for mineral sorting with dry crushing & screening.

## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal.	No top soil is generated.	Working in the broken area.
8b	Concurrent use or storage of topsoil	No proposal.	Nil.	Proposed to work within the broken up area for plan period.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Backfilling proposed.	Over burden/waste dumped in the D4(Backfilling)	2 dump yard identified for dumping of waste material namely D4(backfilling) & D3.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB/Waste generated is proposed for back filling the mineral exhausted pit.	OB/Waste generated is carried out for back filling the mineral exhausted pit.	Back filling is under progress.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	Nil	-

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Within the mining lease- 1500 Nos	Within the mining lease- 500 Nos	More Than 39500Nos sapling were planted so far.
8g	Survival rate	80 % Survival rate	80% Survival rate.	Nil.
8h	Water sprinkling on roads to control airborne dust	Sprinkling on haul roads proposed to control the air borne dust.	Sprinkling on haul roads is carried out regularly to control the dust generated during various mining activities .	9 Tankers with a capacity of 8000 Ltrs & 10000 Kilo liters 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			Developed mine office area with good aesthetic beauty condition.

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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 January-2022 Annual Returns submitted for the year 2020-21	Annual Report submitted on 25.06.2021 (for the year 2020-21)	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager : Sri. Mallikarjun Sarapur Geologist : Sri.Rameshappa Mining Engineer: Sri.Shivaputra	Manager: Sri.H.J.Basavarajappa Geologist : Guruprasad M N Mining Engineer: Sri.Shivaputra.	Violation issued for Geologist engaged in the mine does not have the requisite professional experience.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) working- 43.5ha., Reclaimed & Rehabilitated- 17.75ha., Used for waste disposal- 13.00ha., occupied by plant, building, residential ,welfare building & roads-3.70ha., other purpose (specify) (un-utilization area, EMP, back filling area) 58.99ha.,	Appears to be correct.
9d	Scrutiny of Annual return on afforestation	WML-500 Nos. & 80% survival rate OML-NIL	& appears to be correct.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil.	Nil.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening stock- 137671Tons, Production- 650000Tons, Closing Stock- 237347Tons Grade-wise ore Lumps: - Below 55% -44701 Tons, 55% to below 58% - 18000 Tons & 58% to below 60% - 15397 Tons. Fines: - 55% to below 58% - 116226 Tons, 58% to below 60% - 172000 Tons & 60% to below 62% - 184000Tons.	Appears to correct.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- Rs.942.01/Ton Lumps: Ex-mine Price- Rs. 1613/Ton 0-55% Fe Rs.2249/Ton 55-58% Fe Rs.3405/Ton 58-60% Fe Fines Rs.926/Ton 0- 55% Fe Rs.2016/Ton 55-58 % Fe Rs. 2625/Ton 58-60% Fe Rs. 3257/Ton 60-62% Fe Appears to correct.	Appears to correct.	
9h	Scrutiny of Annual return on fixed assets	8.17 Crores including buildings, plant, machinery & transport equipment.	As annual returns submitted for the year 2020-21, furnished capitalised expenditure is not accounted for the exploration carried out during the year.	Violation issued under rule 45(7).
9k	Scrutiny of Annual return on mining machineries	Excavator-14Nos., Wheel Loader-10Nos., Dumper/Tipper-41Nos., Water Tanker-9Nos., Crushing & Screening-4Nos., Rockdill-1No. Dozer-1No.	Appears to be correct.	

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**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)	28/02/2022				
MCDR17 Rule 45(7)(a)	28/02/2022				
MCDR17 Rule 55(1)(3)	28/02/2022				

**Date :**

**(SURESH PRASAD)**

Indian Bureau of Mines