

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

Mining Plan Modification REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/52/BNG

Mine code : 30KAR03035

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Y.V.Ramakrishna Reddy, Mines Manager and N.Sivaprasad
Official with
Designation
- (iv) Date of Inspection : 28/06/2021
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KARADIKOLLA SURESH**
- (b) **Registration NO.** : **IBM/243/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **KARADIKOLLA SURESH**
- Taluka : **HOSPET**
- Post office : **KARIGANUR**
- Pin Code :
- FAX No. : **08394-226853 (F),pbsandson@**
- E-mail : **pbsandson@gmail.com.**
- Phone : **08394-228332 (O),8971200394**
- (f) **Police Station** : **HOSPET**
- (g) **First opening date** : **05/09/1953**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **M/s P. BALASUBBA SETTY & SON**
correspondance **P.B.No. 3, Hampi Road,**
HOSPET, Bellary -583201
3. (a) **Lease Number** : **KAR0323**
- (b) **Lease area** : **44.6**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **22/01/2006**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : P.B.SETTY & SONS
D.No-2078, P.B.No-03 22nd
Ward, J.P.Nagar Bellary
Road, Hospet BELLARY
KARNATAKA
Phone:08394-265695, 265366
FAX :08394-265355

Owner : P.V.Prakash, M.Partner of M/s P.B. Setty & Son
D.No-2078, P.B.No-03, 22nd
ward, J.P.Nagar, Bellary
Road Hospet BELLARY
KARNATAKA
Phone: 08394-265595, 2
FAX : 08394-265355

Mining Engineer

Name : J.Vijay Narasihulu, Full Time
Qualification : BE, Mining
Appointment/ : 01/08/2017
Termination date

Geologist

Name : N. Shiva Prasad., Full Time
Qualification : M.sc Geology
Appointment/ :
Termination date

Manager

Name : Y.V.Ramakrishna Reddy
Qualification : Dip. in Mining
Appointment/ : 01/12/2011
Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	12/04/1991
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	07/02/1996
		Renewal under rule 22 MCR1960	26/06/2001
		Modif.of approved Mining Plan	20/12/2002
		Modif.of approved Mining Plan	23/03/2007
		Mining Scheme rule 12 MCDR1988	27/06/2008
		Modif.approved Mining Scheme	11/01/2013
		MS modif under MCR 1960	27/08/2015
		MP review under 17(1) MCR 2016	27/11/2017
		MP modif under 17(3) MCR 2016	13/07/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	28 nos of CBH drilled by the lessee in the past amounting to 2302.5 Mtrs.
1b	Exploration over lease area for geological axis 1 or 2	G1 & G2	Area under G1 -10.81 ha Area under G2 -3.06 ha.	Total area of 13.87 Ha. Is mineralized.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not available.	Explorations carried out by Geotech Nagpur in the past.	Expenditure incurred on exploration- 18 Lakh
1d	Balance area to be explored to bring Geological axis in 1 or 2	-	3.06 ha. Of G2 level needs to be explored.	Non-mineralized area : 33.31 ha Total:42.10 Ha
1e	Balance reserve as on 01/04/20	-	14.60 Million tonnes as on 1-4-2020 with average grade of 63% of Fe and 5% (SiO ₂ +Al ₂ O ₃).	As per annual returns submitted for FY 2019-20.
1f	General remarks of inspecting officers on geology, exploration etc			28 nos of CBH drilled by the lessee covering in area of 10.81 Ha. In G1 and 3.06Ha in G2 category .

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed location of development ; N 1683625 - N 1684075 and E 653450 - E 653910	Actual location of development ; N 1683693 - N 1684070 and E 653451 - E 653951	Development was carried out within the proposed grids.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	There is no separate benches for OB & mineral	Combined benches for OB & mineral	No generation of top soil. Working in broken up area.
2c	Stripping ratio or ore to OB ratio	1:0.46	1:0.46	

2d	Quantity of topsoil generation in m3	No proposal	Nil	Working in broken up area
2e	Quantity of overburden generation in m3	381126 tonnes	381140 tonnes	Bulk density ; ore - 3.5 T/Cu.M and Waste -2.5 t/Cu.M
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the benches was carried out as per the proposal. There was no generation of top soil as the workings were carried out in broken up area.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single Pit proposed for production.	Single Pit divided into two section as eastern and western section.	
3b	Quantity of ROM mineral production proposed	0.825 Million tonnes	0.825 Million tonnes	No change.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil.
3d	Quantity of mineral reject generation	No proposal	Nil	No generation of mineral rejects.
3e	Grade of mineral rejects generation and threshold value declared.	+45%Fe for hematite iron ore and +35% Fe for HSIO.	Nil.	Nil.
3f	Quantity of sub grade mineral generation.	No proposal	76420 tonnes	In pit blending of mineral reject with high grade ore.
3g	Grade of sub grade mineral generation	No proposal	+35 % to 45% Fe	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed	Mechanized method adopted	Dry Crushing and screening of 200 T/H

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No Such Beneficiation study carried out.	
3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting proposed in mineral benches	Drilling & Blasting adopted in mineral benches with 2 Nos of 115mm capacity of wagon drilling.	Blasting is carried out using Slurry explosive in conjunction with NONEL
3k	Provision of mining machineries in mineral benches	Drill M/c- 3nos., Excavator-7 Nos., Tippers- 14 Nos	2drill m/c, 9 excavators & 18 No of tippers in operation	HEMM Records not updated. Violation issued
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8mtrs of bench height & 10 mts width proposed	8mtrs of bench height & 10 mts width (avg) is suitable for mining.	
3m	Total area covered under excavation/pits	14.82 ha at the end of plan period.	14.34 ha at the end of reporting year 2020-21.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.46	1:0.46	No change.
3o	Total area put in use under different heads at the end of year	Area under mining : 14.82 Ha, Waste dump site : 13.96 ha, Mineral storage : 3.25 Ha, Infrastructure : 0.20 ha, Roads : 0.75Ha, Mineral separation Plant : 0.02 Ha, Green belt : 1.62 ha, others : 7.23 ha, Un touched area : 0.25 Ha at the end of plan period.	Covered under current (O/C) Workings: 14.064 Ha, Reclaimed/ Rehabilitated : 5.36Ha, Used for waste disposal: 14.716Ha, Occupied by plant, buildings, residential, welfare buildings & roads: 0.97ha, Other Purpose (Green belt, Sub-grade Mineral Dump, Float worked-out are (natural plantation Float worked out area)) 6.99 ha.	Violation issue for waste dump area.

3p	Production of ROM mineral during the last five year period as applicable	2016-17: 480000 2017-18: 480000 2018-19: 825000 2019-20: 825000 2020-21: 825000	2016-17: 4,80,000 2017-18: 4,80,000 2018-19: 8,25,000 2019-20: 8,25,000 2020-21: 8,25,000	All units in tonnes. Actual production is within the proposed production limits
3q	General remarks of inspecting officers on method of mining etc.			Mining was carried out with the help of excavator tipper combination. Drilling & Blasting was carried out in conjunction with NONEL detonators.

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.	No top soil generated.
4b	Location of topsoil, OB and mineral reject dumps	Proposed location of OB; N-1683900 to 1684160 E - 653775 to 654025	Actual location of dumping : N 1684010 to N 1684172. E-653774 to E 653988	Violation issued.
4c	Number of dumps within lease area and outside of lease area	One active dump & 2 inactive dump s within the lease area.	One active dump & 2 inactive dump s within the lease area .	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB dump proposed outside of the ultimate pit limit.	OB dumped outside the UPL.	No change.
4e	Number of active and alive dumps.	One number of active dump proposed.	One number of active dump within the lease.	
4f	Number of dead dumps.	2 nos	2 nos	

4g	Number of dumps established.	No proposal.	Both inactive dump & active dump is partially Stabilized.	Stabilized by Coir matting and there after plantation over the coir mat.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain proposed all along the dumps.	Retaining wall and Garland Drain constructed all along the dump.	
4i	Length of Retaining wall or garland drain all along dumps	670m of retaining wall and 680 m of garland drain proposed.	Retaining wall and garland drain constructed as per proposal.	
4j	Number of settling ponds	No proposal.	Nil.	Total 7 nos of settling ponds constructed in the past and maintained.
4k	Specific comments of inspecting officer on waste dump management			Waste dump management was satisfactory however Clarification sought on location of OB dumping with corresponding area occupied.

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.	No proposal.	Not applicable.	Mineral is not exhausted in the working pit & B/F is not necessary as of now.
5b	Area under backfilling of mined out area	No proposal.	Not applicable.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	Not applicable	
5d	Total area fully reclaimed and rehabilitated	No proposal.	Not applicable.	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Mineral is not exhausted in the working pit & B/F is not necessary as of now.
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Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Annual report on PMCP to be submitted by 1st July of every year.	Annual Report for FY 2019-20 submitted.	Report submitted on date 29/07/2019.
6b	Area available for rehabilitation (ha) .	0.85 ha.	0.85 ha.	
6c	afforestation done (ha).	0.85 ha (2020-21)	0.85 ha (2020-21)	
6d	No. of saplings planted during the year	1360	1375	1985 no. of saplings are planted Including gap plantation and avenue plantation and 150 no. of plants are planted outside lease.
6e	Cumulative no .of plants		agave : 610400, other Local Species: 1,56,160 and actual planted :1985 (2020- 21), and 150 no. outside planted	Plantation done on inactive dump, green belt area, safety barrier, mine office
6f	Any other method of rehabilitation	Geo textiles / Coir mating	Geo textiles / Coir mating	0.25 ha covered with coir mat(2020-21) , cumulative: 2.25 ha
6g	Cost incurred on watch and care during the year	2,04,000/-	9,42,308/-	April-2020 to sep-2020.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal.	Nil.	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal.	Nil.	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal.	Nil.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	Nil.	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal.	Nil.	
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 core zone & buffer zone.	Environmental monitoring Carried out periodically for Air, water, Soil and Noise .	Environmental parameters were observed to be within the permissible limits. Monitoring carried out by MES Bellary.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP activities were carried out as per the proposal.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Size wise and Grade wise sorting of ROM proposed.	Size wise and Grade wise sorting of ROM done.	Dry crushing and screening .
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method proposed for mineral sorting.	Mechanical method adopted for mineral sizing and sorting.	
7c	Different grade of mineral sorted out at mines.	Fines : -10mm, Lumps +10 to 40mm, + 58% Fe, 45 to 58% Fe	Lumps: 58% to below 60% and 62% to below 65%, Fines: Below 55% and 62% to below 65%	
7d	Any beneficiation process at mines .	No proposal.	Not applicable.	Dry crushing & sizing.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No deviation wrt mineral conservation was observed during the course of MCDR inspection.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal.	Nil.	No top soil, working in broken up area.
8b	Concurrent use or storage of topsoil	No proposal.	Nil.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps proposed for overburden.	OB dumped separately at earmarked place.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB & waste will be used during FMCP for backfilling	Nil.	Mineral not exhausted.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Will be complied during FMCP.	Not applicable.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1360 no of saplings proposed on waste dumps.	1375 Nos. of saplings planted on waste dump	Cummulative of 610400 no. of saplings done.
8g	Survival rate	No proposal.	82%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on haul roads to control airborne dust.	5 water tankers and one mist spray tanker were deployed to suppress.	Total -6 nos of water tanker deployed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around mines area was good as the lessee had carried out afforestation and environmental protection measures as per the proposal.

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 May 2021, A.R. Submitted up to 2019-20.	AR submitted on 28-07-2020.

- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager
 Manager Mining: Y V Ramakrishna Reddy, Mining Engineer : VijayaNarasihulu, Geologist : N.Siva Prasad
 Same officers were present during the course of inspection.
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.
 Covered under current (O/C) Workings: 14.064 Ha. , Reclaimed/Rehabilitated: 5.36Ha, Used for waste disposal: 14.716Ha, Occupied by plant, buildings, residential, welfare buildings & roads: 0.97ha, Other Purpose : 6.99 ha.
- 9d Scrutiny of Annual return on afforestation
 With in Mining Lease : 2380 @ survival rate of 81%, Outside mining lease :120 @ survival rate of 70%
 Appears to be correct.
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity)
 72460 tons of below 45% Fe.
 Appears to be correct.
- 9f Scrutiny of Annual return on ROM stock and/or graded ore
 ROM OB: Nil Production:825 000 Tons CB: Nil Dump workings: OB -354442 Tons, Production- Nil, CB-298401 tonnes.
 Appears to be correct..

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value : Lumps- Rs.3808.98/Ton , Fines- Rs.2633.17/Ton . Ex-Mine Price: Lumps-58% to below 60% :Rs 1972.00/Ton, 62% to below 65%: Rs.3603.00/Ton Fines: Below 55% : Rs. 381.00/Ton, 62% to below 65%: Rs.2428.00/Ton . Cost of production: Rs.1198.60 /Ton.	Appears to be correct.
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets: Rs.389264066 /- including land, industrial, plant, machinery and transport equipments.	Appears to be correct.
9k	Scrutiny of Annual return on mining machineries	Excavator - 9Nos, Front End Loader- 8nos, Rock Drill (Non Elec.)-2 Nos, Crusher-3nos, Dumpers-18Nos and water tanker-6Nos.	Appears to be correct.

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

Violation observed			Show couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	04/08/2021			
MCDR17	Rule 19(1)	04/08/2021			

Date :**(ARUN KUMAR)**

Indian Bureau of Mines