

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

MCDR inspection REPORT

Bangalore regional office

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

Mine code : 30KAR03035

- (i) Name of the Inspecting : **S006**) **SURESH PRASAD**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : Y. V. Rama Krishna Reddy, Mines Manager and N.Siva Pr
Official with
Designation
- (iv) Date of Inspection : 09/05/2022
- (v) Prev.inspection date : 06/03/2020

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),8971200391**
- (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

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|-------------------------------|---|--------------------------------|------------|
| 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 |
| | | Modif.approved Mining Scheme | 02/08/2021 |
| | | MP review under 17(1) MCR 2016 | 14/10/2021 |
| | | FMCP under 23C(1) | 14/10/2021 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|-------------------------------|--|---|
| 1a | Backlog of previous year | Nil. | Nil. | |
| 1b | Exploration over lease area for geological axis 1 or 2 | G1:16.50 Ha G2:0.26 Ha | G1: 16.76 Ha. | As reported by the mine management, Non mineralized area: 25.34 Ha out of total area of 42.10 Ha. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Proposed 6 No's of bore hole. | 6 No's of bore hole carried out. | Expenditure incurred on exploration, reported as Rs. 1,72,050/- |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Proposal for depth extension. | Reported 06 nos. of boreholes in for drilling in greater depth | Entire mineralized area under G1. |
| 1e | Balance reserve as on 01/04/20 | - | 13.46 Million tones as on 1-4-2021 | As per AR submitted for the year 2020-21. With average grade 63% of Fe and 5% (SiO ₂ + Al ₂ O ₃). |
| 1f | General remarks of inspecting officers on geology, exploration etc | | | Total 6 Nos. of bore holes as proposed has been carried for greater depth. However, GR report is yet to be submitted. |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|--|--|
| 2a | Location of development w.r.t.lease area | N-1683660 - 1684150 E-653450 - 653925 | N-1683662.7138 - 1684141.8880, E- 653535.6609 - 653905.1357 | |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | There is no separate benches for OB. | Combined benches for OB & mineral. | Already broken up area. No topsoil proposed and generated during the year 2021-22. |
| 2c | Stripping ratio or ore to OB ratio | 1:0.51 | 1:0.54 | |

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| 2d | Quantity of topsoil generation in m3 | No proposal. | Nil. | Already broken up area. |
| 2e | Quantity of overburden generation in m3 | 1,94,790 CUM | 1,95,064 CUM | 4, 87, 660 tones. As per the information furnished by mine management. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | The development work was carried as per the proposal in one pit only. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|---|---|
| 3a | Number of pit proposed for production | Sections line BB' To FF' SE To NW & SW To NE | Sections line BB' To FF' SE To NW & SW To NE | |
| 3b | Quantity of ROM mineral production proposed | 0.898 MMT | 0.898 MMT | As per the approved document and the returns submitted to this office. (MMT- million matric tones.) |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% | 100% | - |
| 3d | Quantity of mineral reject generation | No proposal. | Nil. | |
| 3e | Grade of mineral rejects generation and threshold value declared. | < 45% Fe | Grade below 45% Fe content ore are reported for blending with High grade to suit market demand. | |
| 3f | Quantity of sub grade mineral generation. | No proposal. | Nil. | |
| 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 for segregating from ROM. | Mechanized Method adopted for segregating from ROM. | - |

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| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No proposal. | Not applicable. | - |
| 3j | Provision of drilling and blasting in mineral benches | 1 No. of 115mm dia. of hole,30 mts/hr capacity of meterage of wagon drilling, 12 bar capacity of air compressor and Slurry explosive and ANFO | 1 No. of 115 mm dia. of hole,12 bar capacity of air compressor of Epirock track mounted drilling ,2 No's of 115mm dia. of hole,30 mts/hr capacity of meterage of wagon drilling, 12 bar capacity of air compressor and Slurry explosive. | |
| 3k | Provision of mining machineries in mineral benches | 7 No's of Hydraulic Excavators with 1.2 to 2.8 M3 of bucket capacity, 10 No's of 16 Tonners and 4 No's of 30 Tonnes capacity of tippers/ Dumpers. | 1 no of 1.8, 1 no of 1.6, 1 no of 1.45, and 6 No's of 1.2 M3 of bucket capacity Hydraulic Excavators, 4No's of 16 Tonner, 10 No's of 21 Tonner and 2No's of 25 Tonners of tippers / dumpers. | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Benches of 8 m. height & 10m width (avg) proposed. | The bench height of Pit-1 at the section line D - D' & E - E' were not maintained as per the proposal. | Violation issued under Rule 11(1) of MCDR, 2017. |
| 3m | Total area covered under excavation/pits | 14.25 Ha | 14.25 Ha (2021-22) | |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.51 | 1:0.54 | |

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| 3o | Total area put in use under different heads at the end of year | Mining Pit- 14.25 Ha. Waste dumps- 13.75 Ha. Infrastructure 0.15 Ha. Green Belt 1.62 Ha. Roads 0.75 Ha. Afforestation 3.70 Ha. Worked out float ore area with Plantation & water Conservation & Pollution control structure 5.57 Ha. Virgin area 1.500 Ha. Mineral Separation Plant 0.02 Ha. Mineral Storage 0.79 Ha. Total 42.10Ha | As per the approved MMP. As the annual return for the year 2021-22 was not submitted till date of inspection (due date 30/06/20222) |
| 3p | Production of ROM mineral during the last five year period as applicable | 2015-16: 4,80,000 2016-17: 4,80,000 2017-18: 4,80,000 2018-19: 8,25,000 2017-18: 4,80,000 2018-19: 8,25,000 2019-20: 8,25,000 2020-21: 8,25,000 2021-22: 8,99,030 (In Tonnes) | 2015-16: 4,78,850 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 2021-22: 8,98,950 (In Tonnes) |
| 3q | General remarks of inspecting officers on method of mining etc. | | Mine is being operated by deploying HEMM with excavators and tippers combinations as per the proposal. Further, FMCP has been approved by this office as the lease is expiring within two years. |

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. |

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| 4b | Location of topsoil, OB and mineral reject dumps | Proposed locations: N - 1683950 To N - 1684280 E - 653650 To E - 654050 | Dumping was carried out at : N -1683956.9649 - 1684250.1415 E - 653738.4312 - 653997.6348 | Carried out during the year 2021-22 as per approved FMCP. |
| 4c | Number of dumps within lease area and outside of lease area | One Active dumps & 2 Inactive dumps within the lease area. | One Active dump & 2 Inactive dumps within the lease area. | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Dump proposed within lease area and outside of the UPL. | Dump maintained within lease area and outside of the UPL. | No change. |
| 4e | Number of active and alive dumps. | One number of active dump proposed within the Mining Lease. | One number of active dump within the Mining Lease. | |
| 4f | Number of dead dumps. | No proposal. | Not applicable. | |
| 4g | Number of dumps established. | Inactive portion of dump concurrently afforested. | Partially Stabilized at Active dump. | |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Retaining wall or garland drain proposed all along dumps. | Retaining wall or garland drain constructed all along dumps. | |
| 4i | Length of Retaining wall or garland drain all along dumps | Proposed 1220 m. of Retaining wall & 1220m of garland drain for the year 2021-22. | Constructed 660 m. of Retaining wall & 660m of garland drain for the year 2021-22. | Violation issued for lagging of achieved protective measures. |
| 4j | Number of settling ponds | No proposal. | Nil. | Total 7nos of settling ponds constructed in the past and maintained. |

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| 4k | Specific comments of inspecting officer on waste dump management | Construction of garland drain and retaining wall were not achieved as per the proposal for the year 2021-22. Hence, Violation issued under rule 11(1). Further, protective measures work were observed under progress. |
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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. | Nil. | Mineral has not exhausted fully. |
| 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 has not been exhausted in the working pit therefore, backfilling and reclamation of pit area is not envisaged. |

Progressive Mine Clousre Plan:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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|----|--|--------------------------------------|--|---|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | Before 1st July of every year. | Annual Report 2020-21 Submitted on date 23-07-2021. | Annual report before 1st July of every year setting forth the extent of protective and Rehabilitative works carried out as envisaged in the approved mine closure plan. |
| 6b | Area available for rehabilitation (ha) . | 0.83 ha. | 0.85 ha | As per information furnished by the mine management, 0.49 ha of waste dump covered with coir mat during the year 2021-22. |
| 6c | afforestation done (ha). | 0.83 ha (2021-22) | 0.85 ha (2021-22) | |
| 6d | No. of saplings planted during the year | 1328 | 1955 | As per information furnished by the mine management, 1955 no. of saplings are planted Including gap plantation avenue plantation and 3650 Nos of Agave plantation done FY-2021-22). |
| 6e | Cumulative no .of plants | -- | agave: 6,14,050, Other Local Species: 1,57,615 and actual planted :1955 (2021-22), and 150 nos. of trees planted outside the ML area. | |
| 6f | Any other method of rehabilitation | Proposed Geo textiles / Coir mating. | Geo textiles / Coir mating | 0.49 ha covered with coir mat (2021-22), cumulative: 2.99 ha. |
| 6g | Cost incurred on watch and care during the year | Rs. 10,00,000/- | Rs.17,68,972.00/- | As per information furnished by the mine management Cost incurred Rs.17,68,972/- on watch & care during the FY 2021-22. |

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| 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 on backfilled area | No proposal. | Nil. | Mineral has not exhausted in the pit. |
| 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. | Mineral has not exhausted in the pit. |
| 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. | |

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| 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 & Noise. | Environmental parameters were observed to be within the permissible limits. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | PMCP activities are being observed to be carried out as per proposal. Further, FMCP has already been approved as lease is expiring in the year 2023. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|--|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Size wise & Grade wise sorting of ROM proposed. | Size wise & Grade wise sorting of ROM done. | |
| 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: 10mm 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 | | | Mechanical method adopted for mineral sorting with dry crushing & screening. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal. | Nil. | No top soil generated, already 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 dump proposed for OB. | Maintained as per proposal. | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | OB & waste will be used for backfilling after mineral exhausted from the pit. | Nil. | Mineral has not exhausted. |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | No proposal. | Nil. | Mineral not exhausted. |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 2027 nos. of sapling proposed on waste dump. | Actual plantation reported: 1955 (2021-22), and 180 no. outside planted. | Cumulative of 6,14,050 nos. of sapling 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 tanker and one mist spray tanker were deployed to suppress. | 6 Nos. of water tanker deployed. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | Lessee was proposed 2027 Nos. of plantation for the year 2021-22, whereas total 2135 Nos. of actual plantation reported during the inspection. |

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---------------------------------|
| 9a | Status of submission of Monthly and Annual returns | | M.R. Submitted up to March 2022, A.R. Submitted up to 2020-21. | A.R. Submitted up to 23-07-2021 |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | "Mining Engineer: J. Vijaya Narasihulu, B.Tech in Mining. "Geologist: N.Siva Prasad, M.Sc in Geology | Same officers were present during the inspection. | As per AR for the year 2020-21. |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Area covered under Current (O/C) working: 14.21 ha. Waste dump: 15.22 ha. Infrastructure : 0.92 ha. Reclamation/Rehabilitation : 6.98 ha. Others: 4.77 ha. Total area: 42.10 ha. | Appears to be correct. | As per AR FY 2020-21 |
| 9d | Scrutiny of Annual return on afforestation | Within Mining Lease: 1985 saplings are planted in year 2020-21 and survival rate :81% | Appears to be correct. | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Nil. | Appears to be correct. | No mineral reject generated. |

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| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Opening Stock of ROM: Nil Closing Stock of ROM: Nil. ROM Production: 8,25,000 Tons. Grade wise production:- Lumps: 62% to below 65% 356000 Tons Fines: 60% to below 62% 108000 Tons & 62% to below 65% 361000 Tons. | Appears to be correct. | As per AR-2020-21 |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Av. Ex. Mine price Rs 4117.45/- per ton. Cost of production Rs 1620.50/- per ton. | Appears to be correct. | As per AR-2020-21 |
| 9h | Scrutiny of Annual return on fixed assets | Value of fixed assets Rs 50,07,19,775/- | Appears to be correct. | As per AR-2020-21. |
| 9k | Scrutiny of Annual return on mining machineries | Excavator - 10 Nos. Front-end loaders - 8 No's. Rock Drill (Non electric) - 2 No's. Air Compressors - 2 No's. Crushers - 3 No's. Dumpers - 20 No's. Water tankers - 6 No's Jeep/Tractor - 2 No's Diesel generators - 2 No's. | 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) | 01/06/2022 | | | |

Date :

(SURESH PRASAD)

Indian Bureau of Mines