

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

MCDR inspection REPORT

Kolkata regional office

Mine file No : CAL/BH/SB/FE(N-1)

Mine code : 30BHR27031

- (i) Name of the Inspecting : **R003**) **RAGHVENDRA KUMAR**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : **SHRI ANIL KHIRWAL, LESSEE.**
Official with
Designation
- (iv) Date of Inspection : 05/07/2021
- (v) Prev.inspection date : 19/12/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BALAJI**
- (b) **Registration NO.** : **IBM/6896/2011**
- (c) Category : A Other Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : JHARKHAND
District : SINGHBHUM (WEST)
Village : NOAMUNDI
Taluka : CHAIBASA
Post office : NOAMUNDI BAZAR
Pin Code : 833217
FAX No. :
E-mail : ankit.khirwal@gmail.com
Phone : 06582-255157
- (f) Police Station : NOAMUNDI
- (g) First opening date : 01/05/1972
- (h) Weekly day of rest : SUN
2. Address for : AT & PO: CHAIBASA -833201.
correspondance : DIST: SINGHBHUM WEST.
JHARKHAND .
3. (a) Lease Number : BHR0054
- (b) Lease area : 22.66
- (c) Period of lease : 30
- (d) Date of Expiry : 30/04/2002
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : ANIL KHIRWAL
 KHIRWAL MARKET, SADAR BAZAR
 AT & PO. CHAIBASA SINGHBHUM
 (WEST), JHARKHAND SINGHBHUM
 (WEST) JHARKHAND
 Phone: 09431300407
 FAX : 06582-258357/257157

Owner : ANIL KHIRWAL
 KHIRWAL MARKET PO. CHAIBASA
 . SINGHBHUM (WEST),
 JHARKHAND SINGHBHUM (WEST)
 JHARKHAND
 Phone: 9431300407
 FAX : NIL

Agent : ANIL KHIRWAL
 M/S MARUTI MINERALS
 INDUSTRIES KHIRWAL MARKET,
 AT & PO. CHAIBASA
 SINGHBHUM(W) SINGHBHUM
 (WEST) JHARKHAND
 Phone: 06582-258357, 259157
 FAX : NIL

Mining Engineer

Name : B. D. PANDEY, Full Time
 Qualification : AMIE(MIN. ENGG.)
 Appointment/ : 08/01/2014
 Termination date

Geologist

Name : Choudhury Sabir Ahmed, Full Time
 Qualification : M.Sc. in Applied Geology
 Appointment/ :
 Termination date

Geologist

Name : CHOWDHURY SABIR AHAMAD, Full Time
 Qualification : M. Sc.(Geo)
 Appointment/ : 16/06/2014
 Termination date

Manager

Name : BHISMA DEO PANDEY
 Qualification : AMIE(Min. Engg.)
 Appointment/ : 08/01/2014
 Termination date

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| 6. Date of approval of Mining Plan/Scheme of Mining | : | Renewal under rule 24 MCR1960 | 25/10/2004 |
| | | Mining Scheme rule 12 MCDR1988 | 16/04/2010 |
| | | MP modif under 17(3) MCR 2016 | 19/12/2016 |
| | | MP review under 17(1) MCR 2016 | 05/12/2018 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|---|--|
| 1a | Backlog of previous year | No Boreholes has been proposed during 2020-21. | No borehole has drilled during 2020-21. | |
| 1b | Exploration over lease area for geological axis 1 or 2 | No additional exploration was proposed during 2020-21 in the lease area for Geological Axis-1. | No additional exploration was carried out in the lease area for Geological Axis-1. | Total 35 boreholes have been drilled during 2018-19. No Exploration has been carried out during 2020-21. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No proposal for exploration. | No Boreholes has been drilled. | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | 1.63 hectares area balance area to explore to bring Geological Axis 1 or 2. | Boreholes have proposed during 2021-22. | Out of 19.331 hectares lease area, 16.00 hectares are G-1, and 1.63 hectares in G-2. |
| 1e | Balance reserve as on 01/04/20 | Reserves & Resources as on 01.04.2021 (Within broken area + outside broken area) Proved Mineral Reserves (111) = 1101001 tons Probable Mineral Reserves (122) = 31000 tons Pre-Feasibility Mineral Resources (211+222) = 5041000 tons | Reserves & Resources as on 01.04.2021 (Within broken area + outside broken area) Proved Mineral Reserves (111) = 1101002 tons Probable Mineral Reserves (122) = 31000 tons Pre-Feasibility Mineral Resources (211+222) = 5041000 tons | Out of 19.331 hectares lease area, 8.242 hectares are within broken area. |

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| 1f | General remarks of inspecting officers on geology, exploration etc | It is part of western limbs of Iron ore range of Singhbhum. Hematite Iron ore in this mine occurs as lateritic ore/laminates ore/soft laminated ore and Blue dust. Entire Lease is having same Geology. |
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Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---|
| 2a | Location of development w.r.t.lease area | Proposed to work in Ganesh Pit-A, Hanuman Pit -B & West and East side of Puja Pit during 2020-2021. | Working has been carried out as per the proposal. | |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | It is proposed to form Bench only in Mineral | As per proposal 4 no. benches has been formed in mineral. | Overburden and topsoil are found very thinly. So no separate bench has proposed. |
| 2c | Stripping ratio or ore to OB ratio | 1:0.08 for 2020-21. | 1:0.00 | OB has proposed in outside broken area. During 2020-2021, there is no permission for working outside broken area. So development quantity is nil. |
| 2d | Quantity of topsoil generation in m3 | There is no proposal to generate of Topsoil during 2020-21. | No Topsoil has been generated during 2020-21. | |

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| 2e | Quantity of overburden generation in m3 | During 2020-2021 it is proposed OB as 819.72 Cu.m. | No overburden has been generated. | OB has proposed in outside broken area. During 2020-2021, there is no permission for working outside broken area. So development quantity is nil. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | Proposed to work in Ganesh Pit-A, Hanuman Pit -B & West and East side of Puja Pit during 2020- 2021. No Over burden has been generated against proposed 819.72 cu.m, OB has proposed in outside broken area. During 2020-2021, there is no permission for working outside broken area. So development quantity is nil. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---|
| 3a | Number of pit proposed for production | Proposed to work in Ganesh Pit-A, Hanuman Pit -B & West and East side of Puja Pit during 2020-2021. | Working has been carried out as per the proposal. | Proposal has given for proposed EC, but working has carried out as per existing EC. |
| 3b | Quantity of ROM mineral production proposed | The total target of Production was 74000.61 tons during 2020-2021. | 74000 tons of production have been achieved during 2020- 2021. | |
| 3c | Recovery of sailable/usable mineral from ROM production | ROM Recovery- 85% | ROM Recovery- 100% | |

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| 3d | Quantity of mineral reject generation | There is no proposal to generate of mineral reject 2020-21. | No mineral reject has been generated during 2020-21. |
| 3e | Grade of mineral rejects generation and threshold value declared. | 15% of Intercalated waste i.e. 11099 tons has been proposed for 2020-21. | There is no generation of intercalated waste and entire ROM has been used. |
| 3f | Quantity of sub grade mineral generation. | No Sub Grade Generation | No Sub Grade Generation |
| 3g | Grade of sub grade mineral generation | There is no generation of Sub-Grade mineral. | No Sub-Grade has been generated during 2020-21. |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanised | Mechanised |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Proposed screening unit for ROM. | As per proposal screening plant is used for Beneficiation of ROM. |
| 3j | Provision of drilling and blasting in mineral benches | Spacing - 1m Burden - 0.60m Depth - 1.50m It is Proposed to drill by jack hammer. | Drilling & Blasting are done as per proposal. |
| 3k | Provision of mining machineries in mineral benches | Excavators Atlas Copco JCB Hyva Screening Unit (Fixed) Screening Unit (Mobile) Tippers | As per proposal the machineries are available in field. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Bench height of 6m was proposed in Mineral. | Benches are formed 5-6m height. |

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| 3m | Total area covered under excavation/pits | 7.60 hect area is under Pit and additional 2.0 hect is required during 2020-2021 | 3.52 hectares are under Pit during 2020-2021 and 0.498 hectares are reclaimed. . | Due to delay in statutory clearance, working has been carried out in existing pit, additional area is not used in 2020-21. |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.08 for 2020-21. | 1:0.00 | There is no overburden proposal and achievement, so stripping ratio is zero. |
| 3o | Total area put in use under different heads at the end of year | Land use Pattern as on 01.04.2021. Mines = 9.60 hect Dump = 2.157 hect Infra = 0.20 hect Green Belt = 0.40 hect | Land use Pattern as on 01.04.2021. Mines = 3.52 hect Dump = 1.80 hect Infra = 0.20 hect Green Belt = 0.40 hect | There are no Changes in land use Pattern during 2021 because of delay in statutory clearance, Working in broken area only. |
| 3p | Production of ROM mineral during the last five year period as applicable | 2020-21= 74000.61 tons 2019-2020 = 73999 tons 2018-2019 = 300000 tons 2017-2018 = 150000 tons 2016-2017 = 73998 tons | 2020-21= 74000 tons 2019-2020 = 73998 tons 2018-2019 = 39030 tons 2017-2018 = 71740 tons 2016-2017 = 26670 tons | Mine is working as per existing EC limit. |
| 3q | General remarks of inspecting officers on method of mining etc. | | | Mechanised Method is Proposed, 74000 tons has been achieved during 2020-2021, As per proposal there is no generation of intercalated waste and entire ROM has been used. |

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|--|--|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | No Proposal of dumping. Generated Intercalated waste will be backfilled in Puja pit | As per proposal the backfilling is done in Partly during 2020-2021 in Puja pit. Un-proposed Mahabir pit has been backfilled. | Modification has been submitted and proposed within broken area. |
| 4b | Location of topsoil, OB and mineral reject dumps | Dump-1 (South of Puja Pit), Topsoil Dump-2 (In between Ganesh Pit-A & Hanuman-B), Dump-3 (North of Mahabir Pit), Dump-4 (North of Mahabir Pit), Sub Grade Dump-5 (East of Mahabir Pit), Dump-6 (North of Hanuman Pit-A), Dump-7 (West of Hanuman Pit-A), Dump-8 (South of Dump-9), Dump-9 (East of Puja Pit) | As per proposal the dumps are present. Out of 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump. | Dump-1 & 9 has been re-handle during 2019-2020 and Dump-4,6,7 has been re-handle and backfilled the Mahabir pit. |
| 4c | Number of dumps within lease area and outside of lease area | Lease area = 9 Non Lease area = Nil | Lease area = 5 Non Lease area = Nil | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | All the dumps are within broken area. | As per proposal dumps are formed. | |
| 4e | Number of active and alive dumps. | Active Dump = 04 Alive Dump = 05 | There are 2 active dumps for waste dumping, 1 for Topsoil dumping and 1for Subgrade dumping. | Dump-1&9 has been re-handle during 2019-2020 and Dump-4,6,7 has been re-handle and backfilled the Mahabir pit. |
| 4f | Number of dead dumps. | Dead Dumps = Nil | Dead Dumps = Nil | |

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| 4g | Number of dumps established. | No Proposal | No dumps have been established. | |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | No Proposal | Retaining wall & Garland drains around Dump no 01, 02, 03, 05, 09 & in Mahabir Pit have been constructed. | |
| 4i | Length of Retaining wall or garland drain all along dumps | No Proposal | Total length of Retaining Wall : 233 m | |
| 4j | Number of settling ponds | No Proposal | Nil | It is proposed to maintain the existing settling tanks. |
| 4k | Specific comments of inspecting officer on waste dump management | | | No Proposal of dumping. Generated Intercalated waste will be backfilled in Puja pit. As per proposal the backfilling is done in Partly during 2020-2021 in Puja pit. Un-proposed Mahabir pit has been backfilled. Retaining wall & Garland drainage around dump-1, 2,3, 5, 9 & backfilled Mahabir pit have been constructed. |

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 has proposed in Puja pit during 2020-2021. | As per proposal the backfilling is done in Partly during 2020-2021 in Puja pit. Un-proposed Mahabir pit has been backfilled. | Modification has been submitted and proposed within broken area. |
| 5b | Area under backfilling of mined out area | It is proposed to backfill 1.00 hectares during 2020-2021. | 0.45 hectares has Backfilled against Proposal. | |

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| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No Proposal | Nil | |
| 5d | Total area fully reclaimed and rehabilitated | No Proposal | Nil | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | Backfilling has proposed in Puja pit during 2020-2021. As per proposal the backfilling is done in Partly during 2020-2021 in Puja pit. Un-proposed Mahabir pit has been backfilled. Modification has been submitted and proposed within broken area. |

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). | It should be on or before 1st July every year. | Submitted for the year 2020-2021. | |
| 6b | Area available for rehabilitation (ha) . | No proposal | Nil | |
| 6c | afforestation done (ha). | Proposed 0.674 hect. in 2020-21 (over the existing dump) | Plantation has been achieved in 0.50 hectares during 2020-21 in dump area. | |
| 6d | No. of saplings planted during the year | 1685 saplings proposed for 2020-21. | 557 saplings achieved during 2020-21. | |

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| 6e | Cumulative no .of plants | 3460 no. of saplings proposed in 2.966 hectares during 2014-2021. | 3929 no. achieved in 1.70 Ha. from 2014-2021. |
| 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 | 1.00 Hectare | 0.45 Hectare |
| 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 |
| 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 | 1685 saplings of plantation has proposed during 2020-21. | 557 saplings achieved during 2020-2021 inside the leas area as plantation. |

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| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | Proposed .067 ha. in 2020-21. | Gap Plantation has been achieved in .50 ha. during 2020-21 in slope area of Mahabir pit & Safety zone (outside lease area). | Cumulative 3929 saplings have been planted in safety barrier during 2014-2021 within lease area. |
| 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) | Bi - Annually Survey | Environment monitoring is carried out through own as well as private agency | |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | Environment monitoring is carried out through own as well as private agency. Cumulatively 3929 saplings have been achieved in 1.70 hectares during 2014-2021. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|---|---|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | The total target of ROM Production was 74000.61 tons during 2020-2021. | 74000 tons has been achieved during 2020-2021 | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical Process and Manual Picking of Ore from Intercalated Waste | Mechanical Process and Manual Picking of Ore from Intercalated Waste | |
| 7c | Different grade of mineral sorted out at mines. | +40mm = +58%Fe 10-40mm = 58%Fe 5-10mm = 57%Fe 0-5mm = <46%Fe | +40mm = +58% Fe 10-40mm = 58% Fe 5-10mm = 57% Fe 0-5mm = <46% Fe | Low grade are Blended with High grade ores. |

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| 7d | Any beneficiation process at mines | Screening has been installed. | Screening, sorting and sizing is being done. | |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | | | The total target of ROM Production was 74000.61 tons during 2020-2021. 74000 tons has been achieved during 2020-2021. Low grade are Blended with High grade ores. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|--|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal. | Nil | Top soil dump is utilizing for plantation. |
| 8b | Concurrent use or storage of topsoil | No proposal | Nil | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Separate dump has been proposed for waste dump, topsoil and Subgrade dump. | As per proposal the dumps are present. Outof 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump. | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No proposal | Nil | |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | No proposal | Nil | |

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| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 1685 saplings of plantation has proposed during 2020-21. | 557 saplings achieved during 2020-2021 inside the lease area as plantation. | Cumulatively 3929 saplings have been achieved in 1.70 hectares during 2014-2021. |
| 8g | Survival rate | No proposal | 35% within lease area and 41% outside lease area. | |
| 8h | Water sprinkling on roads to control airborne dust | Yes, it is proposed for water sprinkling on haul roads. | Water sprinkling on road is observed during the inspection. | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | Lease area displays an undulating topography. Lease area grow mainly vegetation of sakhua. Area is in forest and there is no agricultural land within the lease. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|---------|
| 9a | Status of submission of Monthly and Annual returns | MR Submitted up to = June 2021 AR Submitted up to = 2020-2021 | Both Annual & Monthly returns are submitting in online system. | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Full time Mining Engineer, Geologist has appointed. | As per record Mining Engineer and Geologist are present during Inspection. | |

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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Land use Pattern as on 01.04.2021. Already exploited & abandoned = 0.499 hect Covered under current working = 3.946 hect Reclaimed/ Rehabilitated = 0.198 hect | Land use Pattern is filled as per approved Mining Plan. |
| 9d | Scrutiny of Annual return on afforestation | Lessee has planted 557 saplings during 2020-2021. | Plantation on existing dump and Gap plantation has been achieved in 0.50 hectares during 2020-2021. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | 15% of Intercalated waste/ Mineral Rejects Generation is not shown. | Intercalated waste/ Mineral reject of 11099 cum has been proposed for 2020-2021. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Iron Ore Stock as on 01.04.2021 ROM Opening stock = 32706 tons ROM Closing stock = 23618 tons | Mine has produced 74000 tons of Production during 2020-2021. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Cost of Production & Ex. Mine Price has shown. | Some invoice has been checked. |
| 9h | Scrutiny of Annual return on fixed assets | Fixed Assets is given | Fixed Assets is filled |
| 9k | Scrutiny of Annual return on mining machineries | Machineries details given. | As available in field. |

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 |
| | | | |

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines