

MCDR-MiFLOMn/5/2022-BBS-IBM_RO_BBS
INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION

I/7136/2023

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/SNG/MCDR-59/BBS

Mine code : 40ORI13059

- (i) Name of the Inspecting : **KQ13**) **KEWAL KRISHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Chandrakanta Rath, AGM (Mining
Official with
Designation
- (iv) Date of Inspection : 11-MAR-23
- (v) Prev.inspection date : 25-FEB-22

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MAHULSUKHA IRON & MANGAN**
- (b) **Registration NO.** : **IBM/343/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : ORISSA
District : SUNDARGARH
Village : BHUTUDA, RANDA, RANTHA
Taluka : LAHUNIPARA
Post office : BHUTUDA
Pin Code : 770041
FAX No. :
E-mail : mohapatral23@gmail.com
Phone : 9437139637
- (f) Police Station : LAHUNIPADA
- (g) First opening date : 17-SEP-20
- (h) Weekly day of rest : SUN
2. Address for : AT/PO-BANEIKALA, VIA-JODA
correspondance : DIST-KEONJHAR
ODISHA-758038
3. (a) Lease Number :
(b) Lease area : 390.317 Ha.
(c) Period of lease : 50 Yrs
(d) Date of Expiry : 29.06.2070
4. Mineral worked : Mn. & Iron

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5. Name and Address of the

Lessee : PATNAIK MINERALS (P) LTD
PATNAIK MINERALS (P) LTD
POST : KEONJHARGARH
KEONJHAR ORISSA
Phone: 06767-720101
FAX : 06767-72066

Owner : PATNAIK MINERALS (P) LTD
POST: KEONJHARGARH
KEONJHAR ORISSA
Phone: 72101
FAX : 72066

Agent : SHRI SATYABADI SAHU
SUNDARGARH ORISSA
Phone:
FAX :

Mining Engineer

Name : SHRI GAYATRI PRASAD MISHRA, Full Time
Qualification : B TECH MINING
Appointment/ : 01-JUN-21
Termination date

Manager

Name : SHRI CHANDRAKANTA RATH
Qualification :
Appointment/ : 29-JAN-22
Termination date

6. Date of approval of Mining :
Plan/Scheme of Mining

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|--|---|---|
| 1a | Backlog of previous year | 2021-22 nos | 19 nil | violation under rule 11(1) of MCDR 2017 |
| 1b | Exploration over lease area for geological axis 1 or 2 | 2022-23 nos of boreholes proposed to convert the area G1 level | 16 nil | violation under rule 11(1) of MCDR 2017 |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | no such proposal | exploration not carried out by any agency | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | not specified | Reamaining 120.978 ha area to be explored under G1/G2 | |
| 1e | Balance reserve as on 01/04/20 | | As on Feb 2023 Mn Reserves 366631T Remaining resources 10533T Iron Reserves 26783298 T Remaining resources 6031188T | |

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| 1f | General remarks of inspecting officers on geology, exploration etc | Rock of the manganiferous mixed facies formation occupies a major part of the Bonai-Keonjhar belt. . The manganese deposits of Mahulsukha Manganese lease area are located in the inner slopes of the western limb of the synclinorium.The general trend of the planer element is WNW-ESE with either northerly or southerly dips.The entire area is yet to be explored under G1/G2 level. |
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Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|--|--|
| 2a | Location of development w.r.t.lease area | For Mn N2410830 to 2411050 E 308299 to 308520 (co-ordinates as per the deveopment plan 22-23) Iron N 2409842 to N2410109 E 307518 to E307662 | Mn development as per proposal broadly | No development/production incase of Iron ore because of statutory clearance (EC) |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | yes | yes | |

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|----|---|---|---|
| 2c | Stripping ratio or ore to OB ratio | Mn 1:2.56 For Iron 1:2.54 | In case of Mn broadly as per proposal Nil, in case of Iron ,because of no production |
| 2d | Quantity of topsoil generation in m3 | no such proposal | no such proposal |
| 2e | Quantity of overburden generation in m3 | 58220 in case of Mn 256279 in case of iron | 81000T up to Feb 2023 nil in case of iron |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | working within the proposed area in case of Mn , no development/production of iron ore because of statutory clearance |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--------------------------------|---|---|
| 3a | Number of pit proposed for production | 02 nos | 01 no | no production in case of Iron ore because of statutory clearance. |
| 3b | Quantity of ROM mineral production proposed | Mn 59228T Iron 500060T | Mn 36477 T (upto Feb 2023) Iron nil | nil production incase of iron ore because of statutory clearance (EC) |
| 3c | Recovery of sailable/usable mineral from ROM T production | Mn 52121 T Iron 325039 T | 32099 T in case Mn in case of iron nil | |
| 3d | Quantity of mineral reject generation | For Mn 7107 T Iron 175021 T | For Mn 4377 T Iron nil | month -wise reject/subgrade details are not maintained properly , violation under rule 14(2) of MCDR 2017 |

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| 3e | Grade of mineral rejects generation and threshold value declared. | For Mn Grade of MR 10 to 20% & threshold +10% Mn for Iron Grade of MR 45 to 55% & threshold +45% Fe | For Mn Grade of MR 10 to 20% & threshold +10% Mn for Iron nil | no production/development of Iron |
| 3f | Quantity of sub grade mineral generation. | same as mineral reject | same as mineral reject | |
| 3g | Grade of sub grade mineral generation | same as mineral reject | same as mineral reject | no production/development in case of iron |
| 3h | Manual / Mechanised method adopted for segregating from ROM | not specified | Manual segregation for Mn | |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | no such proposal | no such proposal | |
| 3j | Provision of drilling and blasting in mineral benches | drilling and blasting is proposed | drilling and blasting is carried out | |
| 3k | Provision of mining machineries in mineral benches | shovel & dumper etc combination | shovel & dumper etc combination | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Height of 6m and width of 9m in Mn ore | broadly as per the proposal | |
| 3m | Total area covered under excavation/pits | 27.207 ha at the start of plan period | broadly as per the proposal | |

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| 3n | Ore to OB ratio for the pit/mine during the year. | Mn 1:2.56 For Iron 1:2.54 | In case of Mn broadly as per proposal Nil, in case of Iron ,because of no production |
| 3o | Total area put in use under different heads at the end of year | as per last approved document area put to use under different heads 1) under excavation 27.207 ha 2) Dump 19.894 ha 3) Mineral storage 17.804ha 4) Infrastructure 3.984ha 5) Road 11.00ha 6) ETP 0.630ha 7) Othes 43.90 ha | broadly as per the proposal |
| 3p | Production of ROM mineral during the last five year period as applicable | Mn ore Iron ore 2020-21 44964 T nil 2021-22 40028 nil 2022-23 59228 500060 | ore Iron ore 2020-21 39985 T nil 2021-22 39550 T nil 2022-23 36477 T 0 (upto Feb 2023) mine commenced on 17/9/2020 after auction |

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| 3q | General remarks of inspecting officers on method of mining etc. | The ROM production is carried out by open cast mining methods. | The ROM production is carried out by open cast mining methods. |
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Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|-----------------------------|-----------------------------------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | seperate duming are proposed , no top soil generation | broadly as per proposal | |
| 4b | Location of topsoil, OB and mineral reject dumps | no top soil proposal OB N2424800 to 2424970 E 307820 to 307900 | broadly as per proposal | |
| 4c | Number of dumps within lease area and outside of lease area | 06 no within in lease area | 06 no within in lease area | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | outside UPL | outside UPL | |
| 4e | Number of active and alive dumps. | 01 | 01 | |
| 4f | Number of dead dumps. | | 05 nos | 05 no stablized by earlier lessee |
| 4g | Number of dumps established. | no such proposal | 05 nos | stablized by earlier lessee |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | yes | yes | |
| 4i | Length of Retaining wall or garland drain all along dumps | Reataining wall 270m garland drain 300m | broadly as per the proposal | |

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| 4j | Number of settling ponds | 01 | 01 | |
| 4k | Specific comments of inspecting officer on waste dump management | | waste dump management is carried out as proposed | waste dump management is carried out as proposed |

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 such proposal during the year | no such proposal during the year | |
| 5b | Area under backfilling of mined out area | no such proposal during the year | no such proposal during the year | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | no such proposal during the year | no such proposal during the year | |
| 5d | Total area fully reclaimed and rehabilitated | no such proposal during the year | no such proposal during the year | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | area not matured fully for backfilling and reclamation. | area not matured fully for backfilling and reclamation. |

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 on 1st july | not due for submission for the the year 2022-23 | |

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|----|--|------------------|-----------------------------|-----------------|
| 6b | Area available for rehabilitation (ha) . | no such proposal | no such proposal | |
| 6c | afforestation done (ha). | 1.00 ha | broadly as per proposal | saftey zone |
| 6d | No. of saplings planted during the year | 2000 nos | broadly as per the proposal | |
| 6e | Cumulative no .of plants | not specified | 200746 approxi. | 200746 approxi. |
| 6f | Any other method of rehabilitation | no such proposal | no such proposal | |
| 6g | Cost incurred on watch and care during the year | no t specified | not specified | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | no such proposal | no such proposal | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | no such proposal | no such proposal | |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area | no such proposal | no such proposal | |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | no such proposal | no such proposal | |

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| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | no such proposal | no such proposal | |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | no such proposal | no such proposal | |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | no such proposal | no such proposal | |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | no such proposal | no such proposal | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | periodical monitoring of environmental parameters are proposed in core and buffer zone | periodical monitoring of environmental parameters as proposed in core and buffer zone | |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | no specific work on PMCP except environmental monitoring | no specific work on PMCP except environmental monitoring |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|--|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | The ROM (both Iron & Mn) generated from lease will be sent out side for further processing | No ROM generated incase of Iron In case of Mn grade wise sorting. | |

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| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | not specified in case of Iron manually in case of Mn | Manual sorting in case of Mn. | |
| 7c | Different grade of mineral sorted out at mines. | In case of Iron 45to 55% Fe & +55 % Fe In case of Mn 10 to 20% Mn and >20% Mn | In case of Iron nil& in case of 10 to 20% Mn and >20% Mn | |
| 7d | Any beneficiation process at mines . | no such proposal | no such proposal | |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | | grade -wise soring is being carried out in case of Mn | grade-wise sorting is being carriedout in case of Mn |

Environment :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|-----------------------------|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | no such proposal | no such proposal | |
| 8b | Concurrent use or storage of topsoil | no such proposal | no such proposal | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | provision for seperate dumping OB/waste rock | broadly as per the proposal | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | no such proposal | no such proposal | |

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|----|---|---|---|---|
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | no such proposal | no such proposal | |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 1.0 ha area , 2000 planatation saftey zone | broadly as per the proposal | |
| 8g | Survival rate | no specfied | around 70% | |
| 8h | Water sprinkling on roads to control airborne dust | Water sprinkling on haul road | Water sprinkling on haul road | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | Aesthetic beauty in and around the mines is good because of plantation & by regular sprinkling of water on mine roads to control the dust | Aesthetic beauty in and around the mines is good because of plantation & by regular sprinkling of water on mine roads to control the dust |

 Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
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|----|---|--|---|---|
| 9a | Status of submission of Monthly and Annual returns | As per rule Monthly and Annual Returns are to be submitted to IBM | monthly return Submitted. 1) wrong information furnished in part II of Jan 23 monthly return. 2) As per the monthly returns submitted from April 2022 to Jan 2023, There is variation in grade percentage with reference to grade wise production and borholes analysis (ie in grade 25 to 35%Mn and >35% Mn) Annual return for 2022-23 is not due for submission. hence not submitted yet | violation under rule 45(7) of MCDR 2017 |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. | The scrutiny of annual return for the year 2022-23 during the inspection doesnot arise. | |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. | The scrutiny of annual return for the year 2022-23 during the inspection doesnot arise. | |

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- 9d Scrutiny of Annual return on afforestation The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. The scrutiny of annual return for the year 2022-23 during the inspection doesnt arise.
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity) The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. The scrutiny of annual return for the year 2022-23 during the inspection doesnt arise.
- 9f Scrutiny of Annual return on ROM stock and/or graded ore The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. The scrutiny of annual return for the year 2022-23 during the inspection doesnt arise.
- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. The scrutiny of annual return for the year 2022-23 during the inspection doesnt arise.

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| 9h | Scrutiny of Annual return on fixed assets | The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. | The scrutiny of annual return for the year 2022-23 during the inspection doesnot arise. |
| 9k | Scrutiny of Annual return on mining machineries | The annual return for the year 2022-23 was not due for submission as on date of inspection, which has to be submitted on or before Ist july of 2023. | The scrutiny of annual return for the year 2022-23 during the inspection doesnot arise. |

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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) | 30-MAR-23 | | | |
| MCDR17 | Rule 14(2) | 30-MAR-23 | | | |
| MCDR17 | Rule 45(7) (a) | 30-MAR-23 | | | |

Date :**(KEWAL KRISHAN)**

Indian Bureau of Mines