

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/KJR/MCDR-81/BBS

Mine code : 30ORI08106

- (i) Name of the Inspecting : **SKM1**) **SANJIB KUMAR MOHAPATRA**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri Chandra Sekhar Jena (Mines Manager) and Sri Bishn
Official with
Designation
- (iv) Date of Inspection : 25/06/2022
- (v) Prev.inspection date : 08/10/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NAIBAGA IRON & MANGANESE**
- (b) **Registration NO.** : **IBM/5410/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
State : ORISSA
District : KEONJHAR
Village : NAIBAGA
Taluka : JHUMPURA
Post office : DUBUNA
Pin Code :
FAX No. : 06767272298
E-mail : nimm.tpm@gmail.com
Phone : 9437072218
- (f) Police Station : JODA
- (g) First opening date : 17/11/2009
- (h) Weekly day of rest : SUN
2. Address for : AT-JODA
correspondance : PO-JODA
DIST- KEONJHAR
3. (a) Lease Number : ORI0889
(b) Lease area : 47.22
(c) Period of lease : 50
(d) Date of Expiry : 16/11/2059
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : SRI TARINI PRASAD MOHANTY
 MINE OWNER , JODA
 KEONJHAR ORISSA
 Phone:
 FAX :

Owner : T P MOHANTY
 JODA KEONJHAR ORISSA
 Phone: 06767273475
 FAX : 06767273475

Agent : SHRI ARPIT MOHAR
 JODA KEONJHAR ODISHA
 KEONJHAR ORISSA
 Phone: 06767273475
 FAX : 06767273475

Mining Engineer

Name : Himansu Maahant, Full Time
 Qualification : BE(Mining)
 Appointment/ : 02/02/2016
 Termination date

Manager

Name : Chandra Sekhar Jena
 Qualification : BE(Mining)
 Appointment/ : 01/11/2011
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif.of approved Mining Plan	14/05/2013
		Mining Scheme rule 12 MCDR1988	02/06/2015
		MP review under 17(1) MCR 2016	06/01/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	09 Nos	13 nos	Backlog of the previous year has been carried out during the reporting year.
1b	Exploration over lease area for geological axis 1 or 2	Nil	2.454 Ha	After completion of exploration over 2.454 ha of backlog of previous year, entire area of 47.219 Ha have been covered under G1 level of exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	Rs. 11.60 Lakhs.	Rs. 11.60 Lakhs. for the backlog of previous year.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Nil
1e	Balance reserve as on 01/04/20		Iron- 11900814 ton & Mn- 27637 tons as on 01/04/2022.	Iron- 11900814 ton & Mn- 27637 tons as on 01/04/2022.
1f	General remarks of inspecting officers on geology, exploration etc		Entire lease hold area (47.219 Ha.) has been already explored under G1 category. A violation letter has been issued for contravention of rule 12(4B) of MCDR 2017, i.e. submission of geological report prepared in the manner specified in the Minerals (Evidence of Mineral Contents) Rules, 2015 vide letter dated 07/07/2022.	Entire lease hold area (47.219 Ha.) has been already explored under G1 category. A violation letter has been issued for contravention of rule 12(4B) of MCDR 2017, i.e. submission of geological report prepared in the manner specified in the Minerals (Evidence of Mineral Contents) Rules, 2015 vide letter dated 07/07/2022.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block-A: N2415495- N2415840 to E334298- E334648 Block-B: N2415226- N2415268 to E334873- E334988 Block-C: N2415439- N2415571 to E335245- E335343	Block-A: N2415495- N2415815 to E334298- E334622 Block-B: N2415226- N2415268 to E334868- E334978 Block-C: N2415460- N2415571 to E335245- E335340	No such deviation w.r.t. to the development during the reporting year.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, already exist separate benches of OB and mineral within the lease area.	Yes, already exist separate benches of OB and mineral within the lease area.	Yes, already exist separate benches of OB and mineral within the lease area.
2c	Stripping ratio or ore to OB ratio	1:0.006 - Iron 1:3.644- Mn.	Nil - Iron 1:16.194- Mn.	Only development carried in Mn quarry and no production of Mn. ore during the reporting year. Hence deviation in stripping ratio.
2d	Quantity of topsoil generation in m3	Nil	Nil	No proposal during the reporting year.
2e	Quantity of overburden generation in m3	12677 Cum.	7676 Cum.	7676 Cum.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The lesee has carried out as per the proposal but could not achieve the proposal of MN. ore production.	The lesee has carried out as per the proposal but could not achieve the proposal of MN. ore production.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Quaarry- 1,2,3 & 4	Quaarry- 1,2,3 & 4	Quaarry- 1,2,3 & 4. the leseee has carried pout as per the proposal.
3b	Quantity of ROM mineral production proposed	Iron: 585961 tons Mn: 2371 tons	Iron: 512210 tons Mn: 474 tons	The leseee could not achieved the proposed Mn production during the reporting year.
3c	Recovery of sailable/usable mineral from ROM production	Iron: 98% Mn.: 10%	Iron: 100% Mn.: 2.4%	Iron: 100% Mn.: 2.4%
3d	Quantity of mineral reject generation	Iron: 53269 tons Mn: 211 tons	Iron: Nil Mn: 27 tons	Iron: Nil Mn: 27 tons
3e	Grade of mineral rejects generation and threshold value declared.	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese	+45 % Fe to 58 % Fe for Iron +10 % Mn to 25 % Mn for Manganese
3f	Quantity of sub grade mineral generation.	Nil	Nil	Nil
3g	Grade of sub grade mineral generation	Nil	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	Mechanised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	Nil

3j	Provision of drilling and blasting in mineral benches	Yes, Jack Hammer 115 mm dia Drills. Blasting proposed with LD explosives of 25mm dia. & 83mm dia. with detonating cord & milli second delay detonators.	Yes, Jack Hammer 115 mm dia Drills. Blasting proposed with LD explosives of 25mm dia. & 83mm dia. with detonating cord & milli second delay detonators.	Yes, Jack Hammer 115 mm dia Drills. Blasting proposed with LD explosives of 25mm dia. & 83mm dia. with detonating cord & milli second delay detonators.
3k	Provision of mining machineries in mineral benches	Yes, Shovel and Dumper combination proposed.	Yes, Shovel and Dumper combination carried out.	Yes, Shovel and Dumper combination carried out.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The height of the bench proposed is 6m.	The height of the bench is suitable for the method of mining proposed in review of mining plan.	The height of the bench is suitable for the method of mining proposed in review of mining plan.
3m	Total area covered under excavation/pits	9.87 Ha	8.798 Ha	8.798 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.006 - Fe 1:3.644 - Mn	Nil - Fe 1:16.194 - Mn	Nil - Fe 1:16.194 - Mn
3o	Total area put in use under different heads at the end of year	As per the approved review of mining plan , the total area under different heads at the end of plan period will be 21.709 Ha.	As per the approved review of mining plan , the total area under different heads at the end of the reporting year is 17.596Ha.	As per the approved review of mining plan , the total area under different heads at the end of the reporting year is 17.596Ha.

3p	Production of ROM mineral during the last five year period as applicable	2017-18- 589920 mt.- Iron, 14700 mt. - Mn. 2018-19- 592680 mt.- Iron, 14700- Mn. 2019-20- 596520 mt.- Iron, 15000 - Mn. 2020-21- 600000 mt.- Iron, 15000 mt. - Mn. 2021-22- 585961 mt.- Iron, 2371 mt. - Mn.	2017-18- 500100 mt.- Iron, Nil. - Mn. 2018-19- 241670 mt.- Iron, Nil - Mn. 2019-20- 508080 mt.- Iron, Nil - Mn. 2020-21- 523720 mt.- Iron, 47 mt. - Mn. 2021-22- 512210 mt.- Iron, 474 mt. - Mn.	2017-18- 500100 mt.- Iron, Nil. - Mn. 2018-19- 241670 mt.- Iron, Nil - Mn. 2019-20- 508080 mt.- Iron, Nil - Mn. 2020-21- 523720 mt.- Iron, 47 mt. - Mn. 2021-22- 512210 mt.- Iron, 474 mt. - Mn.
3q	General remarks of inspecting officers on method of mining etc.		The lessee has carried out as per the proposal but could not achieved the proposed production of Mn. ore due to due to lack of marketability of produced ore during the reporting year.	The lessee has carried out as per the proposal but could not achieved the proposed production of Mn. ore due to due to lack of marketability of produced ore during the reporting year.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate stacking of OB & mineral reject was proposed.	Separate stacking of OB & mineral reject was carried out and mineral reject were subsequently blended wth sale bale ore and sold out of a regular manner.	Separate stacking of OB & mineral reject was carried out and mineral reject were subsequently blended wth sale bale ore and sold out of a regular manner.
4b	Location of topsoil, OB and mineral reject dumps	OB Dump: N2415265- E335208	OB Dump: N2415265- E335208	OB Dump: N2415265- E335208

4c	Number of dumps within lease area and outside of lease area	One- Within Lease area	One- Within Lease area	One- Within Lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL	Out side UPL	Out side UPL
4e	Number of active and alive dumps.	One	One	One
4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes, Proposed Retaining wall- 240m Garland drain- 120m	Yes, carried out Retaining wall- 70m Garland drain- 50m	Yes, carried out Retaining wall- 70m Garland drain- 50m
4i	Length of Retaining wall or garland drain all along dumps	Yes, Proposed Retaining wall- 240m Garland drain- 120m	Yes, carried out Retaining wall- 70m Garland drain- 50m	Yes, carried out Retaining wall- 70m Garland drain- 50m
4j	Number of settling ponds	One	One	One
4k	Specific comments of inspecting officer on waste dump management		Separate stacking of OB & mineral reject was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner. OB dump was done as per the proposed location and retaining wall has been constructed around the waste dump during the reporting year.	Separate stacking of OB & mineral reject was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner. OB dump was done as per the proposed location and retaining wall has been constructed around the waste dump during the reporting year.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not proposed as pit is not exhausted.	Nil	No proposal during the reporting year.
5b	Area under backfilling of mined out area	Not proposed as pit is not exhausted.	Nil	No proposal during the reporting year.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed as pit is not exhausted.	Nil	No proposal during the reporting year.
5d	Total area fully reclaimed and rehabilitated	Not proposed as pit is not exhausted.	Nil	No proposal during the reporting year.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		As the mine is not matured during the reporting year, no proposal for reclamation and rehabilitation was proposed.	As the mine is not matured during the reporting year, no proposal for reclamation and rehabilitation was proposed.

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).	As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of Every Year.	Submitted within the stipulated time period for the reporting year.	Submitted within the stipulated time period for the reporting year.
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	0.41 Ha.	0.41 Ha.	0.41 Ha.
6d	No. of saplings planted during the year	656 sapplings.	660 sapplings.	660 sapplings.

6e	Cumulative no .of plants	3280 sapplings	16930 Sapplings	16930 Sapplings
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Nil	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.41 Ha with 656 sapplings.	0.41 Ha with 660 sapplings.	0.41 Ha with 660 sapplings.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.41 Ha with 656 sapplings.	0.41 Ha with 660 sapplings.	0.41 Ha with 660 sapplings.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation	Plantation	Plantation
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, Noise and Water quality monitoring will be done during the year within the lease area.	Air, Noise and Water quality monitoring carried out as per the proposal during the reporting year.	Air, Noise and Water quality monitoring carried out as per the proposal during the reporting year.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		The lessee has carried out afforestation and environmental monitoring as per the proposal during the reporting year.	The lessee has carried out afforestation and environmental monitoring as per the proposal during the reporting year.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn were proposed.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting are being praticed.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting are being praticed.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised-Iron Manual-Manganese	Mechanised-Iron Manual-Manganese	Mechanised-Iron Manual-Manganese

7c	Different grade of mineral sorted out at mines.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn were proposed.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting are being practiced.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting are being practiced.
7d	Any beneficiation process at mines .	Nil	No beneficiation process was proposed. Only crushing and screening is being carried out.	No beneficiation process was proposed. Only crushing and screening is being carried out.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting stocks are being practiced. Further no beneficiation process was proposed. Only crushing and screening is being carried out during the reporting year.	Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe & Saleable Ore:+25 % Fe, Mineral Reject:- +10 to 25% Mn sorting stocks are being practiced. Further no beneficiation process was proposed. Only crushing and screening is being carried out during the reporting year.

Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for generation of top soil.	Nil	No proposal for generation of top soil during the reporting year.
8b	Concurrent use or storage of topsoil	No proposal for generation of top soil.	Nil	No proposal for generation of top soil during the reporting year.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate stacking of OB, mineral reject & fines was proposed during the reporting year.	Separate stacking of OB, mineral reject & fines was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.	Separate stacking of OB, mineral reject & fines was carried out and mineral reject were subsequently blended with sale bale ore and sold out of a regular manner.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Nil	No such proposal during the reporting year.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	No such proposal during the reporting year.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	656 sapplings	660 Sapplings were planted during the reporting year.	660 Sapplings were planted during the reporting year.
8g	Survival rate	85%	74%	74%
8h	Water sprinkling on roads to control airborne dust	Sprinkling on haul road were proposed.	Water sprinkling by water tanker over haul roads has been carried out.	Water sprinkling by water tanker over haul roads has been carried out.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Lessee has planted 660 no of sapling within the lease area and water sprinkling by water tanker over haul roads to minimize the fugutive dust emmision. This sustains the asthetic beauty of the mine area.	Lessee has planted 660 no of sapling within the lease area and water sprinkling by water tanker over haul roads to minimize the fugutive dust emmision. This sustains the asthetic beauty of the mine area.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.	Monthly returns for the month of May 2022 and annual return for FY 2021-22 have been submitted within the stipulated time period.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Sri Chandra sekhar Jena- Mines manager, Sri Bishnu charan Barik- Geologist, Sri Himanshu Mohanta- mining Engineer	Sri Chandra sekhar Jena- Mines manager, Sri Bishnu charan Barik- Geologist, Sri Himanshu Mohanta- mining Engineer & Geologist were present during the inspection.	Sri Chandra sekhar Jena- Mines manager, Sri Bishnu charan Barik- Geologist, Sri Himanshu Mohanta- mining Engineer Mines manager, Mining engineer & Geologist were present during the inspection.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit =8.798 ha OB Dump =0.0336 ha Infrastructure & Road=2.675 ha Mineral Storage & Plantation =8.516 ha	Pit =8.798 ha OB Dump =0.0336 ha Infrastructure & Road=2.675 ha Mineral Storage & Plantation =8.516 ha	Pit =8.798 ha OB Dump =0.0336 ha Infrastructure & Road=2.675 ha Mineral Storage & Plantation =8.516 ha
9d	Scrutiny of Annual return on afforestation	600 Sapplings	600 Sapplings	600 Sapplings
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Iron- Nil Mn- 27 tons	Iron- Nil Mn- 27 tons	Iron- Nil Mn- 27 tons
9f	Scrutiny of Annual return on ROM stock and/or graded ore	512210 tons ROM of Iron ore & 474 tons of Mn. ore produced during the reporting year 2021-22.	512210 tons ROM of Iron ore & 474 tons of Mn. ore produced during the reporting year 2021-22.	512210 tons ROM of Iron ore & 474 tons of Mn. ore produced during the reporting year 2021-22.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 1878/-. Grade wise Ex mine price for lumps and fines of iron ore as furnished in Annual return has been scrutinised.	Cost of production: Rs. 1878/-. Grade wise Ex mine price for lumps and fines of iron ore as furnished in Annual return has been scrutinised.	Cost of production: Rs. 1878/-. Grade wise Ex mine price for lumps and fines of iron ore as furnished in Annual return has been scrutinised.
9h	Scrutiny of Annual return on fixed assets	Fixed Asset: Rs. 96347340/-	Fixed Asset: Rs. 96347340/-	Fixed Asset: Rs. 96347340/-

9k	Scrutiny of Annual return on mining machineries	Shovel-5Nos (0.9 Cum) , Shovel-1No (2.1 Cum) , Wheel loader: 3 nos, Dumper: 6 nos, Jeep: 3 nos, Rock drill: 1no Water tanker: 2 nos Generator: 1no.	Shovel-5Nos (0.9 Cum) , Shovel-1No (2.1 Cum) , Wheel loader: 3 nos, Dumper: 6 nos, Jeep: 3 nos, Rock drill: 1no Water tanker: 2 nos Generator: 1no.	Shovel-5Nos (0.9 Cum) , Shovel-1No (2.1 Cum) , Wheel loader: 3 nos, Dumper: 6 nos, Jeep: 3 nos, Rock drill: 1no Water tanker: 2 nos Generator: 1no.
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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 12(4)	07/07/2022			

Date : 16/08/2022

(SANJIB KUMAR MOHAPATRA)

Indian Bureau of Mines