

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT 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 : **U11** ) **DAYANAND UPADHYAY**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri C.S. Jena, Mines Manager  
Official with  
Designation
- (iv) Date of Inspection : 23/09/2018
- (v) Prev.inspection date : 24/09/2016

**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 : 03/12/2059
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

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Not proposed in 2017-18.	Nil.	No backlog.
1b	Exploration over lease area for geological axis 1 or 2	Not proposed in 2017-18.	Nil.	Total 53 nos. of bore holes have been drilled by lessee under G1 level of exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not proposed.	Nil.	Nil.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not proposed in 2017-18.	Nil.	Total 53 nos. of bore holes have been drilled by lessee under G1 level of exploration. The area covered under G1 is 26.0 ha.
1e	Balance reserve as on 01/04/20	As per SOM approved on 02/06/2015 reserve of iron ore: 10.145MT, Mn ore: 0.216MT	As on 01/04/2018 reserve of iron ore: 8.9MT, Mn ore: 0.216MT	As on 01/04/2018 reserve of iron ore: 8.9MT, Mn ore: 0.216MT.
1f	General remarks of inspecting officers on geology, exploration etc	Bore holes not proposed in 2017-18.	Total 53 nos. of bore holes have been drilled by lessee under G1 level of exploration. The area covered under G1 is 26.0 ha.	Total 53 nos. of bore holes have been drilled by lessee under G1 level of exploration. The area covered under G1 is 26.0 ha.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Quarry-1: 500W-790W & 50N-350N, Quarry-2: 100W-250W & 150S-290S, Quarry 3& 4: 00-200N & 100E-300E	Working is carried out in Quarry-1 between 500W-790W & 50N-350N.	Quarry-2 and Quarry 3& 4 are closed due to local disputes of roads as it is falls in private land.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Ore bench- 6m height, OB bench- nil, top soil bench-nil.	In quarry-1, bench of 6m height is maintained.	No OB and top soil benches proposed as the mineralisation is continued from top.
2c	Stripping ratio or ore to OB ratio	Not proposed.	Nil.	No OB and top soil benches proposed as the mineralisation is continued from top.
2d	Quantity of topsoil generation in m3	Not proposed.	Nil.	No OB and top soil benches proposed as the mineralisation is continued from top.
2e	Quantity of overburden generation in m3	Not proposed.	Nil.	No OB and top soil benches proposed as the mineralisation is continued from top.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Quarry-1, Quarry-2, Quarry 3& 4	Working is carried out in Quarry-1 only. Quarry-2 and Quarry 3& 4 are closed due to local disputes of roads as it is falls in private land.	No OB and top soil benches proposed as the mineralisation is continued from top.

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**Exploitation:**


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Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	04 quarry.	Working is carried out in Quarry-1 only.	Quarry-2 and Quarry 3& 4 are closed due to local disputes of roads as it is falls in private land.
3b	Quantity of ROM mineral production proposed	Iron ore-592680T, Mn ore-14700T	ROM production reported in 2017-18 is Iron ore-241670T, Mn ore-Nil	No production reported from Quarry-2 and Quarry 3& 4 as these are closed due to local disputes of roads as it is falls in private land.
3c	Recovery of sailable/usable mineral from ROM production	Iron ore-522744T & Mn ore-11760T	Iron ore-241670T & Mn ore-Nil.	No production reported from Quarry-2 and Quarry 3& 4 as these are closed due to local disputes of roads as it is falls in private land.
3d	Quantity of mineral reject generation	Iron ore-58083T & Mn ore-2940T	No Mineral reject/ sub grade reported during 2017-18.	No Mineral reject/ sub grade reported during 2017-18.
3e	Grade of mineral rejects generation and threshold value declared.	-55% to +45% Fe and 10-25% Mn ore.	No Mineral reject/ sub grade reported during 2017-18.	No Mineral reject/ sub grade reported during 2017-18.
3f	Quantity of sub grade mineral generation.	Iron ore-58083T & Mn ore-2940T	No Mineral reject/ sub grade reported during 2017-18.	No Mineral reject/ sub grade reported during 2017-18.
3g	Grade of sub grade mineral generation	-55% to +45% Fe and 10-25% Mn ore.	No Mineral reject/ sub grade reported during 2017-18.	No Mineral reject/ sub grade reported during 2017-18.
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.	Not proposed.	Nil.	Nil.
3j	Provision of drilling and blasting in mineral benches	DTH drilling of 110mm dia. Blast hole with slurry explosive as column charge and booster alongwith delay detonator.	Drilling and blasting is carried out with DTH drilling of 110mm dia. Blast hole with slurry explosive as column charge and booster alongwith delay detonator.	Drilling and blasting is carried out with DTH drilling of 110mm dia. Blast hole with slurry explosive as column charge and booster alongwith delay detonator.
3k	Provision of mining machineries in mineral benches	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height-6m	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	10.621ha.	About 4.808 ha area has been covered under excavation pits.	About 4.808 ha area has been covered under excavation pits.
3n	Ore to OB ratio for the pit/mine during the year.	Not proposed.	Nil.	No OB and top soil benches proposed as the mineralisation is continued from top.

3o	Total area put in use under different heads at the end of year	Total area proposed under different heads are Pit-10.61 ha, waste dump-1.694 ha, roads-2.330 ha & Mineral storage-2.670, others -1.236 ha.	Area covered under different heads are Pit-4.808 ha, roads-2.110ha, Mineral storage-1.850ha, & others -0.51 ha.	Area covered under different heads are Pit-4.808 ha, roads-2.110ha, Mineral storage-1.850ha, & others -0.51 ha.
3p	Production of ROM mineral during the last five year period as applicable	Iron:2013-14 : 5,37,494 MT, 2014-15: 5,38,736 MT, 2015-16: 5,87,160 MT, 2016-17: 5,89,920 MT, 2017-18: 592680MT	Iron: 2013-14: 59,920 MT, 2014-15: 59,950 MT, 2015-16: 4,40,741 MT, 2016-17: 500100 MT, 2017-18: 241670MT	No production of Mn ore as quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.
3q	General remarks of inspecting officers on method of mining etc.	Excavation of ROM has been proposed in 4 quarries i.e . Quarry-2 and Quarry 3& 4.	The ROM production has been carried out Quarry-1 only. DTH drilling of 110mm dia. Blast hole with emulsion/ slurry explosive alongwith delay detonator is being practiced for drilling and blasting.	Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.

#### 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 for intercalleted waste and mineral reject.	Nil.	Waste and MR not generated as the Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.

4b	Location of topsoil, OB and mineral reject dumps	Intercalleted waste: 50E-150E & 110S-210S and mineral reject: 290E-400E & 150N-210N	Nil.	Waste and MR not generated as the proposed Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.
4c	Number of dumps within lease area and outside of lease area	One waste dump within lease area.	Nil.	Waste and MR not generated as the proposed Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Intercalleted waste: 50E-150E & 110S-210S and mineral reject: 290E-400E & 150N-210N	Nil.	Waste and MR not generated as the proposed Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land. Therefore waste sump has not been established.
4e	Number of active and alive dumps.	One dump.	Nil.	Waste and MR not generated as the proposed Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land. Therefore waste dump has not been established.
4f	Number of dead dumps.	Not proposed.	Nil.	Nil.
4g	Number of dumps established.	Not proposed.	Nil.	Nil.



4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and a garland drain of 120mX2mX1.0m.	Nil.	Retaining wall and a garland drain not made as the proposed dump not established due to non operation of Quarry-2 & quarry 3&4. These quarries are closed due to local disputes of road which is falls in private land.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall and a garland drain of 120mX2mX1.0m.	Nil.	Retaining wall and a garland drain not made as the proposed dump not established due to non operation of Quarry-2 & quarry 3&4. These quarries are closed due to local disputes of road which is falls in private land.
4j	Number of settling ponds	One	Nil.	Settling ponds not made as the proposed dump not established due to non operation of Quarry-2 & quarry 3&4. These quarries are closed due to local disputes of road which is falls in private land.
4k	Specific comments of inspecting officer on waste dump management	No comment.	Waste and MR not generated as the proposed Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land. Therefore waste dump has not been established.	Due to non operation of Quarry-2 & quarry 3&4 proposed waste dump has not been established.

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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.	Not proposed.	Nil.	Pits are not fully exhausted.
5b	Area under backfilling of mined out area	Not proposed.	Nil.	Pits are not fully exhausted.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed.	Nil.	Pits are not fully exhausted.
5d	Total area fully reclaimed and rehabilitated	Not proposed.	Nil.	Pits are not fully exhausted.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Backfilling not proposed.	Nil.	Pits are not fully exhausted.

## 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).	Not specified.	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
6b	Area available for rehabilitation (ha) .	Not proposed.	Nil.	Pits are not fully exhausted.
6c	afforestation done (ha).	0.410ha.	In 2017-18, total area cover under afforestation is about 0.410ha.	In 2017-18, total area cover under afforestation is about 0.410ha.
6d	No. of saplings planted during the year	656 nos.	In 2017-18, total 660 nos. of saplings have been planted by lessee.	In 2017-18, total 660 nos. of saplings have been planted by lessee.

6e	Cumulative no .of plants	Not specified.	Cumulative nos. of saplings planted in the lease area is about 14910.	Cumulative nos. of saplings planted in the lease area is about 14910.
6f	Any other method of rehabilitation	Not proposed.	Nil.	Nil.
6g	Cost incurred on watch and care during the year	Not specified.	Around Rs 77816/- cost incurred on plantation and watch and care.	Around Rs 77816/- cost incurred on plantation and watch and care.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not proposed.	Nil.	Pits are not fully exhausted.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed.	Nil.	Pits are not fully exhausted.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not proposed.	Nil.	Pits are not fully exhausted.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	Nil.	Pits are not fully exhausted.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not proposed.	Nil.	Pits are not fully exhausted.

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not proposed.	Nil.	Pits are not fully exhausted.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not proposed.	Nil.	Pits are not fully exhausted.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not proposed.	Nil.	Pits are not fully exhausted.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring.	Quarterly monitoring of air, water and noise level are being carried out.	Quarterly monitoring of air, water and noise level are being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comment.	Backfilling not proposed as the pits are not exhausted. Quarterly monitoring of air, water and noise level are being carried out.	Backfilling not proposed as the pits are not exhausted. Quarterly monitoring of air, water and noise level are being carried out.

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting	Gradewise sorting practiced within lease area.	Gradewise sorting practiced within lease area.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual for Mn ore mechanised for Iron ore.	Mechanised.	Mn ore not produced due to non operation of quarry-2 and quarry 3 & 4.

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7c	Different grade of mineral sorted out at mines.	+10% to 35% Mn and and +45% to 65% Fe.	Different grades of minerals sorted out at mines are to +58-60%% Fe and +62% Fe to 65%Fe.	Different grades of minerals sorted out at mines are to +58-60%% Fe and +62% Fe to 65%Fe.
7d	Any beneficiation process at mines .	Not proposed.	Nil.	Nil.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Different grades of minerals proposed to sorted out are +10% to 35% Mn and and +45% to 65% Fe.	Different grades of minerals sorted out at mines are to +58-60%% Fe and +62% Fe to 65%Fe.	Mn ore not produced due to non operation of quarry-2 and quarry 3 & 4.

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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation.	Nil.	Nil.
8b	Concurrent use or storage of topsoil	No proposal of top soil generation.	Nil.	Nil.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping for intercalleted waste and mineral reject.	Nil.	Waste and MR not generated as the Quarry-2 & quarry 3&4 are closed due local disputes of road which is falls in private land.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed.	Nil.	Pits are not fully exhausted.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed.	Nil.	Pits are not fully exhausted.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	656 nos. of plantation in 2017-18	660 nos. of plantation in 2017-18.	660 nos. of plantation in 2017-18.
8g	Survival rate	Not specified.	As reported survival rate is 80%.	As reported survival rate is 80%.
8h	Water sprinkling on roads to control airborne dust	Water sprinkler to control air borne dust.	Water sprinkler are used to control air borne dust.	Water sprinkler are used to control air borne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comment.	Aesthetic beauty in and around mined area is maintained. In 2017-18, total 660 nos of saplings have been planted by lessee. As reported cumulative no. of trees planted by lessee is about 14570 nos.	Aesthetic beauty in and around mined area is maintained. In 2017-18, total 660 nos of saplings have been planted by lessee. As reported cumulative no. of trees planted by lessee is about 14570 nos.

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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 & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining engineer-3, Geologist-1, & Sueveyor-1.	Mining engineer-3, Geologist-1, & Sueveyor-1.	Found in order.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current working-1.096ha, Other-2.910ha.	Covered under current working-1.096ha, Other-2.910ha.	Covered under current working-1.096ha, Other-2.910ha.
9d	Scrutiny of Annual return on afforestation	660nos.	660nos.	Found in order.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil.	Nil.	Nil.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM production reported in 2017-18 is Iron ore-241670T	ROM production reported in 2017-18 is Iron ore-241670T	ROM production reported in 2017-18 is Iron ore-241670T
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price, +58-60%% Fe : Rs 2047/-, +62% Fe to 65%Fe : Rs 2954/-	Ex mine price, +58-60%% Fe : Rs 2047/-, +62% Fe to 65%Fe : Rs 2954/-	Ex mine price, +58-60%% Fe : Rs 2047/-, +62% Fe to 65%Fe : Rs 2954/-
9h	Scrutiny of Annual return on fixed assets	Fixed asset: Rs 26249354/-	Fixed asset: Rs 26249354/-	Fixed asset: Rs 26249354/-
9k	Scrutiny of Annual return on mining machineries	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1	Excavator-5, loader-5, DTH 110mm dia.-2, Dumper-8, Crushing & screening plant 150TPH-2, Water tanker-02, Rock breaker-1

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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)	28/09/2018	07/12/2018				

**Date :**

(DAYANAND UPADHYAY)

Indian Bureau of Mines