

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-MN/SNG/MCDR-16/BBS

Mine code : 30ORI13017

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Chaturbhuja Sahoo, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 14/09/2018
- (v) Prev.inspection date : 09/01/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PATABEDA**
- (b) **Registration NO.** : **IBM/247/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : PATABEDA
- Taluka : BONAI
- Post office : PATAMUNDA
- Pin Code :
- FAX No. : 06767-275770
- E-mail : rlmbsr@mail.com
- Phone : 06767-275318,275620
- (f) Police Station : Koira
- (g) First opening date : 24/06/1986
- (h) Weekly day of rest : MON
2. Address for : PATABEDA IRON & MANGANESE MINE C/O.M.G.MOHANTY
correspondance VILL.PATABEDA, PATMUNDA,SUNDARGARH,ORISSA.
770048
3. (a) Lease Number : ORI0133
- (b) Lease area : 19.43
- (c) Period of lease : 50
- (d) Date of Expiry : 02/04/2036
4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : M/S.M.G.MOHANTY
 R.L.MOHANTY, MANAGING PAR
 AT/PO.BARBIL,KEONJHAR,
 ORISSA.-758035 KEONJHAR
 ORISSA
 Phone:06767-75318
 FAX :06767-75770

Owner : SRI.R.L.MOHANTY
 AT/PO.BARBIL,KEONJHAR
 ORISSA.758035 KEONJHAR
 ORISSA
 Phone: 06767-75318
 FAX : 06767-75770

Geologist

Name : SHRI SUSANTA KUMAR PATNAIK,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 10/06/2016
 Termination date

Manager

Name : SHRI CHATURBHUIJ SAHOO
 Qualification : DEGREE MINING
 Appointment/ : 28/01/2013
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	18/07/2000
Plan/Scheme of Mining		Fresh under rule 22 MCR1960	08/11/2002
		Renewal under rule 24 MCR1960	05/07/2005
		Modif.of approved Mining Plan	13/11/2009
		Mining Scheme rule 12 MCDR1988	01/04/2011
		Modif.approved Mining Scheme	28/05/2014
		Mining Scheme rule 12 MCDR1988	11/03/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such proposal.	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	3 nos of boreholes were proposed during the year 2017-18.	Nil.	Total boreholes which were planned during the plan period were completed by 2016-17.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	In house work.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	15 nos of boreholes were proposed during the scheme period from 2016-17 to 2020-21.	Total boreholes which were planned during the plan period were completed by 2016-17.	Nil
1e	Balance reserve as on 01/04/20	As per the approved document on 11.03.2016 iron ore reserves are 4.785 mil.t. and resources are 1.056 mil.t.	due to depletion from the year 2016-17 the iron ore reserves as on 01.04.2018 are 4.47 mt. and resources are 1.056 mt.	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No comments to offer.	all the mineralsied area is explored under G1 level.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	single pit proposed between N2426085-2426377 E331931-332156	single pit developed between N2426085-2426377 E331931-332156	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	seperate becnhes in OB and mineral are proposed. no top soil generation.	no top soil generated. seperate becnhes in OB and mineral are maintained.	Nil
2c	Stripping ratio or ore to OB ratio	1: 0.037 t/cu.m.	1: 0.008 t/cu.m.	due to changes in the lithology during excavation, less quantity of waste generated.
2d	Quantity of topsoil generation in m3	Nil	Nil	Nil
2e	Quantity of overburden generation in m3	7246 cu.m.	2840 cu.m.	due to changes in the lithology during excavation, less quantity of waste generated.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer.	Development is carried out in one pit as proposed.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	single pit proposed for production	production is carried put from single pit.	Nil
3b	Quantity of ROM mineral production proposed	194458 tonnes during the year 2017-18.	166520 tonnes	Nil
3c	Recovery of sailable/usable mineral from ROM production	178976 tonnes	166520 tonnes	Nil

3d	Quantity of mineral reject generation	15482 tonnes	Nil	due to irregular nature of ore deposit.
3e	Grade of mineral rejects generation and threshold value declared.	+45% to -55% Fe	+45% to -55% Fe	Nil
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	Nil
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	Deep hole drilling of 110mm dia is done with 2.5m burden, 3.0mspacing and 6m hight. Blasting is done with Slurry explosives of 83mm dia, Nonel and Electric detonator used.	Deep hole drilling of 110mm dia is done with 2.5m burden, 3.0mspacing and 6m hight. Blasting is done with Slurry explosives of 83mm dia, Nonel and Electric detonator used.	Nil

3k	Provision of mining machineries in mineral benches	Excavator - 0.9 M3 Excavator - 2.1 M3 Excavator - 1.5 M3 Front end loader-1.7 M3 DTH Drill-110mm Tipper - 4.5m3 Tipper - 6m3	Excavator - 0.9 M3 Excavator - 2.1 M3 Excavator - 1.5 M3 Front end loader-1.7 M3 DTH Drill-110mm Tipper - 4.5m3 Tipper - 6m3	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed is 6 m.	bench height maintained is 6 m.	Nil
3m	Total area covered under excavation/pits	7.271 Ha, by the end of plan period i.e. 2020-21.	6.3 Ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.037 t/cu.m.	1: 0.008 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	pit: 7.271 ha, waste dump: 1.132 ha, others: 11.7 ha by the end of plan period i.e. 2020-21.	Pit - 6.3Ha Dump -0.815Ha Others: 9.809 ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2013-14: 143761 t 2014-15: 173043 t 2015-16: 183544 t 2016-17: 194317 t 2017-18: 194458 t	2013-14: 117100 t 2014-15: 117150 t 2015-16: 124410 t 2016-17: 144000 t 2017-18: 166520 t	Nil
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer.	production is carried out from the single pit as proposed.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	no top soil generation is proposed. seperate dumping for OB and mineral rejects are proposed.	no top soil is generated during the year. seperate dumping for OB and mineral rejects are mainatined.	Nil
4b	Location of topsoil, OB and mineral reject dumps	no top soil generation is proposed during the year 2017-18. OB dump called dump-4 near pillar no H and I is proposed.	OB dump called dump-4 near pillar no H and I is maintained. no top soil generation during the period.	Nil
4c	Number of dumps within lease area and outside of lease area	2 nos of waste dumps with in lease area.	2 nos of waste dumps.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N2426378- E332105 N2426325- E332195	N2426378- E332105 N2426325- E332195	Nil
4e	Number of active and alive dumps.	1 no of waste dump called waste dump-4	1 no of waste dump called waste dump-4	Nil
4f	Number of dead dumps.	No such proposal.	Nil	Nil
4g	Number of dumps established.	No such proposal.	1 no of dump called dump-3 was established eralier.	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	yes provided.	provided.	Nil
4i	Length of Retaining wall or garland drain all along dumps	82 m during the year 2017-18.	82 m	Nil
4j	Number of settling ponds	NIl	Nil	Nil

4k	Specific comments of inspecting officer on waste dump management	No comments to offer.	waste dumping is carried out on waste dump-4 as proposed.	Nil
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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	Area not matured for reclamation
5b	Area under backfilling of mined out area	Nil	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments to offer.	Area not matured for reclamation.	Nil

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).	submitted.	submitted.	Nil

6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	0.1 ha. during the year 2017-18.	0.1 ha	Nil
6d	No. of saplings planted during the year	100 nos.	125 nos.	Nil
6e	Cumulative no .of plants	No such proposal.	18305 nos	Nil
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs 0.25 lakh	Rs 0.25 lakh	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)Afforestation 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	Nil	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	regular monitoring of environmental parameters proposed.	regular monitoring of environmental parameters carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer.	planation carried out on dump slopes as proposed.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	proposed. -55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	-55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	As per AR.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	Nil
7c	Different grade of mineral sorted out at mines.	-55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	-55% Fe 55-58% Fe 58-60% Fe 60-62% Fe 62-65% Fe +65% Fe	As per AR.
7d	Any beneficiation process at mines .	Nil	NIL	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer.	different grade wise mineral is sorted out for dispatches.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	NIL	Nil
8b	Concurrent use or storage of topsoil	Nil	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB, proposed.	seperate dumps for OB, rejects are maintained.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	NIL	Area not amtured for reclamation.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	dump planation of 100 nos of saplings proposed during the year 2017-18.	125 nos of saplings planted during the year.	Nil
8g	Survival rate	No proposal.	90% as reported.	Nil
8h	Water sprinkling on roads to control airborne dust	mobile water sprinler is proposed for dust supression on hual roads.	mobile water sprinler is used for dust supression on hual roads.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer.	Aesthetic beauty in and around the mine is mainatined.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	submit before 1st July of previous year annual return	Monthly and annual return submitted with in stipulated time period.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	(i) Graduate Mining Engineer 1 (ii) Diploma Mining Engineer 1 (iii) Geologist 1	(i) Graduate Mining Engineer 1 (ii) Diploma Mining Engineer 1 (iii) Geologist 1	found to be in order.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 6.300 Ha Used for waste disposal plant, 0.815 Ha, Occupied by plant, buildings, residential, welfare buildings & roads 8.519 Ha	Covered under current (O/C) Workings: 6.300 Ha Used for waste disposal plant, buildings, residential, welfare buildings & roads 8.519 Ha	Nil
9d	Scrutiny of Annual return on afforestation	125 nos.	125 nos.	Nil
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 closing stock: 15250 t Lumps 60% to below 62%: 313.200 t 62% to below 65%: 12362.740 t	ROM closing stock: 15250 t Lumps 60% to below 62%: 313.200 t 62% to below 65%: 12362.740 t	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost: Rs.1389.84	production cost: Rs.1389.84	Nil
9h	Scrutiny of Annual return on fixed assets	Rs 86400019	Rs 86400019	Nil
9k	Scrutiny of Annual return on mining machineries	excavator: 2.1 cu.m., 6 nos, dumpers: 6 cu.m., 6 nos, loaders:1.8 cu.m. 3, drill machine: 1 nos 110 mm dia.	excavator: 2.1 cu.m., 6 nos, dumpers: 6 cu.m., 6 nos, loaders:1.8 cu.m. 3, drill machine: 1 nos 110 mm dia.	Nil

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

Date :

(RAMKISHAN R)

Indian Bureau of Mines