

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-31/BBS

Mine code : 30ORI08025

- (i) Name of the Inspecting : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri S.K.Panda, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 12/07/2019
- (v) Prev.inspection date : 12/09/2018

PART-I : GENERAL INFORMATION

- 1. (a) **Mine Name** : **JORIBAHAL (263.25 AC)**
- (b) **Registration NO.** : **IBM/343/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : ORISSA
District : KEONJHAR
Village : JORIBAHAL
Taluka : BARBIL
Post office : PALSA
Pin Code :
FAX No. : 06767-272066
E-mail : pmp1.123@rediffmail.com
Phone : 06767-72101
- (f) Police Station : Joda
- (g) First opening date : 03/06/1960
- (h) Weekly day of rest : TUE
- 2. Address for : JARIBAHAL IRON ORE MINES
correspondance AT/PO-PALSA
DIST-KEONJHAR
- 3. (a) Lease Number : ORI0046
- (b) Lease area : 106.53
- (c) Period of lease : 10
- (d) Date of Expiry : 19/06/2008
- 4. Mineral worked : IRON ORE Main

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 : J.N.PATNAIK
 c/o PATNAIK MINERALS (P)
 LTD, POST :KEONJHARGARH
 KEONJHAR ORISSA
 Phone: 72101
 FAX : 72066

Mining Engineer

Name : SHRI DEBIPRASAD MISHRA,Full Time
 Qualification : DEGREE
 Appointment/ : 01/06/2018
 Termination date

Geologist

Name : SHRI BHABAGRAHI MOHAPATRA,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 07/08/2004
 Termination date

Manager

Name : SHRI S K PANDA
 Qualification : DIPLOMA, FCC
 Appointment/ : 01/06/2018
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	01/02/2007
		Renewal under rule 24 MCR1960	19/12/2008
		Modif.of approved Mining Plan	17/02/2011
		Mining Scheme rule 12 MCDR1988	28/05/2014
		MS modif under MCR 1960	09/06/2017
		MP review under 17(1) MCR 2016	30/11/2017
		Modif.approved Mining Scheme	25/07/2018
		FMCP under 23C(1)	28/11/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	No back log and no exploration carried out in the mine during 2018-19.
1b	Exploration over lease area for geological axis 1 or 2	26 nos of boreholes were proposed during the year 2018-19.	25 nos of boreholes drilled during the year 2018-19.	Nil.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	26 nos of boreholes were proposed during the year 2018-19.	25 nos of boreholes were drilled during the year 2018-19.	Nil
1e	Balance reserve as on 01/04/20	As per the approved document, dated 24.07.2018, the iron ore reserves are indicated to be for 16.9 million tonnes and resources are 11.45 million tonnes as on 01.04.2018.	After depletion of production reported during 2018-19, the available iron ore reserves and resources are arrived at 16.9 million tonnes & 11.45 million tonnes respectively as on 01.04.2019	Nil
1f	General remarks of inspecting officers on geology, exploration etc		After depletion of production reported during 2018-19, the available iron ore reserves and resources are arrived at 16.9 million tonnes & 11.45 million tonnes respectively as on 01.04.2019	Nil

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	2 nos of quarries were proposed to be developed during the year 2018-19.	2 nos of quarries were under operation during the year 2018-19.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No topsoil exists. Seperate benches in OB and ore zone are envisaged.	No topsoil generated during 2018-19. Separate benches in overburden/waste and ore zone are formed.	Nil
2c	Stripping ratio or ore to OB ratio	1: 0.19 t/cu.m.	1: 0.09 t/cu.m.	Nil
2d	Quantity of topsoil generation in m3	No topsoil exists.	Not applicable.	No topsoil generated during 2018-19.
2e	Quantity of overburden generation in m3	192850 tonnes in 2018-19.	426593 tonnes generated during the year 2018-19.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No topsoil exists.	No topsoil exists in the location proposed and excavated during the year 2018-19, thereby no topsoil was generated during the aforesaid year.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pits	Two pits	Nil
3b	Quantity of ROM mineral production proposed	997999 tonnes in 2018-19.	9978881 tonnes produced during 2018-19.	Nil
3c	Recovery of sailable/usable mineral from ROM production	100%	90%	Due to irregualr lithology of the ore body.
3d	Quantity of mineral reject generation	86783 in 2018-19.	426593 tonnes generated during 2018-19.	Nil

3e	Grade of mineral rejects generation and threshold value declared.	+45%-58% Fe	+45%-58% Fe	Nil
3f	Quantity of sub grade mineral generation.	86783 in 2018-19. Also considered as mineral reject	426593 tonnes during 2018-19. The same also considered as mineral reject	Nil
3g	Grade of sub grade mineral generation	+45%-58% Fe	+45%-58% Fe	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.	None	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	Provisions for drilling & blasting envisaged in Overburden/waste & mineral benches.	Drilling & blasting is done as per the requirements in overburden/waste & mineral benches.	Nil
3k	Provision of mining machineries in mineral benches	Provisions for deployment of heavy mining machineries like excavators & tippers/dumpers etc. are envisaged.	The mine excavations are undertaken with excavator & dumper combinations.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height 6 m.	bench height 6 m.	Nil

3m	Total area covered under excavation/pits	66.21 ha.	66.21 ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.19 t/cu.m.	1:0.09 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	106.533 ha	106.533 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 0.99 million tonnes 2015-16: 2.1 million tonnes 2016-17: 3.3 million tonnes 2017-18: 0.83 million tonnes 2018-19: 0.99million tonnes	2014-15: 0.99 million tonnes 2015-16: 2.1 million tonnes 2016-17: 3.3 million tonnes 2017-18: 0.83 million tonnes 2018-19: 0.99million tonnes	Nil
3q	General remarks of inspecting officers on method of mining etc.		The mine excavations are undertaken with excavator & dumper combinations. Separate behches in overburden/waste and in ore zone also.	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 topsoil exists and generation of the same dose not arise. Provisions for seperate dumping of OB/waste and mineral rejects are envisaged.	No top soil generated during 2018-19. Provisions for seperate dumping of OB/waste and mineral rejects done.	Nil
4b	Location of topsoil, OB and mineral reject dumps	310S/920E to 130S/1100E & 110S/980E to 110S/1100E	310S/920E to 130S/1100E & 110S/980E to 110S/1100E	Nil

4c	Number of dumps within lease area and outside of lease area	2 dumps within the mining lease area.	2 dumps within the mining lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside UPL	outside UPL	Nil
4e	Number of active and alive dumps.	Two nos.	Two nos.	Nil
4f	Number of dead dumps.	None	Nil	Nil
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Nil	Nil	Nil
4i	Length of Retaining wall or garland drain all along dumps	No fresh proposal.	Not applicable.	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management		There are two nos. of active waste dumps in the lease area and the waste dumping is being done as envisaged in the approved document.	Nil

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 area has been matured for reclamation as the mineral has not been exhausted.	No area has been matured for reclamation as the mineral has not been exhausted.	Nil
5b	Area under backfilling of mined out area	Not applicable.	Not applicable.	Nil

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists in the location proposed under excavation during 2018-19.	No topsoil generated during 2018-19.	Nil
5d	Total area fully reclaimed and rehabilitated	No area has been matured for reclamation as the mineral has not been exhausted.	No area has been matured for reclamation as the mineral has not been exhausted.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		No area has been matured for reclamation as the mineral has not been exhausted.	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).	The annual return on PMCP has been submitted.	The annual return on PMCP has been submitted.	Nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).			
6d	No. of saplings planted during the year	5000nos saplings in 2018-19.	5500 nos saplings during 2018-19.	Nil
6e	Cumulative no .of plants	No specific proposal.	5500 nos. of saplings.	Nil
6f	Any other method of rehabilitation	None	Not applicable.	Nil

6g	Cost incurred on watch and care during the year	Nil	Nil	Mine operations were suspended from 30.11.2011 by DDM, Joda and mine re opened on 20.04.2018
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No area has been matured for reclamation and rehabilitation .	No area has been matured for reclamation and rehabilitation.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No area has been matured for reclamation and rehabilitation .	Not applicable.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No area has been matured for reclamation and rehabilitation .	Not applicable.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable.	Not applicable.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable.	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable.	Nil	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable.	Not applicable.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable.	Not applicable.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitorig of ambient air quality, water quality, noise level & vibration etc. are envisaged.	Monitorig of ambient air quality, water quality, noise level & vibration etc. are being done on quarterly basis to ensure compliances.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Monitorig of ambient air quality, water quality, noise level & vibration etc. are being done on quarterly basis to ensure compliances.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Different grade of iron ore sorting & sizing envisaged.	Grade wise sorting & sizing is being done by mechanised means.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised.	Mechanised.	Nil
7c	Different grade of mineral sorted out at mines.	Below 55% 55% to below 58%	Below 55% 55% to below 58%	Nil

7d	Any beneficiation process at mines .	Not applicable.	Not applicable.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Grade wise sorting & sizing is being done by mechanised means.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	No topsoil generated during 2018-19.	Nil
8b	Concurrent use or storage of topsoil	Not applicable.	Not applicable.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Sperate dumps for OB/waste and rejects are envisaged.	Dumping of waste is being done in the designated site.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No area is matured for reclamation as no mineral has been exhausted and mineralisation is continues.	No area is matured for reclamation as no mineral has been exhausted and mineralisation is continues.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable.	Not applicable.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5000 nos saplings proposed to be planted in 2018-19.	5500 nos saplings planted during 2018-19.	Nil
8g	Survival rate	No such proposal envisaged.	Reportedly 86%.	Nil
8h	Water sprinkling on roads to control airborne dust	Mobile water sprikler is proposed for dust suppression on haul roads.	Water sprinkling in the haul roads are er is proposed for dust suppression on haul roads.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Mine operations were suspended from 30.11.2011 by DDM, Joda and mine re opened on 20.04.2018. However, the greenery developed by plantation enhances the asthetic beauty of the mine sorroundings.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted all the monthly and annual returns.	Submitted all the monthly and annual returns.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist and Mine Manager are appointed.	Mining Engineer, Geologist and Mine Manager are appointed.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit-66.210 ha, waste dump-15.35ha, Infrastructure 3.481ha, roads- Others-15.905 ha	Pit-66.210 ha, waste dump-15.35ha, Infrastructure, roads- 3.481ha, Others-15.905 ha	Nil

9d	Scrutiny of Annual return on afforestation	5450 nos. of saplings.	Found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral Rejects-426593 tonnes, grade -45% Fe.	Mineral Rejects-426593 tonnes, grade -45% Fe.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock-44377 tonnes & Closing stock:115718 tonnes	Opening stock-44377 tonnes & Closing stock:115718 tonnes	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price varies from Rs. 400/- to 5585/-	Ex mine price varies from Rs. 400/- to 5585/-	Nil
9h	Scrutiny of Annual return on fixed assets	Fixed asset Rs 293076414/	Fixed asset Rs 293076414/	Nil
9k	Scrutiny of Annual return on mining machineries	Shovel-0.9cum/16nos., Tippers-35 nos., Drill machine-100mm dia./5nos. & Water Tanker etc.	Shovel-0.9cum/16nos., Tippers-35 nos., Drill machine-100mm dia./5nos. & Water Tanker etc.	Nil

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
Rule 26(2)	25/07/2019	24/09/2019			
MCDR17 Rule 35(2)	25/07/2019	24/09/2019			

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines