

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/KJR/MCDR-65/BBS

**Mine code :** 30ORI08017

- (i) Name of the Inspecting : **RKD** ) **RAJESH KUMAR DAS**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Anurag Ojha, agent Mine  
Official with  
Designation
- (iv) Date of Inspection : 18/08/2022
- (v) Prev.inspection date : 03/07/2021

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **GANDHAMARDHAN 'B' BLOCK**
- (b) **Registration NO.** : **4269**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : SUAKATI
- Taluka : KEONJHAR
- Post office : SUAKATI
- Pin Code : 758018
- FAX No. : 06766-233085
- E-mail : info@orissamining.com
- Phone : 06766-233064
- (f) Police Station : Suakati
- (g) First opening date : 11/07/1970
- (h) Weekly day of rest : SUN
2. Address for : GANDHAMARDHAN  
correspondance AT/PO-SUAKATI  
DIST-KEONJHAR
3. (a) Lease Number : ORI0086
- (b) Lease area : 618.58
- (c) Period of lease : 50
- (d) Date of Expiry : 20/01/2033
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : M/S OMC LTD.  
 AT & PO: TIRING PAHAR DIST.  
 KEONJHAR, ORISSA KEONJHAR  
 ORISSA  
 Phone:06766-233064  
 FAX :06766-233085

Owner : M/S OMC LTD.  
 M/S OMC LTD. OMC HOUSE,  
 POST BOX NO. 34  
 BHUBANESWAR-751010 KEONJHAR  
 ORISSA  
 Phone: 06766-233064  
 FAX : 06766-233085

Agent : P.K. Sahoo  
 At/Po: Suakati PS: Suakati  
 Dist: Keonjhar KEONJHAR  
 ORISSA  
 Phone: 06766-233064  
 FAX : 06766-233085

## Mining Engineer

Name : Dillip Kumar Choudhury, Full Time  
 Qualification : BE(Mining)  
 Appointment/ : 16/12/2013  
 Termination date

## Geologist

Name : SHRI T K KAUDEYANG, Full Time  
 Qualification : MSC GEOLOGY  
 Appointment/ : 21/04/2018  
 Termination date

## Manager

Name : Ambika Prasad Mohapatra  
 Qualification : Diploma in Mining & 1st class certificat  
 Appointment/ : 11/06/2014  
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	15/01/2003
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	04/12/2006
	:	Mining Scheme rule 12 MCDR1988	01/04/2011
	:	Modif.of approved Mining Plan	27/07/2016
	:	MP modif under 17(3) MCR 2016	07/06/2019
	:	MP review under 17(1) MCR 2016	20/11/2019
	:	MS modif under MCR 1960	02/08/2021

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for geological axis 1 or 2	37 bore holes in approx 47.62 ha	Broadly as per proposal.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	specifically not proposed.	M/s Maheshwari Mining Pvt.Ltd, Rs.8647080/- approximately.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	64 ha.	64 ha.	
1e	Balance reserve as on 01/04/20	178.87 million tons	180.712 million tons	Balance reserve as on 31.03.2022

1f General remarks  
of inspecting  
officers on  
geology,  
exploration etc

Broadly the area is explored but most of the area reported non-mineralise and approx 450 ha. area is explored in G1/G2 and rest non mineralised area in G3. The main Gandhamardan deposit strikes in north south direction (N5°E - S5°W) with gentle to moderate westerly dipping beds (5° to 30° due west). The strike length of the (Gandhamardan Block -B) deposit is 4500 m and average width is 700 m. The ore body is bulging towards south and tapers down to north. The deposit is surrounded from all sides by

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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	2392295N- 2393530N TO 344690E- 345610E,R.L- 980 TO 1050 MRL (HILLTOP QUARRY) 2394943- 2395660 TO 344500- 344920,R.L-950 TO 1000 MRL(PUTULUPANI QUARRY)	Broadly within proposed area but development is less w.r.t. proposal.	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes separate benches in top soil,OB and mineral proposed	As reported top soil generation negligible.OB and mineral benches broadly as per proposal.	
2c	Stripping ratio or ore to OB ratio	1:0.67	1:0.47	
2d	Quantity of topsoil generation in m3	1,00,000	1938	
2e	Quantity of overburden generation in m3	59,10,000	34,23,259	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development is broadly as per proposal with two pits but quantity is less w.r.t. proposal.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	02	02	
3b	Quantity of ROM mineral production proposed	9.12 Million tonne	7.278 Million tonne	
3c	Recovery of sailable/usable mineral from ROM production	100% in which 15% mineral reject(Fe% 45-55)	Broadly as per proposal.	
3d	Quantity of mineral reject generation	45-55% Fe	45-55% Fe	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	NA	NA	

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NA	NA	
3j	Provision of drilling and blasting in mineral benches	Use of 115 mm dia drill with 2.5 m burden and spacing 3.0 m spacing	Broadly as per proposal.	
3k	Provision of mining machineries in mineral benches	Yes, Fully Mechanised Opencast Mining Method by means of Excavator & dumper combination with adequate Bench height 10m , Width (Min) = 15m, Haul road gradient 1:16	Broadly as per proposal	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes but during mine visit it was observed that bench parameters in Putulpani quarry is not as per proposal, benches are not regular and height is some place more than proposal.	
3m	Total area covered under excavation/pits	252.61 Ha.	160.61 ha.	252.6188 Ha. Covered under excavation up to end of the mining plan 31.03.2025.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.67	1:0.47	

3o	Total area put in use under different heads at the end of year	670.00 Ha.	292.25 Ha.	670.00 Ha. Covered under different head land- use up to end of the mining plan (31.03.2025).So balance area used in different head as per proposal area taken in different year.
3p	Production of ROM mineral during the last five year period as applicable	(2017-18)- 4730000 MT,(2018-19)- 5780000 MT,(2019-20)- 7617000 MT,(2020-21)- 7295000 MT,(2021-22)- 9120000 MT	(2017-18)-2520000 MT (2018-19)-5058800 MT (2019-20)-6827400 MT (2020-21)-6424900 MT (2021-22)-7278000 MT	
3q	General remarks of inspecting officers on method of mining etc.			The method of mining is by opencast mining using HEMM and deep hole drilling blasting and working in two pits.

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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)	Yes	Yes	
4b	Location of topsoil, OB and mineral reject dumps	TOPSOIL=(23939 30 - 2394118) N TO (345229 - 345380) E OB= (2395735 - 2396783) N TO (345067 - 346294) E,R.L-580 TO 630 MRL.	Broadly as per proposal.	

4c	Number of dumps within lease area and outside of lease area	TOPSOIL-01, OB-5 & MR stack	Broadly as per proposal	OB dumping in almost in same location but the dump are not continuos.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Northern side of Lease Outside UPL,Upper Kainsari(34494 0E to 346210 E & 2395730N to 2396780N)	Broadly as per proposal out side UPL.	
4e	Number of active and alive dumps.	one	onr	
4f	Number of dead dumps.	04 nos	04 nos	
4g	Number of dumps established.	03 nos under progress	03 nos under progress and plantation done partially.	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	During mine visit it was observed that retaining wall & garland drain constructed in other dump but as per proposal not constructed.	
4i	Length of Retaining wall or garland drain all along dumps	450m x 1.5m x 1.2m Retaining wall & Garland drain of 541m toe of active WD-1	During mine visit it was observed that retaining wall & garland drain constructed in other dump but as per proposal not constructed.	
4j	Number of settling ponds	01 near waste Dump WD-1	not constructed	violation pointed out.
4k	Specific comments of inspecting officer on waste dump management			The retaining wall,garland drain and settling pond not constructed as per proposal.

#### Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	NA	NA	Area not matured for backfilling.
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	NA	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			The area is still not matured for back filling.

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Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yes	yes submitted on time.	
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	10 ha.	Broadly as per proposal.	
6d	No. of saplings planted during the year	29000 nos saplings	29115 nos reported.	
6e	Cumulative no .of plants	45500 nos	74615 nos	

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6f	Any other method of rehabilitation	No other method proposed.	NA
6g	Cost incurred on watch and care during the year	10 Lakhs	Given contract for total 3.7 Crores for 3 year including plantation , watch& care .
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	NA	NA
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NA	NA
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring in core zone & buffer zone of lease area.	Monitoring in core zone & buffer zone by 02 nos of CAAQMS in Core Zone & 01 in buffer Zone & by 04 nos of AQMS in Core Zone & 02 nos Buffer Zone reported.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Broadly done as per proposal.

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mineral is being sorting grade wise within lease	Broadly as per proposal.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	
7c	Different grade of mineral sorted out at mines.	Different grade of mineral blend to get required grade for dispatch.	The material are excavated from different benches where grade variation exist therefore material of different grade blend for desired grade.	

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7d	Any beneficiation process at mines .	NA	No beneficiation process observed in mines except crushing and screening.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The material are excavated from different benches where grade variation exist therefore material of different grade blend for desired grade.

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**Environment :**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes	
8b	Concurrent use or storage of topsoil	Yes	Yes concurrent use for afferestation and also stacked.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	Still area not matured for backfilling.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	29000 nos plantation proposed in 2021-22	29115 nos plantation done	

8g	Survival rate	not mentioned specifically	96% reported.
8h	Water sprinkling on roads to control airborne dust	Yes	Water sprinkler is provided to control airborne dust and fixed water sprinkler work under progress.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The lessee is broadly taking care of all environmental preventive measures as per statute i.e Air, Water, Noise, ground vibration monitoring. The plantation is done and dust suppression water sprinkling is done on regular basis and fines stacks are mostly covered with tarpolin. There is no adverse impact observed during mine visit on aesthetic beauty in and around mines 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	yes	AR & MR submitted in time	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes given	Shri Bibhuti Bhusan Nayak, Mine Manager Shri Tapas Kumar Naik, Mining Engineer Shri Chodagangadev Nayak, Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes given	Broadly as per actual position.	

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9d	Scrutiny of Annual return on afforestation	yes given 29115 nos saplings reported.	plantation done in dump and other areas.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	1131312 MT with grade 57.48 %Fe	During mine visit mineral reject dump observed.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes given more tha 5.3 million stocks of various grade reported including lumps and fines.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	yes given ,Ex- mine price varies from Rs 4613/- to Rs 8312 for different grades and cost of production Rs 4043/-. The sale are domestic sale.	
9h	Scrutiny of Annual return on fixed assets	Yes given	Rs 1844117222/-
9k	Scrutiny of Annual return on mining machineries	Yes given	Broadly as per actual.

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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)	02/09/2022			

**Date :**

**(RAJESH KUMAR DAS)**

Indian Bureau of Mines