

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPMENT 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 : SQ10 ) SHRI G.C. SETHI  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri A. P. Mohapatra, Mine Manager & Shri S.K. Kar, QP  
Official with  
Designation
- (iv) Date of Inspection : 04/05/2019
- (v) Prev. inspection date : 10/09/2018

**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 correspondence : GANDHAMARDHAN  
AT/PO-SUAKATI  
DIST-KEONJHAR
3. (a) Lease Number : ORI0086
- (b) Lease area : 618.58
- (c) Period of lease : 30
- (d) Date of Expiry : 20/06/1993
4. Mineral worked : IRON ORE  
Main

*The lease has been extended by the State Govt.  
vide order no. 1771, dated 08-03-2019 and  
10-07-2040*

## 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

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No back log.	No back log.	Nil
1b	Exploration over lease area for geological axis 1 or 2	During the year 2018-19, 22 nos of boreholes were proposed.	No exploratory drilling have been carried out during the year 2018-19.	Violation under Rule 11(1) of MCDR, 2017 was issued on 14.05.2019. After the issue of violation letter, dated 14.05.2019, the party has complied the violation on 19.06.2019.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s OMC Ltd.	No exploration done during 2018-19.	Violation under Rule 11(1) of MCDR, 2017 was issued on 14.05.2019. After the issue of violation letter, dated 14.05.2019, the party has complied the violation on 19.06.2019.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per the modification of mining plan, dated 07/06/2019, an extent of 596.216 ha is yet to explore.	An extent of 596.216 ha is yet to explore.	An extent of 596.216 ha is yet to explore.

1e	Balance reserve as on 01/04/20	As per the modification of mining plan, dated 07/06/2019, the position of reserves and resources as on 28.02.2019 were 166.08 million tonnes and 24.99 million tonnes respectively.	The position of reserves and resources as on 28.02.2019 were 166.08 million tonnes and 24.99 million tonnes respectively.	The position of reserves and resources as on 28.02.2019 were 166.08 million tonnes and 24.99 million tonnes respectively.
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1f	General remarks of inspecting officers on geology, exploration etc	The lease area is centered on a ridged like escarpment, which runs the north-south direction. The top of the ridge at the lease has a peak at 1061 mRL. The bottom of the escarpment at the lease is at about 570mRL. a number of gullies lead down from the top of the escarpment on both the eastern and western slopes. Insitu iron ore bodies located on the hill top of Gandhamardan Block B are designated as main ore body. Flank ore bodies are confined to the lower levels as compared to the hill top.	The lease area is centered on a ridged like escarpment, which runs the north-south direction. The top of the ridge at the lease has a peak at 1061 mRL. The bottom of the escarpment at the lease is at about 570mRL. a number of gullies lead down from the top of the escarpment on both the eastern and western slopes. Insitu iron ore bodies located on the hill top of Gandhamardan Block B are designated as main ore body. Flank ore bodies are confined to the lower levels as compared to the hill top.	Violation under Rule 11(1) of MCDR, 2017 was issued on 14.05.2019. After the issue of violation letter, dated 14.05.2019, the party has complied the violation on 19.06.2019.
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## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	Hill top quarry: 100 E to 480 E & -910 N to -380 N, Putulpani quarry: -1123E to -654E & 2002 N to 2725 N	The mine workings were found carried in between the grid references. Hill top quarry: 100 E to 480 E & -910 N to -380 N, Putulpani quarry: -1123E to -654E & 2002 N to 2725 N.	None
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil generation. Separate benches in OB and mineral zone are proposed.	Separate benches being maintained in OB and Ore. No top soil was generated during the year 2018-19.	Separate benches being maintained in OB and Ore. No top soil was generated during the year 2018-19.
2c	Stripping ratio or ore to OB ratio	1:0.63 t/cu.m.	1:1.69 t/cu.m.	Due to irregular nature of the ore body.
2d	Quantity of topsoil generation in m3	No topsoil exists.	No topsoil generated during 2018-19.	Nil
2e	Quantity of overburden generation in m3	3.64 million CuM	2.97 million CuM	variation is due to less development work.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Development was carried out within the approved limit in both the quarries.	Nil

## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pits namely Hilltop and Putulpani.	Two pits namely Hilltop and Putulpani.	Nil
3b	Quantity of ROM mineral production proposed	5.06 Million tonnes for the year 2018-19.	5.05 Million tonnes.	Nil
3c	Recovery of sailable/usable mineral from ROM production	5.06 million tonnes during the year 2018-19	5.05 million tonnes.	Nil

3d	Quantity of mineral reject generation	Nil	During the year 2018-19, only 3000 tonnes of sub-grade material was generated, which is considered as the mineral reject.	The sub-grade so generated is termed as mineral reject
3e	Grade of mineral rejects generation and threshold value declared.	+45-55%Fe	During the year 2018-19, only 3000 tonnes of sub-grade material was generated, Which is considered as mineral reject. However, no specific proposal for mineral reject generation is envisaged in the modification of mining plan, approved dated 27.07.2016.	The sub-grade so generated is considered as mineral reject as per the present terminology.
3f	Quantity of sub grade mineral generation.	0.72 million tonnes in 2018-19.	Only 3000 tonnes of sub-grade/ mineral reject was generated in 2018-19.	Variation in the ore zone.
3g	Grade of sub grade mineral generation	+45-55%Fe	+45-55%Fe	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	Mechanized method	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	Hilltop Quarry= Drilling 150 mm dia Burden & spacing is 3.0 to 4.0 m respectively. Putulpani=Drilling 115 mm dia Drill with 3.0 m burden and spacing 3.5 m	Hilltop Quarry= Drilling 150 mm dia Burden & spacing is 3.0 -3.5 m & 3.5 to 4.0 m respectively. Putulpani=Drilling 115 mm dia Drill with 3.0 m burden and spacing 3.5 m	Nil
3k	Provision of mining machineries in mineral benches	Dumper and shovel combination.	Dumper and shovel combination.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10m in Overburden & Ore	Height of the benches have been maintained as per proposal.	Nil
3m	Total area covered under excavation/pits	As per approved document dated 07.06.2019, an extent of area 208.947 ha at the end of plan period i.e. 2019-2020.	As on 28.02.2019, the area under excavation was for 120.41Ha as indicated in the approved modification of the mining plan.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.63 t/cu.m.	1:1.69 t/cu.m.	Due to irregular nature of the ore body.



3o	Total area put in use under different heads at the end of year	Area of excavation=208 .94 Ha Waste dump=51.11 Ha Mineral storage=52.73 Ha Infrastructure =23.34 Ha Roads=44.06 Ha Mineral Separation plant= 118.75 ha Sub-grade storage=28.07 Ha till the end of plan period i.e. 2019-20.	Excavated area (mining)= 120.41 Ha Waste dump= 10.46 Ha Mineral Storage= 15.63 Ha Infrastructure = 14.73 ha Roads = 15.91 ha Mineral Separation plant= 3.37 ha Sub-grade storage=6.64 Ha till 28.02.2019 as indicated in the approved modification of the mining plan, dated 07.06.2019.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2015-16:2.64 mT 2016-17:2.99 mT 2017-18:4.51 mT 2018-19: 5.06mT	2015-16: 0.57 mT 2016-17:1.30 mT 2017-18:2.52 mT 2018-19: 5.05mT	Lower production in the years 2015-16 to 2017-18 was due to not having Stage-II clearance form MoEF.
3q	General remarks of inspecting officers on method of mining etc.		There are two quarries viz. Hill top quarry and Putulipani quarry were under excavation during 2018-19 as proposed in the modification of mining plan, dated 27/07/2016.	Nil

#### 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 of OB and stacks for sub-grade/Mineral Rejects proposed.	Separate dump of OB and separate stacks for sub-grade/mineral reject maintained.	Nil

4b	Location of topsoil, OB and mineral reject dumps	No proposal of top soil generation. The waste dumping was proposed at Waste Dump(WD1) at Upper Kainsari area (00E to 530E & 2775N to 3120N).	Dumping of the waste was observed in Waste Dump(WD1).	Nil
4c	Number of dumps within lease area and outside of lease area	Total five dumps exist within lease area. No dumps outside of lease area.	Total five dumps exist within lease area. No dumps outside of lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	E/W3000-E/W4150 & N/S1000-N/S1500.	E/W3000-E/W4150 & N/S1000-N/S1500.	Nil
4e	Number of active and alive dumps.	One.	One.	Nil
4f	Number of dead dumps.	04 nos of dumps	04 nos of dumps	Nil
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall and garland drain observed along the dumps. No fresh proposal.	Retaining wall and garland drain observed along the dumps. No fresh retaining wall & garland drain constructed in 2018-19.	Nil
4i	Length of Retaining wall or garland drain all along dumps	No fresh proposal.	No retaining wall constructed during 2018-19.	Nil
4j	Number of settling ponds	No fresh proposal for settling tanks during 2018-19 as many existing settling tanks are already made.	No settling tanks made during 2018-19.	Nil

4k	Specific comments of inspecting officer on waste dump management	The dumping of waste is done with retaining wall and garland drain facilities along the toe of waste dump Besides, the active dump is found located ideally beyond the ultimate pit limit.	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.	No area is matured for backfilling.	Nil	Nil
5b	Area under backfilling of mined out area	No area matured for reclamation/backfilling and no proposal to that effect has been envisaged.	No area matured for reclamation/backfilling.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists.	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	No area matured for reclamation/backfilling and no proposal to that effect has been envisaged.	No area matured for reclamation/backfilling.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		No area is matured for reclamation/backfilling as the ore 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).	Annual return on PMCP for 2018-19 has not been submitted as on the date of inspection, which is due for submission on or before 1st July 2019.	The annual return on PMCP was not due for submission as on the date of inspection.	Nil
6b	Area available for rehabilitation (ha) .	The annual return on PMCP was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	Nil	Nil
6c	afforestation done (ha).	500 saplings proposed to be planted in 2018-19	During the period 2018-19, 5000 nos of saplings were planted.	Nil
6d	No. of saplings planted during the year	500 saplings in 2018-19.	During the period 2018-19, 5000 nos of saplings were planted.	Nil
6e	Cumulative no .of plants	720775 nos of saplings planted.	720775 nos of saplings planted.	Nil
6f	Any other method of rehabilitation	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil

6g	Cost incurred on watch and care during the year	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on on backfilled area	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil

6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No area is matured for reclamation & rehabilitation .	No area is matured for reclamation & rehabilitation.	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	The land affected by mining operations is not matured for reclamation & rehabilitation . Hence not applicable.	Not applicable.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No waste land in the lease.	Not applicable.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly environmental monitoring in core zone & buffer zone.	Quarterly environmental monitoring in core zone & buffer zone is being done. Air, Water, Soil, Noise, Dust fall tests done in every quarter as per SPCB & CPCB guidelines)	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		The annual return on PMCP has not been submitted as on the date of inspection, which is due for submission on or before 1st July 2019.	Nil

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Dispatch of ROM after crushing & screening is envisaged.	Crushing & Screening is practised.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual/Mechanical	Manual/Mechanical	Nil
7c	Different grade of mineral sorted out at mines.	CLO (+10-40mm) & Fines (-10mm)	CLO (+10-40mm) & Fines (-10mm)	Nil
7d	Any beneficiation process at mines	None	Not applicable.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		There is no mineral conservation problem in the mine.	Nil

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists in the mine.	Not Applicable	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)	Separate dump of OB & sub-grade stack is envisaged.	Separate dump of OB has been maintained. The sub-grade/mineral reject stacked separately.	Nil

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No backfilling proposal as no area has been matured for reclamation. The Overburden/waste generated is proposed for dumping in the designated site.	The Overburden/waste generated are being done as envisaged in the approved document.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable.	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yearwise plantation proposed	5000 nos of sapling planted during the year 2018-19.	Nil
8g	Survival rate	80 %	80 %	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads by water tanker in continuous manner.	Water sprinkling on haul roads made by water tanker & fixed sprinkler.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around mines has been maintained.	Nil

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Compliance of Rule 45:

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Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	As per the Rule 45 of MCDR, 2017, the monthly and annual returns to be submitted to IBM.	The party has submitted all the monthly returns for the year 2018-19 but the annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection does not arise
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection does not arise	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection does not arise	Nil
9d	Scrutiny of Annual return on afforestation	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection does not arise	Nil

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil
9h	Scrutiny of Annual return on fixed assets	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	Nil


9k	Scrutiny of Annual return on mining machineries	The annual return for the year 2018-19 was not due for submission as on the date of inspection, which has to be submitted on or before 1st July 2019.	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise	The scrutiny of annual return for the year 2018-19 during the inspection dose not arise
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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 11(1)	14/05/2019	25/06/2019		

Date : 26-07-2019

  
(SHRI G.C. SETHI)

Indian Bureau of Mines