

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

**MCDR inspection REPORT  
Jabalpur regional office**

**Mine file No :** MP/JBP/MANG-16

**Mine code :** 40MPR18003

- (i) Name of the Inspecting : **G005** ) **SANJAY M. GIRHE**  
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 16-MAR-20
- (v) Prev.inspection date : 10-SEP-15

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KEOLARI (4.03 HA)**
- (b) **Registration NO.** :
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :  
State : MADHYA PRADESH  
District : JABALPUR  
Village :  
Taluka :  
Post office :  
Pin Code :  
FAX No. : NA  
E-mail : NA  
Phone : NA
- (f) Police Station : GOSALPUR
- (g) First opening date : 05-APR-08
- (h) Weekly day of rest :
2. Address for : M/S SHOBHA MINERALS  
correspondance : 765/1, NAPIER TOWN,  
JABALPUR 482001
3. (a) Lease Number : MPR2192
- (b) Lease area : 4.03
- (c) Period of lease : 20
- (d) Date of Expiry : 18-JUN-27
4. Mineral worked : MANGANESE ORE Main  
OCHRE Associated  
LATERITE Associated  
IRON ORE Associated

## 5. Name and Address of the

Lessee : SHOBHA MINERALS  
765- Napier town JABALPUR  
MADHYA PRADESH  
Phone:NA  
FAX :NA

Owner : SHOBHA MINERALS  
765- Napier town JABALPUR  
MADHYA PRADESH  
Phone: NA  
FAX : NA

6. Date of approval of Mining : Fresh under rule 22 MCR1960 10-NOV-05  
Plan/Scheme of Mining Modif.of approved Mining Plan 25-AUG-09  
Mining Scheme rule 12 MCDR1988 28-MAY-13  
MP review under 17(1) MCR 2016 24-MAY-18

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration was proposed during the 2019-20.	NA	
1b	Exploration over lease area for geological axis 1 or 2	Exploration not Proposed	NA	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Proposed	No exploration carried out during the year 2019-20.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not Proposed	Area under G1 level exploration: 3.03 Ha G3 level: 1.00 Ha Area explored under G1 level by way of working only.	No detailed exploration carried out by the lessee in the past.

1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved(111) - 7836123 (Iron Ore) Proved(111) - 54820 ( Manganese Ore) Resources in tonnes Feasibility(2 11): 976280 (Iron Ore) Pre- Feasibility(2 21): 64269 ( Mn Ore) Inferred Mineral Resources (333)- 720650 (Iron Ore) Inferred Mineral Resources (333)- 50477 ( Mn Ore) Reserves & Resources positions as per approved ROMP dtd 24.05.2018 Inferred(333) : 361447 MT	Reserves in Tonnes Proved(111) - 519406 (Iron Ore) Proved(111) - 53607 ( Manganese Ore) Resources in tonnes Feasibility(211): 458443 (Iron Ore) Inferred Mineral Resources (333)- 458443 (Iron Ore) Inferred Mineral Resources (333)-48264 ( Mn Ore) Reserves & Resources positions as per AR for the year 2019-20 Inferred(333): 361447 MT A-1:The balance reserves as on 1/4/2018 is 48835 tonnes
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1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Entire mineralised lase area has not been explored fully as per UNFC Guidelines by the lessee in past. Hence, lessee was instructed to propose further exploration to convert G2 reserves/resources into G1 level of exploration. Area proved by working pits up to 374mRL.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to work in between E100 to E260 & S380 to S270 with bench floor mRLs as 406mRL to 370mRLs as earmarked in VI(B) Plate for the year 2019-20.	Mine working was carried out as per the proposed locations during the year 2019-20.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Benches in Top soil - Nil, Overburden Benches - Nil, Iron & Mn ore - 7 Benches (Height -6mts)	Bench height of 6mts not maintained in Iron & Mn ore benches. Approx. 8 to 10m bench height was observed	Violation under Rule 11(1) of MCDR,2017 was issued for devaition in proposed vs actual bench height
2c	Stripping ratio or ore to OB ratio	Not Proposed	Nil	No overburden or top soil generation proposals were given for 5 yrs plan period.

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2d	Quantity of topsoil generation in m3	Not Proposed	Nil	No top soil generation proposals were given for 5 yrs plan period.
2e	Quantity of overburden generation in m3	Not Proposed	Nil	No overburden generation occurred.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	There is single working pit centralised located & its dimensions Pit No-1 (170-220m x (80-145m x (10-20m). Iron ore & Mn ore mineralisation was very well seen in working pit.

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#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Excavation were proposed in Pit-1 from 406mRL to 370mRL as marked in Plate-VIB	Production carried out from single Pit-1	
3b	Quantity of ROM mineral production proposed	1,77,570 tonne of Iron Ore & 12,457 tonne of Mn ore proposed in 2019-20. 13,032 tonne iron ore & 896 tonne of Mn ore proposed from dump working	1213 tonne Mn ore & 174207 tonnes Iron ore production acheived during the year 2019-20. No production reported from dump working during the year.	

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3c	Recovery of sailable/usable mineral from ROM production	90 % recovery of iron ore proposed & 5% recovery of Mn ore proposed	Recovery of iron ore & Mn ore achieved as per the proposals.	
3d	Quantity of mineral reject generation	Not Proposed	Nil	No mineral rejects in the lease area
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	NA	
3f	Quantity of sub grade mineral generation.	Not Proposed	NA	
3g	Grade of sub grade mineral generation	Not Proposed	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual dressing, sizing & sorting of Iron, Mn ore proposed	Manual dressing, sizing & sorting of Iron, Mn ore carried out	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	NA	
3j	Provision of drilling and blasting in mineral benches	Not Proposed	NA	Iron & Mn ore found as pebbles & fines hence drilling/blasting not proposed

3k	Provision of mining machineries in mineral benches	Excavator/Tata , 1.0Cum capacity Loader-Tata TATA Dumper model 2515, 24 T capacity Tractor mounted Air Compressor Rock breaker CP 1650 Water pump with Diesel engine	Excavator/Tata, 1.0Cum capacity Loader-Tata TATA Dumper model 2515, 24 T capacity Tractor mounted Air Compressor Rock breaker CP 1650 Water pump with Diesel engine	In house & outsourced HEMM.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No OB bench height is proposed Bench height of 6m proposed in Iron & Mn ore benches	Proposed height of benches were not maintained at some location	Violation of rule 11(1) of MCDR,2017 was issued for this deviation.
3m	Total area covered under excavation/pits	2.61 Ha area was proposed in approved ROMP period i.e. 2018-19 to 2022-23.	Total 4.03 Ha area covered under excavation as per AR for the year 2019-20.	
3n	Ore to OB ratio for the pit/mine during the year.	Not Proposed	Nil	
3o	Total area put in use under different heads at the end of year	As per the previous approved ROMP (As on 01.04.2018) Pits-2.61 Ha Mineral Storage-1.30 Ha Road - 0.01 Ha	As per the previous annual return (As on 01.04.2020) Pits-4.03 Ha Infrastructure- 0.020Ha Road - 0.01 Ha	



3p	Production of ROM mineral during the last five year period as applicable	Iron Ore Mn	Ore	Iron Mn Ore
		2015-16-:	2015-16-:	1,52,500
		2,60,021	9,047	
		17,883	2016-17-:	43,000
		2016-17-:	500	
		2,61,948	2017-18-:	63,500
		18,151	Nil	
		2017-18-:	2018-19-:	90,000
		2,94,930	700	
		21,053	2019-20-:	1,74,207
		2018-19-:	3,807	
		1,46,037		
		10,336		
		2019-20-:		
		1,77,570		
		12,457		
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Mechanised open cast working proposed by using Excavator /JCB & dumper combination without drilling & blasting.  A-3: Modern and scientific mining methods are in practice for optimal exploitation of mineral wealth. Latest technologies like cavity monitoring and machineries are being used.

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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)	Not Proposed	Nil	No OB, top soil & mineral rejects proposed to generated during approved plan period

4b	Location of topsoil, OB and mineral reject dumps	Not Proposed	Nil	
4c	Number of dumps within lease area and outside of lease area	Not Proposed	NA	Single subgrade dump is located towards north-western part of ML area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Proposed	NA	Single subgrade dump is located towards north-western part of ML area.
4e	Number of active and alive dumps.	Not Proposed	No active OB or top soil dumps in lease area	
4f	Number of dead dumps.	Not Proposed	No dead dump existing in lease area.	
4g	Number of dumps established.	Not Proposed	NA	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	Nil	
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	NA	
4j	Number of settling ponds	Not Proposed	NA	
4k	Specific comments of inspecting officer on waste dump management	NA	NA	No overburden or top soil encountered in the mining lease area. Hence, scope of dumps management doesnot exists.

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#### Solid Waste Management - Backfilling:

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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.	Not Proposed	NA	ML area is devoid of OB/Waste and non of the pit ore exhaustedhence backfilling is not proposed.
5b	Area under backfilling of mined out area	Not Proposed	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	NA	No top soil encountered in ML area
5d	Total area fully reclaimed and rehabilitated	Not Proposed	None of the ML area is reclaimed & rehabilitated	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	No overburden/waste encountered in the lease area. Top soil as and when generated proposed to be used for plantation purpose. Hence, scope of reclamation by backfilling doesn't exist.

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#### 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).	To be submitted before 1st July of every year	Not submitted	Violation under rule 26(2) of MCDR,2017 was pointed out.
6b	Area available for rehabilitation (ha) .	Not Proposed	NA, presently no area is available for rehabilitation	

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6c	afforestation done (ha).	Total 150 saplings proposed to be planted during 2019-20	Total 160 saplings planted during the year	Survival rate 60% reported during the year
6d	No. of saplings planted during the year	Total 150 saplings proposed to be planted during 2019-20	Total 160 saplings planted during the year	
6e	Cumulative no .of plants	NA	NA	
6f	Any other method of rehabilitation	Not Proposed	NA	
6g	Cost incurred on watch and care during the year	NA	NA	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not Proposed	Area not matured for backfilling so far	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Area not matured for backfilling so far	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not Proposed	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Area not matured for backfilling so far	

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not Proposed	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not Proposed	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not Proposed	NA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Yes, Compliances of environmental monitoring is being carried out.	Analysis reports were provided during mine inspection
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Area is devoid of OB/Waste, hence scope of backfilling/reclamation & rehabilitation doesn't exist and no proposals are given. Periodic env. monitoring is being carried out by outsourced consultant.

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Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	1,77,570 MT of iron ore & 12,457 MT Mn ore proposed as total ROM production for despatch. Grade wise sorting proposed within lease area for Iron & Mn ore	1,91,113 MT iron ore & Manganese ore- Nil dispatched during the year. Iron ore lumps & fines of <55% Fe content despatched.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposed as Manual	Manual sorting is done	Entire ROM is sorted grade wise & for selling purpose.
7c	Different grade of mineral sorted out at mines.	Grade wise sorting & sizing for iron ore <55% Fe content and Manganese <25% Mn content proposed	Grade wise sorting & sizing for iron ore <55% Fe content and Manganese <25% Mn content being carried out.	
7d	Any beneficiation process at mines	Not Proposed	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Iron ore & Mn ore is being conserved by grade wise sorting in the lease area. Iron ore <55% Fe content & Mn ore <25% Mn content proposed to be sell to the nearby cement plants, beneficiation plant & steel industries.

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**Environment:**


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Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Not Proposed	NA	No top soil encountered or proposed during plan period.
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Not Proposed	Nil	No top soil, OB or mineral rejects generation proposed.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Iron ore & Mn ore not exhausted in any pits for aforesaid purpose.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	150 Saplings were proposed to be planted	150 saplings planted within & outside ML area with 60% survival rate.	
8g	Survival rate	Proposed as 80%	Acheived as 60%	Low survival rate due stony/lateritic nature of top surface
8h	Water sprinkling on roads to control airborne dust	Water sprinkling was proposed by water tanker	Regular water sprinkling is done by water tanker	Water tanker of 5KL capacity is provided for the purpose

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	Aesthetic beauty in and around mine area is not much satisfactory as plantation not done up to that extent. Hence, it was instructed to propose at least 200-300 sapling/year & incorporate the same in further submission ROMP/MP.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. for January & February-2020 were not submitted till the date of inspection Annual Return was submitted for 2018-19	Annual Return for the year 2018-19 submitted within time limit.	Violation under rule 45(5)(b) for non submission of MR was issued.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	NA	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	NA	

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9d	Scrutiny of Annual return on afforestation	Given as Saplings planted -150 Nos (Within & outside ML area) Survival rate- 60%	Some plantation were observed along statutory barrier & other part of ML area.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral/ore rejects generated during the year
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Iron Ore- Below 55% Fe content (Lumps)  O/S-10895.056 MT Despatch-10372.52 MT C/S-3969.78 MT Iron Ore- Below 55% Fe content (Fines)  O/S-118657.75 MT Despatch-180381 MT C/S-108675.72 MT Mn Ore-: O/S-996.10 MT Despatch-Nil C/S-2209.24 MT
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Mn Ore <25Mn Grade -Rs 800/MT Iron Ore <55% Fe (Lumps) Grade- Rs 450/MT Iron Ore <55% Fe (Fines) Grade- Rs 750/MT
9h	Scrutiny of Annual return on fixed assets	Given	NA
9k	Scrutiny of Annual return on mining machineries	Given	NA

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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)	27-MAY-20		MCDR17	Rule 11 (1)	19-APR-21
MCDR17	Rule 14 (3)	27-MAY-20		MCDR17	Rule 14 (3)	19-APR-21
MCDR17	Rule 26 (2)	27-MAY-20	31-JUL-20			
MCDR17	Rule 31 (4)	27-MAY-20	31-JUL-20			
MCDR17	Rule 45 (1)	27-MAY-20	31-JUL-20			
MCDR17	Rule 45 (5) (k)	27-MAY-20	31-JUL-20			

**Date :**

**(SANJAY M. GIRHE)**

Indian Bureau of Mines