

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

**Review and updation of Mining Plan REPORT**

**Jabalpur regional office**

**Mine file No :** MP/JABALPUR/MANGANESE ORE 17

**Mine code :** 40MPR18006

- (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 : 09-MAR-21
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **DARSHANI 5.70HA.**
- (b) **Registration NO.** :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :  
State : MADHYA PRADESH  
District : JABALPUR  
Village :  
Taluka :  
Post office :  
Pin Code :  
FAX No. : -  
E-mail : -  
Phone : -
- (f) Police Station :
- (g) First opening date : 01-AUG-13
- (h) Weekly day of rest :
2. Address for :  
correspondance :
3. (a) Lease Number : MPR2299
- (b) Lease area : 5.7
- (c) Period of lease : 30
- (d) Date of Expiry : 02-MAY-41
4. Mineral worked : MANGANESE ORE Main  
OCHRE Associated  
LATERITE Associated  
IRON ORE Associated

5. Name and Address of the

Lessee : KAMAL LIME INDUSTRIES  
PROP.KISHORE KUMAR STATION  
ROAD KATNI MADHYA PRADESH  
Phone:07622-223767/223730  
FAX :07622-222771

Owner : SHREE KAMAL LIME INDUSTRIES  
STATION ROAD KATNI MP KATNI  
MADHYA PRADESH  
Phone:  
FAX :

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 21-APR-16  
Plan/Scheme of Mining

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During the approved SOM period 2016-17 to 2020-21 total 05 core boreholes of 20m each were proposed.	Propose exploration not carried out	Violation of Rule 11(1) of MCDR, 2017 pointed out for not carried out exploration as proposed.
1b	Exploration over lease area for geological axis 1 or 2	Exploration was proposed by 05 core boreholes of 20m for geological axis G1	Exploration not carried out	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration was proposed by 05 core boreholes of 20m for geological axis G1	Not carried out as per the proposals	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration was proposed by 05 core boreholes of 20m for geological axis G1	Area explored under G1/G2 level of about 2.10Ha by way of working only.	Detailed exploration not carried out by the lessee in past.

1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved(111) - 17130 MT- Iron Ore & 95507 Mn Ore Resources in tonnes Feasibility(221): 1890 MT Iron Ore & 10614 MT Mn Ore Measured (331): 18903 MT Iron Ore & 106121 MT Mn Ore Reserves/resources position as SOM approved dtd 21.04.2016	Reserves in Tonnes Proved(111) -11825 MT- Iron Ore & 66925 Mn Ore Resources in tonnes Feasibility(221): 1890 MT Iron Ore & 10614 MT Mn Ore Measured (331): 18903 MT Iron Ore & 106121 MT Mn Ore As on 01.04.2020 as per AR 2019-20	No additional reserves/resources have been estimated.
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 & G3 reserves/resources into G1 level of exploration.

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Development :

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Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	It was proposed to work in between Central part to southern part and northern part to central part with 03 nos of benches from 406 mRLs to 399mRL in Plate-X for the year 2019-20	Mine working was carried out as per the proposed locations.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil generation not proposed during the year. Separate bench in mineral proposed	No top-soil generation during this year. Bench height of 3 to 4m maintained in limestone for systematic mining.	
2c	Stripping ratio or ore to OB ratio	1: 0.67 Tonne/CuM proposed during the year	No mine waste generated during the year the year 2019-20	Due to less production of 375MT iron & 1010 MT of Mn ore, mine waste is not generated.
2d	Quantity of topsoil generation in m3	Not Proposed	Nil	
2e	Quantity of overburden generation in m3	During the year 2019-20 total 567 CuM & in 2020-21 total 3312 CuM mine waste generation was proposed	During the year 2019-20 no mine waste generated	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	Total 1 working pit & 3 old pits are existing. Pit No-1 : 1.94 Ha at central part, Old Pit-1: 0.0512 Ha at NE part, Old Pit-2: 0.081 at Western part & Old Pit-3 : 0.035 Ha at Southern part.
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### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Excavation were proposed in Pit-A from 406mRL to 399mRL during the year 2019-20 & in 2020-21 from 402mRL to 395mRL	Mine working were carried out as per proposals for Iron & Mn ore.	
3b	Quantity of ROM mineral production proposed	Iron Ore-: 3200 MT & Mn ore-:17963MT during the year 2019-20 Iron Ore-: 2998 MT & Mn ore-:16830 MT during the year 2020-21	Iron Ore-: 375 MT & Mn ore-:1010 MT during the year 2019-20 Iron Ore-: 2900 MT & Mn ore-:4660 MT during the year 2020-21 Acheived production	
3c	Recovery of sailable/usable mineral from ROM production	Recovery of 5% of Iron Ore & 20% of Mn ore proposed	Recovery acheived as per the proposals	
3d	Quantity of mineral reject generation	Not Proposed	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	Nil	No mineral reject generation in lease area

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3f	Quantity of sub grade mineral generation.	Not Proposed	Nil
3g	Grade of sub grade mineral generation	Not Proposed	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sizing & sorting proposed	Manual sizing & sorting carried out
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Temporary wet screening/beneficiation noticed within lease area.
3j	Provision of drilling and blasting in mineral benches	Small dia 32mm shallow depth drilling & blasting is proposed by Jack hammer	Drilling & blasting using jack hammer carried out Small dia 32mm shallow depth.
3k	Provision of mining machineries in mineral benches	Excavator/JCB-60HP, 1.10Cum capacity TATA Dumper model 2515, 20 T capacity Tractor mounted Air Compressor Tractor mounted Air Compressor Jack Hammer with Drill rods Mahindra Tractor with Water Tank on trolley Water pump with Diesel engine	Excavator/JCB-60HP, 1.10Cum capacity TATA Dumper model 2515, 20 T capacity Tractor mounted Air Compressor Jack Hammer with Drill rods Tractor with Water Tank on trolley Water pump with Diesel engine

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 3m proposed in mineral	Bench height in ore maintained as per the proposals	Proposed bench height is suitable as per the deposit
3m	Total area covered under excavation/pits	2.67 Ha area was proposed in approved SOM period i.e. 2016-17 to 2020-21	2.507Ha as on 01.04.2020 as per annual return 2019-20.	
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.67 Tonne/CuM proposed during the year 2019-20	Nil	No mine waste generated during the year due to meager Iron & Mn ore production
3o	Total area put in use under different heads at the end of year	As per the previous approved SOM Pits-2.11Ha Waste Dumps-1.39Ha Road-0.18Ha	As per the Annual Return 2019-20 as on 01.04.20 Pits-2.507 Ha Waste Dumps-1.492Ha Reclaimed/Rehabilitated-0.045Ha Infrastructure-0.183Ha Green belt-0.086Ha	
3p	Production of ROM mineral during the last five year period as applicable	2015-16-: 3763MT (Iron) + 17200 MT (Mn) 2016-17-: 3531MT (Iron)+ 19825 MT (Mn) 2017-18-: 3510MT (Iron) + 19704 MT (Mn) 2018-19-: 3505MT (Iron) + 19678 MT (Mn) 2019-20-: 3200 MT (Iron) + 17963 MT (Mn)	2015-16-: 3700MT (Iron) + 1700 MT (Mn) 2016-17-: 3530MT (Iron)+ 19620 MT (Mn) 2017-18-: 1252MT (Iron) + 7581 MT (Mn) 2018-19-: Nil (Iron) + 370 MT (Mn) 2019-20-: 375 MT (Iron) + 1010 MT (Mn)	Production details as per online submitted annual returns



3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Mechanised open cast working proposed by using Excavator /JCB & dumper combination with shallow drilling & blasting using jack hammer.
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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)	Separate dumping of mine was proposed	Mine waste not generated during the year	No top soil & OB generation proposed during the year
4b	Location of topsoil, OB and mineral reject dumps	Not Proposed	One mine waste dumps is located in between E404750 to E404910 & N2600525 to N2600415	
4c	Number of dumps within lease area and outside of lease area	Dumping was proposed at E404750 to E404910 & N2600525 to N2600415	No mine waste generated during the year	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumping was proposed at E404750 to E404910 & N2600525 to N2600415	Dumping outside UPL proposed	
4e	Number of active and alive dumps.	One active dump	One active dump	
4f	Number of dead dumps.	Not Proposed	No dead dumps within ML area	
4g	Number of dumps established.	Not Proposed	Nil	
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	Nil	
4j	Number of settling ponds	Not Proposed	Nil	
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Mining lease area is mostly devoid of any OB/Top soil. About 70% phyllitic waste generated from ROM.

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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.	None of the pit area is fully mineral/ore exhausted.	Backfilling was proposed during approved plan periodn over 7.5m barrier zone	
5b	Area under backfilling of mined out area	675 Sq.M area proposed for backfilling	Backfilling carried out as per the proposals	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil	No top soil generated proposed during the year
5d	Total area fully reclaimed and rehabilitated	675 Sq.M area proposed for backfilling	Proposed area fully reclaimed during approved plan period	

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5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Huge quantity of mine waste generation proposals are given, hence scope of reclamation by backfilling very well exist in the lease area. But, presently not pits have been fully mineral exhausted.
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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 within time limit as per the provisions of Rule 26 of MCDR,2018	Violation pointed out under rule 26(2) of MCDR,17
6b	Area available for rehabilitation (ha) .	675 SqM area proposed for reclamation	NA	
6c	afforestation done (ha).	70 Saplings proposed for plantation	70 Saplings planted during the year	
6d	No. of saplings planted during the year	70 Saplings proposed for plantation	70 Saplings planted during the year	
6e	Cumulative no .of plants	NA	NA	
6f	Any other method of rehabilitation	Not Proposed	Nil	
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	675 SqM area proposed for reclamation	675 SqM reclaimed by backfilling in 7.5m barrier zone	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Backfilling proposed by waste material	Backfilling done by waste material
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not Proposed	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not Proposed	Nil
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	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	In most of the working pits areas, ore is already existed hence scope of backfilling doesnot exist. Periodic monitoring is being carried out by outsourced consultant.

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	3200 MT Iron ore & 17963 MT Mn ore proposed as total ROM production for despatch. Grade wise sorting proposed within lease area.	375MT Iron ore & 1010MT Mn Ore despatched during the year 2019-20. 2900 MT Iron ore & 4660MT Mn ore production carried out during the year 2020-21	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposed as Manual	Manual sorting is done	
7c	Different grade of mineral sorted out at mines.	Proposed within lease area	Iron ore having 75% Fe2O3 proposed to supply in steel & Mn Ore having 34% MnO2 for Ferro Alloys ind proposed	
7d	Any beneficiation process at mines	Not Proposed	Temporary screening of ore carried out	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Mineral is being conserved by grade wise sorting in the lease area steel grade iron ore and manganese ore for ferro alloys plants. Grade wise stacking is done on earmarked locations.
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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not Proposed	Nil	
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping proposed for mine waste	No mine waste generated during the year	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Mine waste proposed for backfilling	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	72 Saplings proposed to be planted	72 Saplings planted within lease area	
8g	Survival rate	Proposed as 60%	Acheived as 60%	Low survival rate due to scarcity of water in lease area
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by water tanker	Regular water sprinkling is done by water tanker	Water tanker of 3KL 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 maximum nos of saplings final ROMP.

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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. submitted upto- January-21 A.R. submitted upto- 2019-20	Annual Return for the year 2019-20 was submitted within time limit.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri Shrinivas Mishra as Geologist and Shri M.P. Yadav as Mining engineer were appointed.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Working Pit-2.507Ha Reclaimed/Rehabilitated-0.045Ha Waste dumps-1.41Ha Infrastructure-0.18Ha Green belt-0.086Ha	

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9d	Scrutiny of Annual return on afforestation	Given	72 Saplings were planted during the year with 60% survival
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral rejects generated
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Mn Ore O/S-36666 MT Despatch-3448 MT C/S-34227 MT Iron Ore  O/S-Nil Despatch-375.575 MT C/S-Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Mn Ore- Ex-Mine price : Rs 1500/Tonne Iron Ore- Ex-mine price: Rs 500/Tonne Cost of production- Rs 892.33/Tonne
9h	Scrutiny of Annual return on fixed assets	Given	Nil
9k	Scrutiny of Annual return on mining machineries	Given	Nil

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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)	01-JUN-21	16-AUG-21				
MCDR17	Rule 31(4)	01-JUN-21	16-AUG-21				
	Rule 26(2)	01-JUN-21	16-AUG-21				
	Rule 46	01-JUN-21	16-AUG-21				

**Date :**

**(SANJAY M. GIRHE)**

Indian Bureau of Mines