

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

**Mining Plan Modification REPORT**

**Jabalpur regional office**

**Mine file No :** MP/JBP/I.ORE-6

**Mine code :** 30MPR18002

- (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 : 01-OCT-20
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **AGARIYA**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :  
State : MADHYA PRADESH  
District : JABALPUR  
Village : AGARIYA  
Taluka : SIHORA (MEGHAGWA)  
Post office : AGARIYA  
Pin Code : 483334  
FAX No. : N. A.  
E-mail : N. A.  
Phone : 07622-220142 (Katni)
- (f) Police Station :
- (g) First opening date : 19-SEP-87
- (h) Weekly day of rest : FRI
2. Address for : M/S NIRMALA MINERALS  
correspondance : PATHAK WARD, KATNI (M.P.) 483501
3. (a) Lease Number : MPR0558  
(b) Lease area : 20.14  
(c) Period of lease : 50  
(d) Date of Expiry : 05-MAR-37
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : NIRMALA MINERALS  
 PATHAK WARD KATNI MADHYA  
 PRADESH  
 Phone:N. A.  
 FAX :N. A.

Owner : NIRMALA MINERALS  
 PATHAK WARD KATNI MADHYA  
 PRADESH  
 Phone: N. A.  
 FAX : N. A.

## Mining Engineer

Name : SHIV PRATAP SINGH, Full Time  
 Qualification : B.E.(Mining)  
 Appointment/ : 27-SEP-10  
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	27-JAN-00
Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	27-JAN-00
	:	Mining Scheme rule 12 MCDR1988	27-APR-06
	:	Renewal under rule 24 MCR1960	25-JUL-07
	:	Mining Scheme rule 12 MCDR1988	13-FEB-13
	:	MP modif under 17(3) MCR 2016	24-MAR-17

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During the year 01 DTH & 02 Core boreholes proposed	No exploration carried out as per the proposals.	Violation pointed out & issued U/R 11(1) of MCDR,17
1b	Exploration over lease area for geological axis 1 or 2	During the year 01 DTH & 02 Core boreholes proposed for G1 axis	No exploration carried out as per the proposals.	Violation pointed out & issued U/R 11(1) of MCDR,17
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration was proposed but not carried out	No exploration carried out as proposed	Not available as no exploration carried out
1d	Balance area to be explored to bring Geological axis in 1 or 2	About 4.40 Ha area explored in G1 by working pit	Area explored under G1 level about 4.40 & rest area yet to be explored in G1 level	4.40 hact area is proven up to depth of 20mts and further depth to be proven.
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Probable (121) - 27,80,701 MT Resources Feasibility (221): 8,44,830MT The balance reserves as on 1/4/2016 as per MMP approved on 24/03/2017	Reserves in Tonnes Proved (121) - 26,15,703 MT Resources Feasibility (221): 8,44,830MT The balance reserves as on 1/4/2020 as per Annual return.	No additional reserves estimation done.

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	No detailed exploration carried out in ML area and mostly area is explored by way of working pit up to 25 to 28m and remaining area yet to be explored in G1 level.
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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 extend quarry-2 towards south from 409mRL to 391mRL	Mine working was carried out as per the proposed locations with very minor deviation.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No separate bench proposed for OB during the year. Separate benches in ore were proposed.	No separate benches observed for OB. Bench height of 6 to 7m maintained in iron ore for systematic mining.	Most of the working lease is devoid of top soil. Sufficient development work carried out by removing top OB.
2c	Stripping ratio or ore to OB ratio	Prposed as 1:0.11	NA, as no OB generated during the year	
2d	Quantity of topsoil generation in m3	Not Proposed	Nil	

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2e	Quantity of overburden generation in m3	1874M3 Proposed during the year	No overburden generated during the year 2019-20	There are two working pits in the eastern & western part of lease area with broken up area of about 3.40Ha and about 28mt working depth. Pits dimensions (Quarry-1: 155m x (50-80m) x (9m to 28m), Quarry-2 (200m) x (55-160m) x (5m to 28m)
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			

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#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Working was proposed in one pit from 409mRL to 391mRL	Mine working was carried out in given single pit	
3b	Quantity of ROM mineral production proposed	50614 MT proposed in 2019-20	41160MT (Achieved in 2019-20)	
3c	Recovery of sailable/usable mineral from ROM production	90% recovery of Iron ore proposed	Almost achieved as proposed	About 10% of ROM generated as inter-burden waste.
3d	Quantity of mineral reject generation	Not Proposed	Nil	No ore rejection, entire ROM utilised
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	Mineral reject generation was not proposed	

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3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	Neither any proposals were given for subgrade iron ore generation and not any generated during the year.
3g	Grade of sub grade mineral generation	Not Proposed	Nil	Not Proposed during the year
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanical screening & sizing proposed	Mechanical screening & sizing carried out	ROM Screening within the lease area being practised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	Lessee is not having any plan for beneficiation study.
3j	Provision of drilling and blasting in mineral benches	No drilling & blasting proposed	Not Applicable	Mostly the iron ore is of friable/fines in nature
3k	Provision of mining machineries in mineral benches	Back Hoe Ex-210-02 Nos 1.2CuM, PC-300, Dumpers 27 T capacity-13 Nos Water Tanker-5KL Mobile Screening Unit	Back Hoe Ex-210-02 Nos 1.2CuM, PC-300, Dumpers 27 T capacity-13 Nos Water Tanker-5KL Mobile Screening Unit	HEMM deployment proposed as per the capacity & targeted production.
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 ore proposed	Mostly the benches heights in ore are being maintained	Proposed bench height is suitable as per the deposit

3m	Total area covered under excavation/pits	3.62 Ha area was proposed in approved MMP period i.e. 2017-18 to 2021-22	3.52 Ha as on 01.04.2019 as per Annual Return,2019-20	
3n	Ore to OB ratio for the pit/mine during the year.	Proposed as 1:0.11	Not Done	No OB/inter-burden generated during the year
3o	Total area put in use under different heads at the end of year	As per the previous approved MP Pits-3.62 Ha Waste Dumps-0.10Ha Mineral Storage-3.0Ha Infrastructure -0.10Ha Road-0.10Ha As on 01.04.2016	Pits-3.53 Ha Infrastructure-0.65Ha Road-0.10Ha Other (Stacks, Plantation, etc)-8.5Ha As per Annual Return for the year 2019-20	
3p	Production of ROM mineral during the last five year period as applicable	2015-16- :126540MT 2016-17- :126540MT 2017-18- : 214900MT 2018-19- : 205923MT	2015-16- : Nil 2016-17- : Nil 2017-18- : 26453.84 MT 2018-19- : 44966.94 MT 2019-20- : 41160.33 MT	Production details as per annual returns from 2015-16 to 2019-20
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Open cast fully mechanised working proposed by using Excavator & dumper combination without drilling & blasting. Two working pit are located eastern & western side. Mineralisation proved up to depth of 28mts. By working pits.

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Solid Waste Management - Dumping:

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Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil generation was proposed. Concurrent use for backfilling proposed	OB/Inter-burden generated utilized as per the proposals.	Lateritic soil in the form of inter-burden , no OB generation was proposed.
4b	Location of topsoil, OB and mineral reject dumps	Inter-burden proposed to be backfilled in 7.5m barrier & rest for preparing protective bund towards eastern boundary	Inter-burden/mine waste used as per the proposals	Dumping not proposed during the year
4c	Number of dumps within lease area and outside of lease area	Only one dumps within lease area located toward eastern side	Only one dumps within lease area located toward eastern side	No dumping outside ML
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB/waste generated proposed for backfilling of 7.5m barrier zone	Existing OB dumps outside the UPL	
4e	Number of active and alive dumps.	At Present one small size OB in the lease area towards eastern part of ML	At Present one small size OB in the lease area towards eastern part of ML	
4f	Number of dead dumps.	No dead dumps in the lease area	No dead dumps in the lease 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	The mine waste is in the form of lateritic soil in southern part of ML area. These mine waste proposed for backfilling purpose on 7.5m barrier zone.

#### 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.	Not Proposed	None of the quarry area is fully ore exhausted. Hence, scope doesn't exist.	Backfilling proposed on 7.5m barrier zone
5b	Area under backfilling of mined out area	Total 1400 Sq.M area was proposed for backfilling	Details of backfilled area not available	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil	No top soil generation was proposed during the year
5d	Total area fully reclaimed and rehabilitated	1400 Sq.M area was proposed for backfilling	Details on backfilling not available for the year	Total backfilled area's details not furnished in approved document
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Lateritic waste as mine waste encountered in the lease area. No top soil generation is proposed. Generated mine waste proposed for reclamation by backfilling means.

## 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 was pointed out under rule 26(2) of MCDR,17 & issued.
6b	Area available for rehabilitation (ha) .	Not Proposed	Not done	Mining operations are continued & no benches matured so far rehabilitation purpose so far.
6c	afforestation done (ha).	Not Proposed	Nil	
6d	No. of saplings planted during the year	Not Proposed	Nil	
6e	Cumulative no .of plants	Not Proposed	Nil	
6f	Any other method of rehabilitation	Not Proposed	Nil	
6g	Cost incurred on watch and care during the year	Not Proposed	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	1400 Sq.M area was proposed for backfilling over 7.5m	Backfilling not carried out as proposed	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1400 Sq.M area was proposed for backfilling over 7.5m	Backfilling not carried out	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on 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	Rehabilitation not proposed over waste land
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	Analysis reports were provided during the inspection
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Scope of PMCP work is not very well existed in the lease area as none of the working pit fully ore exhausted. Backfilling was proposed at 7.5m barrier zone.

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Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	50614 tonnes proposed as total ROM production for despatch. No grade wise sorting proposed	41160 tonne ore produced & 26791 lumps & 14369 tonne fines ore dispatched as <55% Fe content	Production of only <55% Fe content carried out during the year
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Screening & sizing of Iron ore proposed	Screening & sizing of Iron ore carried out	
7c	Different grade of mineral sorted out at mines.	Sponge grade iron ore, Cement grade & Beneficiable grade proposed	Sponge grade - Fe 58 to 60%, Cement grade - 48 to 50% & Beneficiable grade -45 to 52%	
7d	Any beneficiation process at mines .	No beneficiation proposed within ML area	NA	Iron ore of ML supplied to beneficiation plant located at Hargarh, Sihora for upgradation
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Ore is being conserved by suitable screening & sizing. Iron ore being supplied/sold to the beneficiation plant located Sihora for upgradation.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation & utilization proposed	Nil	Top soil not encountered during the year
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	No generation of top soil proposed during the year.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB generated proposed for backfilling at 7.5m barrier zone & for protective bund formation.	Backfilling not done	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Use of overburden proposed for backfilling purpose at 7.5m barrier zone only	Backfilling not carried out as per proposals	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	Working pits not matured for the said purpose
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation not proposed during the year	Not done	Proposals not given in approved document
8g	Survival rate	Not Proposed	NA	
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 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 good as sufficient numbers of saplings have been planted.

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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	M.R. submitted upto- November-2020 A.R. not submitted for the year 2019-20	Violation under rule 45(5) (c) of MCDR,2017 was pointed out & issued 11/12/2020
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Not Given	Violation under Rule 55(1) (c) (i) of MCDR,2017 was pointed out & issued on 11/12/2020
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Working Pits area- 3.532Ha Reclaimed/Rehabilitated - 0.30Ha Infrastructure-0.650Ha Ore Stacks/Green plantation-8.593Ha
9d	Scrutiny of Annual return on afforestation	Not Given	No plantation done during the year
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	Below 55% Fe content (Lumps): O/S-61307.65 tonnes Production-26791.33 tonnes Despatch-26791.33 tonnes C/S-61307.65 tonnes Below 55% Fe content (Fines): O/S-162915.71 tonnes Production-14369 tonnes Despatch-14369 tonnes C/S-162915.71 tonnes
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Below 55% Fe (Lumps) -Rs 420.30/MT Below 55% Fe (Fines) -Rs 375.32/MT

9h	Scrutiny of Annual return on fixed assets	Given	No comments
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)	11-DEC-20	MCDR17	Rule 11(1)	11-DEC-20 08-JUL-21
MCDR17	Rule 26(2)	11-DEC-20	MCDR17	Rule 26(2)	11-DEC-20 08-JUL-21
MCDR17	Rule 45(5) (c)	11-DEC-20	MCDR17	Rule 45(5) (c)	11-DEC-20 08-JUL-21
MCDR17	Rule 55(1) (1)	11-DEC-20			19-APR-21

**Date :**

**(SANJAY M. GIRHE)**

Indian Bureau of Mines