

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

**MCDR inspection REPORT
Ranchi regional office**

Mine file No : JHK/GLA/BX/257/RRO.

Mine code : 07JHK09007

- (i) Name of the Inspecting : **R002**) **RAGHVENDRA KUMAR**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 11/09/2021
- (v) Prev.inspection date : 03/09/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BIMARLA**
- (b) **Registration NO.** : **IBM/961/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :
State : JHARKHAND
District : GUMLA
Village : BIMARLA
Taluka : GHAGHRA
Post office : GHAGHRA
Pin Code :
FAX No. : 06526-224118
E-mail : bijesh.jha@adityabirla.com
Phone : 06526-224016 & 224112
- (f) Police Station : GHAGHRA
- (g) First opening date : 21/05/2015
- (h) Weekly day of rest : SUN
2. Address for : VILL.- BIMARLA,
correspondance : TAHSIL- GHAGHRA,
DISTT.- GUMLA (JHK)
3. (a) Lease Number : JHK0185
- (b) Lease area : 134.37
- (c) Period of lease : 50
- (d) Date of Expiry : 17/07/2059
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : M/S MINERALS & MINERALS LTD.
 AT/PO - LOHARDAGA, DIST -
 LOHARDAGA, JHARKHAND.
 LOHARDAGA JHARKHAND
 Phone:06526-224016
 FAX :06526-224118

Owner : I.J.JOSHI
 MINERALS & MINERALS LTD. PO
 & DIST-LOHARDAGA LOHARDAGA
 JHARKHAND
 Phone:
 FAX :

Agent : MANOJ KUMAR NAYAK
 HINDALCO INDUSRTIS LTD,
 COURT ROAD, LOHARDAGA JHK
 LOHARDAGA JHARKHAND
 Phone: 9617779670
 FAX :

Mining Engineer

Name : SRI JITENDER KUMAR,Full Time
 Qualification : DIP-IN-MIN & MINE SURVEYING
 Appointment/ : 21/05/2015
 Termination date

Geologist

Name : MIHIR BARAI,Full Time
 Qualification : M.Sc.(GEO)
 Appointment/ : 19/08/2015
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	19/11/2008
Plan/Scheme of Mining		MP modif under MCR 1960	19/05/2016
		MP review under 17(1) MCR 2016	30/09/2020
		MP modif under 17(3) MCR 2016	03/11/2020

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	No Additional exploration was proposed during 2020-2021 in the lease area for Geological axis - 1.	No Additional exploration was carried out in the lease area for Geological axis - 1 during 2020- 2021.	Total 115 + 256 boreholes have been drilled in the lease area from 2012-2019.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal for Exploration during 2020-2021.	No Exploration was carried out at during 2020-2021.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal during 2020-2021.	No Exploration was carried out at during 2020-2021.	115 + 256 boreholes have been drilled so far in the lease area and 73.85 hectares has explored to G-1.
1e	Balance reserve as on 01/04/20	Reserves & Resources as on 01.04.2021 Proved Mineral Reserves (111) = 1514379 tons Prefeasibility Mineral Resources (221) = 247262 tons Measured Mineral Resources(331) = 2563551 tons	Reserves & Resources as on 01.04.2021 Proved Mineral Reserves (111) = 1651348 tons Prefeasibility Mineral Resources (221) = 247262 tons Measured Mineral Resources(331) = 2563551 tons	
1f	General remarks of inspecting officers on geology, exploration etc		It is part of Chhotanagpur Granite gneiss. Laterite, Bauxite and Lithomarge occur in the plateau top as capping of Chhotanagpur Granite gneiss.	Bauxite deposit is not extensive and continuous but found in limited area only. Lease is having Same Geology.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed to work in Quarry-GHR-A, BRG-A & B during 2020-2021.	Development has not been carried out as per the proposal.	Violation has been issued under Rule 11(1).
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It is proposed to form separate Bench's in Topsoil, Overburden and Mineral.	Separate Benches are formed for Topsoil, Overburden and Mineral.	
2c	Stripping ratio or ore to OB ratio	1:0.97	1:0.40	
2d	Quantity of topsoil generation in m3	34645cum	39946cum	
2e	Quantity of overburden generation in m3	285556cum	266309cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in Quarry-GHR-A, BRG-A & B during 2020-2021.	Development has not been carried out as per the proposal.	Violation has been issued under Rule 11(1).

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Proposed to work in Quarry-GHR-A, BRG-A & B during 2020-2021.	Development has not been carried out as per the proposal.	Violation has been issued under Rule 11(1).
3b	Quantity of ROM mineral production proposed	The total target of Production was 292990 tons during 2020-2021.	108350 tons of production has been achieved during 2020-2021.	
3c	Recovery of sailable/usable mineral from ROM production	80%	78%	

3d	Quantity of mineral reject generation	It is proposed to produced 30520 tons of mineral rejects during 2020-2021.	23080 tons of mineral rejects has been generated.	
3e	Grade of mineral rejects generation and threshold value declared.	Mineral reject- below the threshold value and outside the ore zone. Al2O3 10%	Mineral reject- below the threshold value and outside the ore zone. Al2O3 10%	
3f	Quantity of sub grade mineral generation.	112250 ton	45030 ton	
3g	Grade of sub grade mineral generation	Al2O3 32.0%	Al2O3 31.90%	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal	Nil	Only Manual Picking of Ore from Intercalated Waste.
3j	Provision of drilling and blasting in mineral benches	Depth - 3 & 6 m Burden & Spacing 2.5mx2.5m and 2.5mx3.0m respectively for 3.0m & 6.0m bench height respectively. It is Proposed to drill by 100mm dia, crawler mounted down hole drill. Blasting is done by using slurry explosives.	Drilling & Blasting are done as per proposal.	
3k	Provision of mining machineries in mineral benches	SHOVEL (HYDRAULIC) AIR COMPRESSOR DUMPER WHEEL LOADER	As per proposal machineries are available in field.	

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Soil- morrum -5.25 m, Bauxite- 3.4 m	Benches are formed as per proposal.	
3m	Total area covered under excavation/pits	37.88 hect.	38.66 hect.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.97	1:0.40	
3o	Total area put in use under different heads at the end of year	Landuse Pattern as on 01.04.2021 Mining area=37.88 hect Reclaimed area = 19.49 hect Roads = 2.60 hect	Landuse Pattern as on 01.04.2021 Mining area=38.66 hect. Reclaimed area = 27.91 hect Roads = 2.60 hect	
3p	Production of ROM mineral during the last five year period as applicable	2016-17 299249 T 2017-18 298747 T 2018-19 292047 T 2019-20 296512 T 2020-21 292990 T	2016-17 112730MT 2017-18 156420MT 2018-19 185715MT 2019-20 155000MT 2020-21 108350MT	
3q	General remarks of inspecting officers on method of mining etc.	Proposed to work in Quarry-GHR-A, BRG-A & B during 2020-2021.	108350 tons has been achieved during 2020-2021 against 292990 tons of proposal. Development has not been carried out as per the proposal.	Violation has been issued under Rule 11(1).

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	It is proposed to backfill the area simultaneously	As per proposal, backfilling is not done concurrently in the proposed area.	

4b	Location of topsoil, OB and mineral reject dumps	There is no proposal for dumping. It is proposed to backfill Quarry- Ghaghra-A & Barang-C, during 2020-2021.	As per proposal the backfilling is not carried out during 2020-2021.	Violation has been issued under Rule 11(1).
4c	Number of dumps within lease area and outside of lease area	Lease area = Nil Non Lease area = Nil	Lease area = Nil Non Lease area = Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	There is no proposal of Dump.	There is no active dump within lease area for waste dumping.	
4e	Number of active and alive dumps.	Active Dump = Nil Alive Dump = Nil	Nil	Excavated area is backfilled simultaneously. So dumping is not proposed.
4f	Number of dead dumps.	Dead Dumps = Nil	Dead Dumps = Nil	
4g	Number of dumps established.	No dumps have been established.	No dumps have been established.	
4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposal	Nil	
4i	Length of Retaining wall or garland drain all along dumps	No Proposal	Nil	
4j	Number of settling ponds	No Proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management	There is no proposal for dumping during 2020-2021. It is proposed to backfill the area simultaneously	As per proposal, backfilling is not done concurrently in the proposed area.	Violation has been issued under Rule 11(1).

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.	Simultaneously Back filling has proposed to backfill Quarry-Ghaghra-A & Barang-C, during 2020-2021.	Simultaneously Back filling was in process and could not achieved as per proposal.	Violation has been issued under Rule 11(1).
5b	Area under backfilling of mined out area	It is proposed to backfill 2.86 hectares during 2020-2021.	3.5 hectares has Backfilled against proposal.	As per proposal the backfilling is done concurrently in unproposed area.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use	Concurrent use	
5d	Total area fully reclaimed and rehabilitated	2.86 Ha.	3.5 Ha.	Total area fully reclaimed & rehabilitated= 27.91 ha., As per proposal the backfilling is done concurrently in unproposed area.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Simultaneously Back filling has proposed to backfill Quarry-Ghaghra-A & Barang-C, during 2020-2021.	3.5 hectares has Backfilled against proposal of 2.86 hectares during 2020-2021.	As per proposal the backfilling is done concurrently in unproposed area. Violation has been issued under Rule 11(1).

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).	It should be on or before 1st July every year.	Submitted for the year 2020-2021.	
6b	Area available for rehabilitation (ha) .	2.86 ha.	3.5 ha.	Total 27.91 ha. area rehabilitated.
6c	afforestation done (ha).	Afforestation 0.64 Ha.	Afforestation 1.2 Ha.	

6d	No. of saplings planted during the year	No of sapling -1600.	No of sapling -3000	Plantation done on 3.86 ha. reclaimed land.
6e	Cumulative no .of plants	3650 plants	9650 plants	
6f	Any other method of rehabilitation	No Proposal	Nil	
6g	Cost incurred on watch and care during the year	0.53 lakh	0.64 lakh	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2.86 Ha.	3.5 Ha.	Total 27.91 ha. area backfilled.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	2.5 Ha.	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Proposed 0.64 hect in 2020-2021	1.20 hectares has been afforested	Plantation done on 3.86 ha. reclaimed land.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	0.56 Ha.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	NIL	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	1600 saplings proposed in backfilled area for 2020-2021.	3000 saplings have been achieved.	

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposed 0.64 hect in 2020-2021.	1.2 hectares has been afforested.	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Simultaneous Backfilling.	Simultaneous Backfilling.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly Basis	Environment monitoring is carried out through own as well as private agency.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Environment monitoring is carried out through private agency.	3000 saplings have been achieved in 1.20 hectares during 2020-2021.	9650 saplings have been planted during 2015-2021 inside the backfilled area.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	The total target of Production was 292990 tons during 2020-2021.	108350 tons of production has been achieved during 2020-2021.	45030 tons of Sub Grade has been generated during 2020-2021. Sub grade blended with high grade material.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Process and Manual Picking of Ore from Intercalated Waste.	Mechanical Process and Manual Picking of Ore from Intercalated Waste.	
7c	Different grade of mineral sorted out at mines.	Average Grade:- Al2O3 = >38% Sio2 =<5% Cut Off Grade for Bauxite:- Al2O3 = +30% Sio2 = 10%	Average Grade:- Al2O3 = >38% Sio2 =<5% Cut Off Grade for Bauxite:- Al2O3 = +30% Sio2 = 10%	Sub Grade/ Low grade are Blended with High grade ores to get the desired plant feed materials.

7d	Any beneficiation process at mines .	Manually sizing and sorting are proposed.	sorting and sizing is being done.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of Production was 292990 tons during 2020-2021.	108350 tons of production has been achieved during 2020-2021.	Sub Grade/ Low grade are Blended with High grade ores to get the desired plant feed materials.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal of removing topsoil separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclaimed and rehabilitation of mined out areas.	
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal of removing topsoil/ OB separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclaimed and rehabilitation of mined out areas.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	The OB and waste generated are to be proposed to backfilled simultaneously in the mined-out areas.	Backfilling has not done in the proposed area for restoring the land to its original use.	Violation has been issued under Rule 11(1).
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	Simultaneously backfilling.	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1600 nos. of saplings proposed in 0.64 Ha. area during 2020-21.	3000 saplings have been planted in 1.2 Ha. during 2020-2021 inside the backfilled area.	
8g	Survival rate	No such proposal.	50%	
8h	Water sprinkling on roads to control airborne dust	Yes, it is proposed for water sprinkling on haul roads.	Water sprinkling on road is observed during the inspection.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Cultivation depends mainly at the top of the plateau in monsoon. Surrounding area beyond lease area is greenery. The area is hilly terrain.	Thin Vegetation and Sal trees of varying height are available.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	--	Both Annual & Monthly returns are submitting in online system. Submitted within the time limits	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per Annual return 2020-21, Shri Manikant Singh is Mining Engineer & Shri Jitendra Kumar is Mines manager and Shri Mihir Barai is Geologist.	As per record Mining Engineer and Geologist are present during Inspection.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2021. Exploited area = 38.660 hect Current working = 10.750 hect Reclaimed = 27.910 hect Plant/building/Roads = 4.080 hect, Work done under PMCP= 3.50 ha.	Seems to be correct.
9d	Scrutiny of Annual return on afforestation	During 2020-21, 3000 saplings have been achieved with 60% of survival.	Seems to be correct.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generation reported.	Mineral Rejects Generation not shown.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2021 ROM Closing stock = Nil Dispatches of Processed ore 40% to below 45% Al ₂ O ₃ = 118601.070 tons. Mine has produced 108350.00 tons of Production during 2020-2021.	Information furnished on ROM stock, grade etc. seems to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value - Rs.1170.01/ton for domestic captive consumption. Ex-mine price - 1064.61/MT, Cost of production, 1064.61/-MT.	It is a captive mine of Hindalco, Cost of production-1064.61/-MT seems to be correct.

9h	Scrutiny of Annual return on fixed assets	The Value of fixed assets furnished as Rs 111010131 /-.	Seems to be correct.
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC)-3 AIR COMPRESSOR-1 DUMPER-8 WHEEL LOADER-1	Machineries were available in field.

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)	01/10/2021			

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines