

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

Mining Plan Modification REPORT

Ranchi regional office

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

Mine code : 07JHK09007

- (i) Name of the Inspecting : **K005**) **B.P. KERKETTA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Jitender Kumar, Mines Manager, Shri M.Barai, Geol
Official with
Designation
- (iv) Date of Inspection : 11/02/2020
- (v) Prev.inspection date : 27/11/2015

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 correspondance** : VILL.- BIMARLA,
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

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	NIL	No of holes - 256 (Core drill), 3175.2 m having average depth 12.4m in 2018-19	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	M/s - South West Pinnacle, Rs. 62.71 Lakhs	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	The entire lease area explored by the lessee. Altogether 115 nos. of BHs were given by the lessee in the entire lease area (134.526 Hc) during the year 2012-13 and 2014-15 with total metrage of 1503.40 m having maximum depth of 19 m, minimum depth of 9m and av.depth of 14 m. The exploration carried out for G1 level. Further at a grid interval of 50m x 50m, 256 core drill completed (3175.20m having avg. depth 12.4m) in 2018-19.	
1e	Balance reserve as on 01/04/20		3.57 Million Tonnes	

1f	General remarks of inspecting officers on geology, exploration etc	The Bauxite deposit is mostly associated with high level laterite, occur as thin, irregular and discontinuous lenses or tabular bodies within the laterite capping. Bauxite is Bohemitic (Al ₂ O ₃ ,H ₂ O) Lease area explored at 50m*50m Grid interval.256 Core drill completed with Total depth 3175.20m having avg.depth 12.4m. in 2018-19.Besides 115 nos. of BHs have been given during year 2012-13 and 2014-15 with total meterage of1503.40m having maximum depth of 19m & minimum depth of 9m.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	In Quarry no.4 around BH 109,BH 110,BH 111,BH 112 and BH 14A in the area under G-1 category S90-S372 TO W175-E90 & in Quarry no.5 in S372-S565 To W200-E63 as per Plate no.9.	As per Development Plan & Section (2017-18),Plate No. 7, only a part of Quarry no.3 has been worked. The western part beyond the Proposed Quarry no.3 upto lease pillar no. LP 161 have been extensively worked and backfilled, for which there was no mining proposal. One Quarry Q-3D has been opened on the eastern side of Lease pillar LP 157 and western side of Lease pillar LP 141 having size about 200mx60mx6-8m approx. New Quarry Q1C, size 150mx110mx6m approx. seen worked on western side of Q1B.	For not following the mining proposals a Violation letter for rule 11(1) was issued on 19/09/2020 and Show-cause -notice on 27/11/2020. Draft Modification on the approved Mining Plan has been received on 21/01/2020,which has been Provisionally approved on 03/04/2020.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil 1, Overburden 1, Mineral 1	Top soil 1, Overburden 1, Mineral 1	

2c	Stripping ratio or ore to OB ratio	1:0.83	1:1.47	More Overburden was encountered during 2018-19.
2d	Quantity of topsoil generation in m3	156807 Cum	38500 Cum	Proposal includes Top Soil & Morrum whereas Actual includes only top soil. Quantity
2e	Quantity of overburden generation in m3	243232 m3	409391m3	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Mining proposals as per approved Modification in Mining Plan dated 19/05/2016 were not followed. Therefore, Violation letter for rule 11(1) was issued on 19/09/2020 and Show-cause -notice on 27/11/2020. Draft Modification in the approved Mining Plan has been received on 21/01/2020, which has been Provisionally approved on 03/04/2020.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1	1	
3b	Quantity of ROM mineral production proposed	292047 Metric Tonnes	185715 Metric Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	80%	64%	With respect to actual/proposal
3d	Quantity of mineral reject generation	30422 m3	10687 m3	
3e	Grade of mineral rejects generation and threshold value declared.	<30% Al2O3 &>10.00 % SiO2	<30% Al2O3 &>7.00 % SiO2	
3f	Quantity of sub grade mineral generation.	87614 MT	57441 MT	

3g	Grade of sub grade mineral generation	Al2O3- 32.0 %	Al2O3- 31.39 %
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.	NA	NA
3j	Provision of drilling and blasting in mineral benches	Regulation 106(2)(b), 100 mm dia drilled by Crawler Mounted Drill	Regulation 106(2)(b), 100 mm dia drilled by Crawler Mounted Drill
3k	Provision of mining machineries in mineral benches	3Hydraulic Excavator 0.9cum, 8 Dumper,1 Drill,1 Air Compressor.	3Hydraulic Excavator 0.9cum, 8 Dumper,1 Drill,1 Air Compressor.
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	Soil- morrum -5.25 m, Bauxite- 3.4 m
3m	Total area covered under excavation/pits	3.95 Ha	8.65 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.83	1:1.47
3o	Total area put in use under different heads at the end of year	Excavation - 19.26 Ha, Reclamation - 14.81 Ha, Plantation - 0.64 Ha	Excavation - 8.65 Ha, Reclamation - 18.41 Ha, Plantation - 0.8 Ha
3p	Production of ROM mineral during the last five year period as applicable	2013-14 0 2014-15 0 2015-16 218816 Te 2016-17 299249 Te 2017-18 298747 Te 2018-19 292047 Te	2013-14 0 2014-15 0 2015-16 43455 Te 2016-17 112730 Te 2017-18 156420 Te 2018-19 185715 Te

3q	General remarks of inspecting officers on method of mining etc.	Mining proposals as per approved Modification in Mining Plan dated 19/05/2016 were not followed. Therefore, Violation letter for rule 11(1) was issued on 19/09/2020 and Show-cause -notice on 27/11/2020. Draft Modification in the approved Mining Plan has been received on 21/01/2020, which has been Provisionally approved on 03/04/2020. More Overburden was encountered during 2018-19 therefore, the actual stripping ratio is more as compared to the proposed.
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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)	Top soil, O.B. and mineral rejects to be used as backfilling.	Used for simultaneous backfill	
4b	Location of topsoil, OB and mineral reject dumps	Top soil, O.B. and mineral rejects to be used as backfilling.	Used for simultaneous backfill.	
4c	Number of dumps within lease area and outside of lease area	Top soil, O.B. and mineral rejects to be used as backfilling. No external dumps.	Used for simultaneous backfill.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Top soil, O.B. and mineral rejects to be used as backfilling. No external dumps.	Used for simultaneous backfill.	

4e	Number of active and alive dumps.	Top soil, O.B. Nil and mineral rejects to be used as backfilling. No external dumps.	
4f	Number of dead dumps.	Top soil, O.B. NIL and mineral rejects to be used as backfilling.	
4g	Number of dumps established.	Top soil, O.B. NIL and mineral rejects to be used as backfilling.	
4h	Whether Retaining wall or garland drain all along dumps are there.	Top soil, O.B. NIL and mineral rejects to be used as backfilling.	
4i	Length of Retaining wall or garland drain all along dumps	Top soil, O.B. NIL and mineral rejects to be used as backfilling. Not applicable.	
4j	Number of settling ponds	Top soil, O.B. NIL and mineral rejects to be used as backfilling. Not proposed.	
4k	Specific comments of inspecting officer on waste dump management		The mined out areas are being backfilled with the mine waste approximately to the height of existing surroundings. The backfilled areas are levelled for afforestation and agriculture use.

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.	full extraction of mineral	full extraction of mineral	
5b	Area under backfilling of mined out area	19.26 Ha	8.65 Ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	14.81 Ha	8.65 Ha	Plantation establishment
5d	Total area fully reclaimed and rehabilitated	14.81 Ha	18.41 Ha	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Backfilling is done after full extraction of mineral. Out of proposed 14.81 ha. reclaimed area during 2018-19, lessee has reclaimed 18.41ha.	

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yearly Report to be submitted.	Yearly report submitted.	
6b	Area available for rehabilitation (ha) .	Afforestation -0.16 Ha,	Afforestation - 0.80 Ha,	
6c	afforestation done (ha).	400 nos.	2000nos.	
6d	No. of saplings planted during the year	400nos.	2000nos.	
6e	Cumulative no .of plants	1200nos.	3550nos.	
6f	Any other method of rehabilitation	Not Proposed.	Nil	
6g	Cost incurred on watch and care during the year	Rs.65000/-	Rs.65000/-	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	199mx162mx5m,3 .2ha	8.65 Ha	Backfilled the backlog area.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	199mx162mx5m,3 .2ha.	8.65 ha	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	3.2ha.	0.80 Ha	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	Not applicable.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.16 Ha	0.80 Ha	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	14.81ha	18.41ha	
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	Quarterly Basis
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Efforts were made by the lessee to adhere the proposals made in the approved document. Care has also taken by the lessee for preserving environment and conservation of mineral resources.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Sub grade to be blended with high grade material	Sub grade blended with high grade material	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	Manual method of sorting and sizing was proposed in approved document.	ROM produced is manually sorted and low grade ore blended with high grade ore before dispatch.	
7d	Any beneficiation process at mines .	No proposal of beneficiation at mines.	Except manual sorting and sizing, no beneficiation process is carried out at mines.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		There is no mineral conservation problem in the mine. The entire ROM produced is sorted and sized manually. Low grade ore produced is blended with high grade ore and dispatched to its Alumina plant.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and utilization	Separate removal and utilization
8b	Concurrent use or storage of topsoil	Simultaneously used over backfilling	Simultaneously used over backfilling
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Simultaneously used for backfilling	Simultaneously used for backfilling
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Simultaneously used for backfilling	Simultaneously used for backfilling
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Simultaneously used for backfilling	Simultaneously used for backfilling
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	0.16 Ha	0.8 Ha
8g	Survival rate	Not proposed.	70%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling	Water sprinkling
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Practice of concurrent backfilling and spreading of top soil over it is practised in the mine. As on date out of about 33.31 ha broken area about 18.41 ha has been rehabilitated. The aesthetic beauty in and around the mining area is not disturbed due to mining.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Lessee submit monthly and Annual Return regularly.	Lessee use to submit monthly and Annual Return regularly and furnished data in relevent items.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per Annual return 2018-19, Shri Manikant Singh is Mining Engineer & Shri Jitendra Kumar is Mines manager and Shri M.Barai is Geologist.	During inspection Shri Manikant Singh is Mining Engineer & Shri Jitendra Kumar is Mines manager and Shri M.Barai is Geologist.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	In part I, item 12 of the Annual Return 2018-19, information on land use pattern furnished by the lessee.	As per Annual Return 2018-19, Area already exploited & abandoned by opencast mining-25.86 ha, Area under current working-7.45 ha, Area reclaimed/rehabilitated-18.41 ha, Area occupied by plant, building, road etc.-4.08 ha and Area used for progressive mine closure plan during the year - 8.650ha.	
9d	Scrutiny of Annual return on afforestation	As per Annual return, 2000 trees planted during 2018-19 with survival rate of 70%.	The information on afforestation seems to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generation reported.	No mineral reject generated during the year.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As per annual return 2018-19, ROM Opening Stock -nil, ROM Closing Stock-nil, ROM production-185715 MT and despatch-182255.21 MT. Grade 40% to below 45% Al2O3.	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	The sale value,ex-mine price and production cost shown in part VI and VII respectively of the Annual Return 2018-19 as: Sale value - Rs.182601549/- for domestic captive consumption. Ex-mine price -1001.91/MT, Cost of production-1001.91/-MT.	It is a captive mine of Hindalco, Cost of production-1001.91/-MT seems to be correct.
9h	Scrutiny of Annual return on fixed assets	The value of fixed assets of the lessee shown in Part II A of Annual Return 2018-19 under capital structure.	The Value of fixed assets furnished in Annual Return 2018-19 as Rs 74008949 /- seems to be correct.
9k	Scrutiny of Annual return on mining machineries	As per Annual return 2018-19, machinery used during the year are given below. SHOVEL (HYDRAULIC) 0.900 CUM - 3 Nos, WHEEL LOADER 2.300 CUM- 1 No. DUMPER 25.000 TONNE - 8 Nos. AIR COMPRESSOR 450.000 CUM/MN- 1 No.	The machineries as furnished were in use in the mine during the year.

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

Date :

(B.P. KERKETTA)

Indian Bureau of Mines