

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

**Mining Plan Modification REPORT**

**Ranchi regional office**

**Mine file No :** JHK/LOH/BX/255/RRO

**Mine code :** 07JHK12012

- (i) Name of the Inspecting : **K005** ) **B.P. KERKETTA**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sri Kiran Shankar Singh, Mines Manager, Sri Victor Basu  
Official with  
Designation
- (iv) Date of Inspection : 16/02/2020
- (v) Prev.inspection date : 08/10/2015

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **PAKHAR BAUXITE MINE109.50**
- (b) **Registration NO.** : **IBM/961/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **LOHARDAGA**
- Village : **PAKHAR**
- Taluka : **KISKO**
- Post office : **NARI-NAWADIH**
- Pin Code : **835302**
- FAX No. : **06526-224118**
- E-mail :
- Phone : **06526-224112, 224015, 22311**
- (f) **Police Station** : **KISKO**
- (g) **First opening date** : **18/08/2011**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **VILL.- PAKHAR**  
**correspondance** **P.O.- KISKO, DISTT.- LOHARDAGA,**  
**JHARKHAND-835302**
3. (a) **Lease Number** : **BHR0271**
- (b) **Lease area** : **109.51**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **25/07/2058**
4. **Mineral worked** : **BAUXITE** **Main**

## 5. Name and Address of the

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

Owner : BIJESH KUMAR JHA  
 Minerals&Minerals Ltd. At &  
 P.O. Lohardaga Jharkhand  
 LOHARDAGA JHARKHAND  
 Phone:  
 FAX : 06526224016

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

## Mining Engineer

Name : DILLU SINGH,Full Time  
 Qualification : B.TECH(MINING)  
 Appointment/ : 02/07/2018  
 Termination date

## Geologist

Name : RAMESH KUMAR,Full Time  
 Qualification : MSc.(GEO)  
 Appointment/ : 10/10/2017  
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	23/04/2008
Plan/Scheme of Mining	:	MP modif under MCR 1960	23/05/2016

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	nil	During Plan Period from 2015-16 to 2019-20 No exploration proposed as per approved Modification in Approved Mining Plan dated 23/05/2016.	
1b	Exploration over lease area for geological axis 1 or 2	nil	G1: 16.96ha.( Bauxite & subgrade) G2: 27.29ha. ( Bauxite & subgrade) The South Eastern area is negative.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil.Entire area already explored during 2011-12.	Nil.Entire area already explored during 2011-12.	
1e	Balance reserve as on 01/04/20		As on 01/04/2019: 111-98685MT(Proved Reserve)  121-525658MT(Probable Reserve)	
1f	General remarks of inspecting officers on geology, exploration etc	NA	lease area has already been fully explored. No proposal for further exploration.	

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	77E -64W 38N - 240N 386W -560W, 70N -219N	77E -64W 38N -240N 386W -560W, 70N -219N	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil 3, Overburden 1,Mineral 3.	Top soil 3, Overburden 1,Mineral 3.	
2c	Stripping ratio or ore to OB ratio	1:0.65	1:2.45	

2d	Quantity of topsoil generation in m3	216116cum.(inc luding Murrum)	70192cum.
2e	Quantity of overburden generation in m3	68982cum.	275620cum.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	<p>Mining proposals were not folowed as per approved Modification in Approved Mining Plan dated 23/05/2016. The area on the western side of Quarry K-9 during 2018-19 was not to be worked i.e on the South side of Boundary Pillar No. BD-7, around PBH 48, between location coordinates 156N to 200N &amp; 46W to 100W and 40N to 154N &amp; 64W to 100W. But during inspection the above area was seen worked out. Also ,the Proposed Quarry No.K9A was not mined ,but a New Quarry K-7A was worked, which was not proposed.</p>	<p>A violation letter dated 19/09/2019 for violation of Rule 11(1), 35(2),55(1) (3)(iii) was issued. Later on, for non compliance of Rule 11(1) a Show-Cause-Notice was issued. The lessee submitted Draft Modification in approved Mining Plan on 19/12/2020, which was approved on 16/11/2020.</p>

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	1 is already develop and another is under developing stage	
3b	Quantity of ROM mineral production proposed	279242 MT	247130 MT	
3c	Recovery of sailable/usable mineral from ROM production	80%	80%	
3d	Quantity of mineral reject generation	30352cum.	nil	
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3% : 28%threshold valueAl2O3% <30%	Al2O3% : 28%threshold valueAl2O3% <30%	

3f	Quantity of sub grade mineral generation.	Nil	Nil
3g	Grade of sub grade mineral generation	Nil	Nil
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.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Harder morrum and laterite are drilled by using 88mm dia drills and Bauxite benches are to be drilled by 100mm drills and lasted by slurry explosive. Burden-3m and spacing-3.5m	Harder morrum OB and laterite are drilled by using 88mm dia drills and Bauxite benches are drilled by 100mm drills and blasted by slurry explosive. Burden-3m and spacing-3.5m
3k	Provision of mining machineries in mineral benches	Proposed Mining machinery to be deployed i mineral benches are : DTH-2nos.,,88mm-Atlas capco-disel-440 HP Excavators-7nos.,0.9cum - diesel-124 HP Cmpressor-2-300cfm Jackhammer-4nos., Trippers -8nos.,10MT- Diesel-98.5HP	Following machinery were deployed during mining of Bauxite. DTH-02nos.,25m/hr Excavator -01nos.,0.9cum,Excavator -01nos.,1.9cum Compressor-02nos.,450cfm& 330cfm Wheel Loader-01,2.3cum Dumpers-06nos.,25MT capacity

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Maximum height of the proposed benches will be 6m and avg thickness 2.9m	Height of the benches maintained between 4 m.
3m	Total area covered under excavation/pits	5.05Ha	4.05Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.65	1:2.45
3o	Total area put in use under different heads at the end of year	as per approved Modified Mining Plan area covered under mining including reclamation-37.15 ha Road-3.83 ha Infrastructure -0.16 ha soil dump-0.87 ha.	(i) Already exploited & abandoned by opencast (O/C) mining 22.77 ha (ii) Covered under current (O/C) Workings 4.05ha (iii) Reclaimed/Rehabilitated 18.72ha (iv) Used for waste disposal 0.000 (v) Work done (plantation) under progressive mine closure plan during the year 2.82ha.
3p	Production of ROM mineral during the last five year period as applicable	2013-14 120767 MT 2014-15 212832 MT 2015-16 279778 MT 2016-17 277509 MT 2017-18 277791 MT 2018-19 279242 MT	2013-14 234500 MT 2014-15 277855 MT 2015-16 277350 MT 2016-17 277220 MT 2017-18 277605 MT 2018-19 247130 MT

3q	General remarks of inspecting officers on method of mining etc.	Total area put to use as per Annual Return is (i) Already exploited & abandoned by opencast (O/C) mining 22.77 ha (ii) Covered under current (O/C) Workings 4.05ha (iii) Reclaimed/Rehabilitated 18.72ha (iv) Used for waste disposal 0.000 (v) Work done (plantation) under progressive mine closure plan during the year 2.82ha. The Stripping ratio is more than proposed due to more Overburden encountered.
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Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Concurrent use for backfilling and reclamation	Concurrent use for backfilling and reclamation	
4b	Location of topsoil, OB and mineral reject dumps	No such proposal.	Simultaneous backfilling of mined out quarries and spread of top soil over backfilled area. No dumping of Top soil and No reject generation.	
4c	Number of dumps within lease area and outside of lease area	No such proposal.	Simultaneous backfilling of mineout quarries and spread of top soil over backfilled area. No dumping of Top soil and No reject generation.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal for dumps.	NA, Simultaneous backfilling of mineout quarries and spread of top soil over backfilled area. No dump.	
4e	Number of active and alive dumps.	Nil	Nil	
4f	Number of dead dumps.	No proposal	Two dead dumps are in the lease area.	
4g	Number of dumps established.	NA	Two old dumps near the southern boundary of the lease area.	

4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposal	Two old dumps with garland drain and retaining wall were there.
4i	Length of Retaining wall or garland drain all along dumps	No such proposal	Two old dumps with Garland Drain and retaining wall were made. Size 170x2x2, 130x2x2
4j	Number of settling ponds	No such proposal	Nil
4k	Specific comments of inspecting officer on waste dump management		No proposal for dump.Simultaneous backfilling of the mineout quarriese and spread of top soil over backfilled area.

#### 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.	full extraction of mineral from mined out area before starting backfilling:	full extraction of mineral from mined out area before starting backfilling:	
5b	Area under backfilling of mined out area	2.80ha.	2.82ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Soil will be used concurrently to spread over backfilled quarry.	Soil is used concurrently to spread over backfilled quarry.	
5d	Total area fully reclaimed and rehabilitated	During plan period (2015-16 to 2019-20), 14.14ha area was proposed to be reclaimed.	Total area reclaimed was 18.72 ha. as on 01/04/2019.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Concurrent backfilling and reclamtion of minedout areas were in progress.No duming of Top soil or OB.Total reclaimed area 18.72ha. as on 01/04/2019.	



## 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).		Lessee has submitted annual Report on PMCP in time.	
6b	Area available for rehabilitation (ha) .	2.80ha.	2.82ha during 2018-19.	
6c	afforestation done (ha).	Proposed afforestaion during 2018-19 was 2000plantation on 0.80ha	No of sapling planted during 2018-19 was 2350 covering area of 1.92ha.	
6d	No. of saplings planted during the year	2000nos.	2530nos.	
6e	Cumulative no .of plants	NA	21625 nos.	
6f	Any other method of rehabilitation	No such proposal.	Nil	
6g	Cost incurred on watch and care during the year	Not Specified.	Rs.80000/-approx.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	2.8ha. K9-180mx98mx12m K9A-160mx96mx9m	2.82ha. K9-180mx98mx12m K7A-165mx95mx9m	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	filled by waste	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	1000nos. in 0.8ha area.	2530nos.in 1.92ha.	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil
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	NIL	195 saplings in 0.12ha area at the cost of Rs21450/-Cumulative 390nos of plantation done in 0.24ha area at the cost of Rs.31200/-
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	nil	nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	NA
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly Environmental ( Air,water,noise)Monitoring proposed.(core Zone & Buffer zone) Cost Rs100000/-	Quarterly Environmental (Air,water,noise)Monitoring done.(core Zone & Buffer zone) Cost Rs74000/-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Lessee used to provide all means of PMCP compliance of the lease.

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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	As per proposal in approved Modified Mining plan ROM to be despatched was-279242 MT during 2018-19.	Actual despatch during 2018-19 was 247180.55 MT.No grade wise sorting but higher grade ore blended with lower grade to prepare feed grade for Alumina Plant.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual
7c	Different grade of mineral sorted out at mines.	No grading of ore was proposed at mine site.	Grading of ore not done at mine site.Low grade ore is blended with high grade ore and despatched as feed grade for Alumina plant.
7d	Any beneficiation process at mines .	No beneficiation only hand sorting was proposed	Ore was sorted manually,No beneficiation at mine site.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		There is no such problem for Mineral conservation.Low grade ore blended with high grade ore to prepare feed grade and despatched to Alumina plant.

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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal was there to remove top soil seprately and will be spread over backfilled minedout quarries.	Separate removal of Soil was done and concurrently spread over back filled area.	
8b	Concurrent use or storage of topsoil	Concurrent spread of top soil over concurrent backfiilled minedout areas was proposed.	Soil so removed was used to spread over backfilled minedout quarries.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No dump was proposed as concurrent backfilling of minedout areas was proposed.	No dump was there except two old dumps.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposal was there that all excavated OB and waste will be used for concurrent backfilling and soil will be used for reclamation of backfilled areas to restore the land to its original use.	It was seen that all excavated O B and Waste used for concurrent backfilling and soil is used for reclamation of the backfilled quarries by spreading soil over backfilled areas.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposal.	NA
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2000nos.	2530nos.
8g	Survival rate	75%	75%
8h	Water sprinkling on roads to control airborne dust	Proposal was there to use sprinkler to control airborne dust.	Water sprinkler used to control airborne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		There is no issue of mineral conservation and aesthetic beauty has been maintained by reclamation rehabilitation and afforestation.

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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	Monthly and Annual Return submitted	Monthly and Annual Return submitted
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per annual Return Sri Kiran Shankar Singh was appointed as Mines Manager, Sri Dillu Singh was appointed as Mining Engineer and Sri Ramesh Kumar as geologist.	During the inspection Sri Kiran Shankar Singh was appointed as Mines Manager, Sri Dillu Singh was appointed as Mining Engineer and Sri Ramesh Kumar as geologist.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	As per latest Annual return available in the office, land use pattern during 2018-19 is given below: Area exploited 22.77 ha, Area under current working - 4.05ha, Area reclaimed /rehabilitated - 18.72, Workdone under progressive mine closure plan during the year-2.820 ha.	Road area have not been given. Other information is more or less correct.
9d	Scrutiny of Annual return on afforestation	2530 sapplings planted within lease area, with 75% survival rate.	Found Correct.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	nil	Found correct.

- 9f Scrutiny of Annual return on ROM stock and/or graded ore As per Annual return of 2018-19 total production of ROM was 247130 MT, Opening Stock- 280.94MT, closing stock- 230.39MT and despatch during the year-72.55MT Below 40% Al<sub>2</sub>O<sub>3</sub> and 247108MT 40% to below 45% Al<sub>2</sub>O<sub>3</sub> respectively. Found correct.
- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost Sale value for 247180.55MT Bauxite Ore despatched is 228765788MT. Ex -mine Price & Cost of Production is same i.e. Rs 925.50/MT . Seems correct.
- 9h Scrutiny of Annual return on fixed assets Combined information on Fixed asset for the three mines i.e. (i) Pakhar(15.58ha )(ii) Pakhar(109.507 ha) & (iii) Bimarla Bauxite mine has been given as Rs.74008949/- Found to be correct.

9k	Scrutiny of Annual return on mining machineries	As per Annual Return following Non Electrical Mining machinery being used in mine. Shovel-hyd- 1.9cum-1 Shovel -hyd- 0.9cum-1 Wheel loader- 2.3cum-1 Air Compressor- 450cum/MN- 1,Air Compressor- 330cum/MN-1 Dumper-25 T-6 Water Tanker 8000Ltr. -1no	Found correct.
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**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