

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

Mining Plan Modification REPORT

Kolkata regional office

Mine file No : CAL/BH/SB/FE(N-1)

Mine code : 30BHR27031

- (i) Name of the Inspecting : **K03**) **G. S. KANNAN**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : DR. G.S. JAISWAL, QP.
Official with
Designation
- (iv) Date of Inspection : 23/02/2021
- (v) Prev.inspection date : 29/12/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BALAJI**
- (b) **Registration NO.** : **IBM/6896/2011**
- (c) Category : A Other Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : JHARKHAND
District : SINGHBHUM (WEST)
Village : NOAMUNDI
Taluka : CHAIBASA
Post office : NOAMUNDI BAZAR
Pin Code : 833217
FAX No. :
E-mail : ankit.khirwal@gmail.com
Phone : 06582-255157
- (f) Police Station : NOAMUNDI
- (g) First opening date : 01/05/1972
- (h) Weekly day of rest : SUN
2. Address for : AT & PO: CHAIBASA -833201.
correspondance : DIST: SINGHBHUM WEST.
JHARKHAND .
3. (a) Lease Number : BHR0054
- (b) Lease area : 22.66
- (c) Period of lease : 30
- (d) Date of Expiry : 30/04/2002
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : ANIL KHIRWAL
 KHIRWAL MARKET, SADAR BAZAR
 AT & PO. CHAIBASA SINGHBHUM
 (WEST), JHARKHAND SINGHBHUM
 (WEST) JHARKHAND
 Phone: 09431300407
 FAX : 06582-258357/257157

Owner : ANIL KHIRWAL
 KHIRWAL MARKET PO. CHAIBASA
 . SINGHBHUM (WEST),
 JHARKHAND SINGHBHUM (WEST)
 JHARKHAND
 Phone: 9431300407
 FAX : NIL

Agent : ANIL KHIRWAL
 M/S MARUTI MINERALS
 INDUSTRIES KHIRWAL MARKET,
 AT & PO. CHAIBASA
 SINGHBHUM(W) SINGHBHUM
 (WEST) JHARKHAND
 Phone: 06582-258357, 259157
 FAX : NIL

Mining Engineer

Name : B. D. PANDEY, Full Time
 Qualification : AMIE(MIN. ENGG.)
 Appointment/ : 08/01/2014
 Termination date

Geologist

Name : Choudhury Sabir Ahmed, Full Time
 Qualification : M.Sc. in Applied Geology
 Appointment/ :
 Termination date

Geologist

Name : CHOWDHURY SABIR AHAMAD, Full Time
 Qualification : M. Sc.(Geo)
 Appointment/ : 16/06/2014
 Termination date

Manager

Name : BHISMA DEO PANDEY
 Qualification : AMIE(Min. Engg.)
 Appointment/ : 08/01/2014
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	25/10/2004
		Mining Scheme rule 12 MCDR1988	16/04/2010
		MP modif under 17(3) MCR 2016	19/12/2016
		MP review under 17(1) MCR 2016	05/12/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Boreholes has Proposed during 2019-2020 & 2020-2021	No Boreholes has drilled.	
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	Additional exploration was not carried out in the lease area for Geological axis - 1	No Exploration has been carrying out during 2019-2020 & 2020-2021
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal	No Boreholes has drilled	
1d	Balance area to be explored to bring Geological axis in 1 or 2	1.63 hectares are balance area to explore to bring Geological axis 1 or 2.	Borehole has proposed during 2021-2022.	Out of 19.331 hectares lease area, 16.00 hectares are G-1 and 1.70 hectares in G-2
1e	Balance reserve as on 01/04/20	Reserves & Resources as on 01.04.2020 (within broken area + outside broken area) Proved Mineral Reserves (111) = 1175001 tons Feasibility Mineral Resources (211) = 31000 tons Pre-Feasibility Mineral Resources (221 + 222) = 5041000 tons	Reserves & Resources as on 01.04.2020 (within broken area + outside broken area) Proved Mineral Reserves (111) = 1175002 tons Feasibility Mineral Resources (211) = 31000 tons Pre-Feasibility Mineral Resources (221 + 222) = 5041000 tons	Out of 19.331 hectares lease area, 8.242 hectares are within broken area.

1f	General remarks of inspecting officers on geology, exploration etc	It is part of western limbs of Iron ore range of Singhbhum.	Hematite Iron ore in this mine occurs as lateritic ore/ laminates ore/ soft laminated ore and Blue dust.	Entire Lease is having Same Geology.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed to work in West and East side of Puja Pit during 2019-2020 & 2020-2021.	Working has been not carried out as per the proposal and working in Southern side of Puja Pit.	Violation has been issued under Rule 11(1) by JMG on 31.12.2020
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It is proposed to form Bench only in Mineral	As per proposal 4 benches has been formed in mineral.	Overburden and topsoil are found very thinly. So no separate bench has proposed.
2c	Stripping ratio or ore to OB ratio	1 : 0.00 for 2019-2020	1 : 0.00	There is no overburden proposal and achievement, so stripping ratio is zero.
2d	Quantity of topsoil generation in m3	There is no proposal to generate of Topsoil during 2019-2020	No topsoil has been generated.	
2e	Quantity of overburden generation in m3	There is no proposal to generate of overburden during 2019-2020	No overburden has been generated.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in West and East side of Puja Pit during 2019-2020. There is no proposal to generate Topsoil and Overburden.	Working has been not carried out as per the proposal and working in Southern side of Puja Pit.	There is no overburden proposal and achievement, so stripping ratio is zero.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Proposed to work in West and East side of Puja Pit during 2019-2020 & 2020-2021.	Working has been not carried out as per the proposal and working in Southern side of Puja Pit.	Violation has been issued under Rule 11(1) by JMG on 31.12.2020
3b	Quantity of ROM mineral production proposed	The total target of ROM Production was 73999 tons during 2019-2020.	73998 tons of ROM and 24302 tons of Dump working has been achieved during 2019-2020	Violation has been issued under Rule 11(1)
3c	Recovery of sailable/usable mineral from ROM production	ROM Recovery - 85%	ROM Recovery - 100%	Violation has been issued under Rule 45(5)(b)
3d	Quantity of mineral reject generation	Less than 45% Fe	Less than 45% Fe	
3e	Grade of mineral rejects generation and threshold value declared.	15% of Intercalated waste of 11099 tons has been proposed for 2019-2020	As per proposal there is no generation of intercalated waste and entire ROM has been used.	Violation has been issued under Rule 45(5)(b)
3f	Quantity of sub grade mineral generation.	No Sub Grade Generation	No Sub Grade Generation	
3g	Grade of sub grade mineral generation	There is No Generation of Subgrade Mineral	There is No Generation of Subgrade Mineral	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Proposed screening unit for ROM.	As per proposal screening plant is used for Beneficiation of ROM	
3j	Provision of drilling and blasting in mineral benches	Spacing - 1m Burden - 0.60m Depth - 1.50m It is Proposed to drill by jack hammer.	Drilling & Blasting are done as per proposal.	

3k	Provision of mining machineries in mineral benches	Excavators Atlas Copco JCB Hyva Screening Unit (Fixed) Screening Unit (Mobile) Tippers	As per proposal the machineries are available in field.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 6m was proposed in Mineral.	Benches are formed 5-6m height.	
3m	Total area covered under excavation/pits	4.642 hect area is under Pit and additional 3.0 hect is required during 2019-2020	4.642 hect area is under Pit	Due to delay in statutory clearance, working has been carried out in existing Mines, additional area is not in use during 2019-2020.
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.00 for 2019-2020	1 : 0.00	There is no overburden proposal and achievement, so stripping ratio is zero.
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2020. Mines = 7.642 hect Dump = 2.157 hect Infra = 0.40 hect Green Belt = 0.40 hect	Land use Pattern as on 01.04.2020. Mines = 4.642 hect Dump = 2.157 hect Infra = 0.20 hect Green Belt = 0.40 hect	There are no Changes in land use Pattern during 2020 because of delay in statutory clearance, Working in broken area only.
3p	Production of ROM mineral during the last five year period as applicable	2019-2020 = 73999 tons 2018-2019 = 300000 tons 2017-2018 = 150000 tons 2016-2017 = 73998 tons 2015-2016 = 73999 tons	2019-2020 = 73998 tons 2018-2019 = 39030 tons 2017-2018 = 71740 tons 2016-2017 = 26670 tons 2015-2016 = 59373 tons	Mine is working as per existing EC limit.
3q	General remarks of inspecting officers on method of mining etc.	Mechanised Method is Proposed	73998 tons has been achieved during 2019-2020	As per proposal there is no generation of intercalated waste and entire ROM has been used.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No Proposal of dumping. Generated Intercalated waste will be backfilled in central part of Puja pit during 2019-2020.	As per proposal the backfilling is not carried out in central part of Puja pit during 2019-2020.	Backfilling has not formed as per proposal Violation has been issued under Rule 11(1).
4b	Location of topsoil, OB and mineral reject dumps	Dump-1 (South of Puja Pit), Topsoil Dump-2 (In between Ganesh Pit-A & Hanuman-B), Dump-3 (North of Mahabir Pit), Dump-4 (North of Mahabir Pit), Sub Grade Dump-5 (East of Mahabir Pit), Dump-6 (North of Hanuman Pit-A), Dump-7 (West of Hanuman Pit-A), Dump-8 (South of Dump-9), Dump-9 (East of Puja Pit)	As per proposal the dumps are present. Out of 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump.	Dump-1 & 9 has been re-handle. Violation has been issued under Rule 11(1).
4c	Number of dumps within lease area and outside of lease area	Lease area = 9 Non Lease area = Nil	Lease area = 9 Non Lease area = Nil	Out of 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All the dumps are within broken area.	As per proposal dumps are formed.	
4e	Number of active and alive dumps.	Active Dump = 4 Alive Dump = 5	There are 2 active dumps for waste dumping, 1 for Topsoil dumping and 1 for Subgrade dumping.	
4f	Number of dead dumps.	Dead Dumps = Nil	Dead Dumps = Nil	
4g	Number of dumps established.	No Proposal	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	Generated Intercalated waste will be backfilled in central part of Puja pit during 2019-2020.	Out of 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump.	There are 2 active dumps for waste dumping, 1 for Topsoil dumping and 1 for Subgrade dumping.

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.	Back filling has proposed in central part of Puja pit during 2019-2020.	Backfilling has done in North side of Puja Pit.	Violation has been issued under Rule 11(1).
5b	Area under backfilling of mined out area	0.019 hectares has proposed for Back filling in central part of Puja pit during 2019-2020.	Backfilling has done in unproposed area of North side of Puja Pit for 0.010 hectares.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal	Nil	
5d	Total area fully reclaimed and rehabilitated	No Proposal	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Back filling has proposed in central part of Puja pit during 2019-2020.	Backfilling has done in North side of Puja Pit for 0.010 hectares.	

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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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 2019-2020	
6b	Area available for rehabilitation (ha) .	No Proposal	Nil	
6c	afforestation done (ha).	Proposed 1.792 hect in 2019-2020 (Gap plantation in safety zone)	Gap plantation has been achieved in 1.00 hectares during 2019-200 in safety zone	
6d	No. of saplings planted during the year	300 saplings proposed for 2019-2020	276 saplings achieved during 2019-2020 inside the lease area.	
6e	Cumulative no .of plants	1775 nos of saplings proposed in 0.50 hectares from during previous plan period 2014-2019 in safety zone	3372 nos achieved in 0.70 from 2014-2019 in the safety zone inside the lease area.	Cumulatively 3648 saplings have been planted in safety barrier during 2014-2020 within lease area.
6f	Any other method of rehabilitation	No Proposal	Nil	
6g	Cost incurred on watch and care during the year	No Proposal	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	0.019 hectares has proposed for Back filling in central part of Puja pit during 2019-2020.	Backfilling has done in unproposed area of North side of Puja Pit for 0.010 hectares.	Violation has been issued under Rule 11(1).
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No Proposal	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	Nil	
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	300 saplings of Gap Plantation has proposed during 2019-2020	276 saplings achieved during 2019-2020 inside the lease area as Gap plantation	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposed 1.792 hect in 2019-2020 (Gap plantation in safety zone)	Gap plantation has been achieved in 1.00 hectares during 2019-200 in safety zone	Cumulatively 3648 saplings have been planted in safety barrier during 2014-2020 within lease area.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Bi-Annually Survey	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 own as well as private agency.	Cumulatively 3648 saplings have been planted in safety barrier during 2014-2020 within lease area.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	The total target of ROM Production was 73999 tons during 2019-2020.	73998 tons has been achieved during 2019-2020	
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.	+40mm = +58% Fe 10-40mm = 58% Fe 5-10mm = 57% Fe 0-5mm = <46% Fe	+40mm = +58% Fe 10-40mm = 58% Fe 5-10mm = 57% Fe 0-5mm = <46% Fe	Low grade are Blended with High grade ores
7d	Any beneficiation process at mines	Screening has been installed.	Screening, sorting and sizing is being done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of ROM Production was 73999 tons during 2019-2020.	73998 tons has been achieved during 2019-2020	Low grade are Blended with High grade ores.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	Nil	Topsoil dump is present in the lease area
8b	Concurrent use or storage of topsoil	No Proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump has been proposed for waste dump, topsoil and Subgrade dump.	As per proposal the dumps are present. Out of 9 Dumps, 1-Topsoil Dump, 1-Sub Grade dump and 7 waste dump.	Dump-1 & 9 has been re-handle. Violation has been issued under Rule 11(1).

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	300 saplings proposed for 2019-2020	276 saplings achieved during 2019-2020 inside the lease area.	
8g	Survival rate	No Proposal	42%	
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	Lease area displays an undulating topography.	Lease area grow mainly vegetation of sakhua	Area is in forest and there is no agricultural land within the lease.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	MR Submitted up to = January 2021 AR Submitted up to = 2019-2020	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	Full time Mining Engineer, Geologist has appointed.	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 01.04.2020. Already exploited & abandoned = 0.499 hect Covered under current working = 3.946 hect Reclaimed/ Rehabilitated = 0.198 hect Dump = 2.157 hect	Landuse Pattern is filled as per approved Mining Plan	
9d	Scrutiny of Annual return on afforestation	Lessee has planted 276 saplings during 2019-2020	Gap plantation has been achieved in 1.00 hectares during 2019-200 in safety zone	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	15% of Intercalated waste/ Mineral Rejects Generation is not shown	Intercalated waste/ Mineral reject of 11099 tons has been proposed for 2019-2020	Violation has been issued under Rule 45(5)(b) for not showing achieved mineral reject quantity during 2019-2020
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Iron Ore Stock as on 01.04.2020 ROM:- Opening stock = 28573 tons closing stock = 32706 tons Dump Working:- Opening stock = Nil closing stock = 24302 tons	Mine has produced 73998 tons of ROM during 2019-2020 and 24302 tons as dump working	Violation has been issued under Rule 11(1) & 45(5)(b)
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production & Ex. Mine Price has shown	Some invoice has been checked	
9h	Scrutiny of Annual return on fixed assets	Fixed Assets is given	Fixed Assets is filled	
9k	Scrutiny of Annual return on mining machineries	Machineries details given	As 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)	09/03/2021			
MCDR17	Rule 45(5)(k	09/03/2021			

Date :

(G. S. KANNAN)

Indian Bureau of Mines