

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

**MCDR inspection REPORT  
Ranchi regional office**

**Mine file No :** BIH/PAL/GRP/562/RRO

**Mine code :** 28BHR18020

- (i) Name of the Inspecting : **K03** ) **G. S. KANNAN**  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri. Arvind Kumar, Geologist  
Official with  
Designation
- (iv) Date of Inspection : 19/03/2020
- (v) Prev.inspection date : 08/03/2017

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **PURNADIH**
- (b) **Registration NO.** : **IBM/4160/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :  
State : JHARKHAND  
District : PALAMAU  
Village : PURNADIH  
Taluka : SATBARWA  
Post office : KHAMDIH  
Pin Code :  
FAX No. : 06562-2222727  
E-mail : charanmukesh@yahoo.com  
Phone : 08987760561/9334700516
- (f) Police Station : LESLIGANJ
- (g) First opening date : 01/07/1995
- (h) Weekly day of rest : WED
2. Address for : AT- PURNADIH  
correspondance : DISTT.- PALAMAU  
STATE- JHARKHAND
3. (a) Lease Number : BHR0504
- (b) Lease area : 81.75
- (c) Period of lease : 50
- (d) Date of Expiry : 05/12/2044
4. Mineral worked : GRAPHITE Main

## 5. Name and Address of the

Lessee : MOHAN MINERALS  
 INDUSTRIAL ESTATE  
 SUDNA, DALTONGANJ DIST-  
 PALAMAU PALAMAU JHARKHAND  
 Phone: 08987760561/9334700516  
 FAX : 06562-2222727

Owner : MUKESH CHARAN (PROPRIETOR)  
 201-A, DURGA KUTIR, KANKE  
 ROAD, NEAR CMPDI RANCHI  
 RANCHI JHARKHAND  
 Phone: 09334700516, 09  
 FAX :

Agent : Amit Kmar Agrawal  
 H.No. 512 Lower PP Compound  
 Near guru nanak School,  
 Ranchi 834001 PALAMAU  
 JHARKHAND  
 Phone: 9835194138  
 FAX :

Mining Engineer  
 Name : Ujjawal Kumar Pasta, Full Time  
 Qualification : Diploma in Mining and Second Class manag  
 Appointment/ : 01/04/2019  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	06/06/1994
		Mining Scheme rule 12 MCDR1988	04/11/2013
		MP review under 17(1) MCR 2016	27/10/2017

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	15 Core Boreholes has Proposed during 2018-2019 & 2019-2020.	No Boreholes has been drilled as per proposal.	Violation has been issued under Rule 11(1)
1b	Exploration over lease area for geological axis 1 or 2	Total 30 - Additional exploration was proposed during 2018-2019 & 2019-2020 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 carried out. Violation has been issued under Rule 11(1)
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Own drilling and/ or Contract drilling machines were proposed for Exploration.	No Boreholes has drilled	Violation has been issued under Rule 11(1)
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration was proposed out at 100m X 100m grid interval. 30 Additional exploration was proposed in plan period (2015-2020)	Exploration was not carried out at 100m X 100m grid interval. Entire lease area has to be explored for availability of ore from G-3 to G-1.	No boreholes have been drilled so far in the lease area and Reserves and Resources are estimate based on depth of Quarry has been considered under G-1.

1e	Balance reserve as on 01/04/20	Reserves & Resources as on 01.04.2019 Proved Mineral Reserves (111) = 28427 Tons Probable Mineral Reserves (122) = 10381 Tons Feasibility Mineral Resources (211) = 26837 Tons Pre-Feasibility Mineral Resources (222) = 26122 Tons	Reserves & Resources as on 01.04.2019 Proved Mineral Reserves (111) = 28427 Tons Probable Mineral Reserves (122) = 10381 Tons Feasibility Mineral Resources (211) = 26837 Tons Pre-Feasibility Mineral Resources (222) = 26122 Tons	Mine is non-working from 2013-14 to 2018-19 for want of statutory clearance. So there is no change in R & R. Mine starts it working from 2019-20.
1f	General remarks of inspecting officers on geology, exploration etc	It is part of Chotanagpur Granite gneiss of Precambrian age	Graphite veins occur parallel and concordant with the quartz mica schist. Graphite veins occurs 2 to 9m thickness.	Lease is having Same Geology. Thickness and mineralogy is changes from place to place. Hence borehole has to be drilled at closer interval to get quantity and quality

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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 Quarry-2 & 3 during 2018-2019. (Section line X7-Y7 & A4-B4 & X5-Y5 & A7-B7). During 2019-2020 in Quarry-2 & 6 (Section line X3-Y3 & A8-B8 & X5-Y5 & A7-B7).	Working has been not 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 as Topsoil - 1 bench Overburden - 1 bench Mineral - 3 benches	As per proposal benches are not formed.	
2c	Stripping ratio or ore to OB ratio	1 : 0.97 during 2018-2019	Nil during 2018-2019	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020
2d	Quantity of topsoil generation in m3	11812 cu.m of topsoil has proposed during 2018-2019	No topsoil has been generated as per proposal.	
2e	Quantity of overburden generation in m3	During 2018-2019 it is proposed OB as 55683 cu.m	No OB has been generated as per proposal.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in Quarry-2 & 3 during 2018-2019. (Section line X7-Y7 & A4-B4 & X5-Y5 & A7-B7). During 2019-2020 in Quarry-2 & 6 (Section line X3-Y3 & A8-B8 & X5-Y5 & A7-B7).	No OB & Topsoil has been generated as per proposal.	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020

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### Exploitation:

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Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Proposed to work in Quarry-2 & 3 during 2018-2019. (Section line X7-Y7 & A4-B4 & X5-Y5 & A7-B7). During 2019-2020 in Quarry-2 & 6 (Section line X3-Y3 & A8-B8 & X5-Y5 & A7-B7).	Development and production are not carried out as per proposal during 2018-2019	Violation has been issued under Rule 11(1)
3b	Quantity of ROM mineral production proposed	The total target of Production was 27806 tons during 2018-2019 and 28666 tons during 2019-2020.	No production has been achieved during 2018-2019 and 4908 tons during 2019-2020.	
3c	Recovery of sailable/usable mineral from ROM production	60% Recovery	Nil for 2018-19 & 90% recovery for 2019-20	
3d	Quantity of mineral reject generation	No Proposal	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Mineral reject- No Proposal. Threshold Value for Mineral rejects is not Declared	Mineral reject- No Proposal. Threshold Value for Mineral rejects is not Declared	
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	Manual method	Manual method	

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	It is Proposed to use crackmite in this area to breaking or cracking of OM.	Drilling & Blasting are not during 2018-2019 due to non-working.	
3k	Provision of mining machineries in mineral benches	Hydraulic Excavators Compressor Water Tanker Tippers	As per proposal machineries are not 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	3.54 hect area is proposed under Pit as on 2019-2020	2.27 hect areas are under Pit during 2019-2020 due to non-working.	
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.97 for 2018-2019	Nil for 2018-2019 due to non-working	
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2019. Mines = 3.54 hect Dump = 3.72 hect Roads = 1.00 hect Green Belt = 0.35 hect	Land use Pattern as on 01.04.2019. Mines = 2.27 hect Dump = 1.72 hect Roads = 0.39 hect Green Belt = 0.10 hect	Due to mine is not working from 2013-2014, there is no change in land use pattern.
3p	Production of ROM mineral during the last five year period as applicable	2018-2019 = 27806 tons 2017-2018 = 22361 tons 2016-2017 = Nil 2015-2016 = Nil 2014-2015 = 56019 tons	2018-2019 = Nil 2017-2018 = Nil 2016-2017 = Nil 2015-2016 = Nil 2014-2015 = Nil	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.

3q	General remarks of inspecting officers on method of mining etc.	Mechanised Method is Proposed	Development and production are not carried out as per proposal during 2018-2019	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.
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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)	Generated OB/ Intercalated waste will be dumping in between cross section B4 to B7 during 2018-19 & 2019-20	As per proposal the dumping is not carried out and dumping in waste dump-1 un-proposed area.	Violation has been issued under Rule 11(1).
4b	Location of topsoil, OB and mineral reject dumps	Location of proposed Dump in between cross section B4 to B7 during 2018-19 & 2019-20	As per proposal the dumping is not carried out in between cross section B4 to B7 during 2018-19 & 2019-20	Violation has been issued under Rule 11(1).
4c	Number of dumps within lease area and outside of lease area	Lease area = 4 Non Lease area = Nil	Lease area = 3 Non Lease area = Nil	New dump is not formed and dumping in old dump.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump is proposed outside the UPL	As per proposal dumps are not formed.	
4e	Number of active and alive dumps.	Active Dump = 4  Alive Dump = Nil	There are 3 active dumps within lease area for waste dumping.	OB dump-1 Waste dump-1 & 2
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	Generated OB/ Intercalated waste will be dumping in between cross section B4 to B7 during 2018-19 & 2019-20	As per proposal the dumping is not carried out in between cross section B4 to B7 during 2018-19 & 2019-20	New dump is not formed and dumping in old dump.

#### 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.	No Back filling has proposed	Backfilling has done in existing Quarry No-10	Violation has been issued under Rule 11(1).
5b	Area under backfilling of mined out area	No Back filling has proposed	Backfilling has done in existing Quarry No-10	Violation has been issued under Rule 11(1).
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.	No Back filling has proposed	Backfilling has done in existing Quarry No-10	

#### 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.	Not Submitted for the year 2018-2019	Violation has pointed out under Rule 26 (2)
6b	Area available for rehabilitation (ha) .	No Proposal	Nil	
6c	afforestation done (ha).	Proposed 0.32 hect in 2018-2019	0.10 hectares has planted	Violation has been issued under Rule 11(1).
6d	No. of saplings planted during the year	400 saplings proposed in 7.5m safety barrier for 2018-2019	100 Saplings planted	
6e	Cumulative no .of plants	800 nos of saplings proposed from during plan period 2017-2029 in 7.5m safety barrier and dump slope	100 saplings have planted during 2017-2019 inside the lease area.	Violation has been issued under Rule 11(1).
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	No Proposal	Nil	
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	400 saplings proposed in 7.5m safety barrier for 2018-2019	100 Saplings planted	Violation has been issued under Rule 11(1).
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposed 0.32 hect in 2018-2019	0.10 hectares has planted	Violation has been issued under Rule 11(1).
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 private agency.	100 saplings have planted during 2017-2019 inside the lease area.	Violation has been issued under Rule 11(1).

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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	The total target of Production was 27806 tons during 2018-2019.	No production has been achieved during 2018-2019	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working 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	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.
7c	Different grade of mineral sorted out at mines.	Size = Lump > 200mm Fixed Carbon = 10.96	Size = Lump > 200mm Fixed Carbon = 10.96	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.
7d	Any beneficiation process at mines	Manually sizing and sorting	sorting and sizing is being done	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of Production was 27806 tons during 2018-2019.	Size = Lump > 200mm Fixed Carbon = 15.32	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.

## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	Nil	
8b	Concurrent use or storage of topsoil	No Proposal	Nil	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Generated OB/ Intercalated waste will be dumping in between cross section B4 to B7 during 2018-19 & 2019-20	As per proposal the dumping is not carried out and dumping in waste dump-1 un-proposed area.	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	Backfilling has done in existing pit	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	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	400 saplings proposed in 7.5m safety barrier for 2018-2019	100 Saplings planted	
8g	Survival rate	80%	30%	
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	Scanty vegetation, bushes are observed in lease area	Surrounding area beyond lease area is greenery. The area is rugged and covered with float boulders.	

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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	MR Submitted up to = February 2020 AR Submitted up to = 2018-2019	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	Partly Mining Engineer, Geologist is appointed.	Only Mines mate is working as Permit Manager.	It is advised to appoint mining engineer/ Geologist in full time.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2019. Mines = 2.27 hect Dump = 1.72 hect Roads = 0.39 hect Green Belt = 0.10 hect	Landuse Pattern is filled as per approved Mining Plan	
9d	Scrutiny of Annual return on afforestation	400 saplings proposed in 7.5m safety barrier for 2018-2019	It is advised the lessee to plant the saplings as per the proposal.	Violation has been issued under Rule 11(1)
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is no Mineral Rejects Generation	There is no Mineral Rejects Generation	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Graphite Stock as on 01.04.2019 ROM Closing stock = 8.06 tons	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019-2020.	
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 and mismatched	Violation has been issued under Rule 45(5)(c).
9h	Scrutiny of Annual return on fixed assets	Fixed Assets is not shown.	It is advice to fill the Fixed Assets	

9k	Scrutiny of Annual return on mining machineries	Machineries details are not given	Mine is not working from 2013-14 to 2018-19 for want of statutory clearances. Starts working during 2019- 2020.
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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)	10/06/2020			
MCDR17	Rule 11(4)	10/06/2020			
MCDR17	Rule 26(2)	10/06/2020			
MCDR17	Rule 33	10/06/2020			
MCDR17	Rule 45(5)(c)	10/06/2020			

**Date :**

**(G. S. KANNAN)**

Indian Bureau of Mines