

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

MCDR INSPECTION REPORT

Ranchi regional office

Mine file No : JHK/PAL/GRP/568/RRO

Mine code : 28JHK14001

- (i) Name of the Inspecting : **B001**) **SAGAR BODRA**
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : S/SRI MANGAL HASDA, MINE MANAGER, RAHUL JHA, GEOLOGIS
Official with
Designation
- (iv) Date of Inspection : 09/10/2017
- (v) Prev.inspection date : 07/03/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GAURA (MLA 6.41)**
- (b) **Registration NO.** : **IBM/11373/2012**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **PALAMAU**
- Village : **GAURA**
- Taluka : **SATBARWA**
- Post office : **SATBARWA**
- Pin Code :
- FAX No. : **0651-2300971**
- E-mail : **tccplrnc@gmail.com**
- Phone : **0651-2313292/93**
- (f) **Police Station** :
- (g) **First opening date** : **02/05/2002**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **VILL.- GAURA,**
P.O.- SATBARWA,
DISTT.- PALAMAU (JHK)
3. (a) **Lease Number** : **JHK0147**
- (b) **Lease area** : **4.66**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **11/02/2006**
4. **Mineral worked** : **GRAPHITE** **Main**

5. Name and Address of the

Lessee : SHISHIR KUMAR PODDAR
 3P SHREE GOPAL COMPLEX
 COURT ROAD, RANCHI RANCHI
 JHARKHAND
 Phone:0651-2203789, mob. 9934362408
 FAX :N.A

Owner : SHISHIR KUMAR PODDAR
 C/O M/S CHHOTANAGPUR
 GRAPHITE INDS. 3P, SHREE
 GOPAL COMPLEX, COURT ROAD
 RANCHI - 834001 (JHK)
 RANCHI JHARKHAND
 Phone: 0651-2313292/23
 FAX : 0651-2300971

Agent : AJAY SHANKAR
 3P SHREE GOPAL COMPLEX
 COUR ROAD, RANCHI JHARKHAND
 RANCHI JHARKHAND
 Phone: 9771403710
 FAX : 0651-2300971

Mining Engineer

Name : MANGAL HANSDA, Full Time
 Qualification : B. TECH. (MINING)
 Appointment/ : 01/07/2014
 Termination date

Geologist

Name : RAHUL KUMAR JHA, Full Time
 Qualification : M. Sc. (GEOLOGY)
 Appointment/ : 07/06/2014
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	24/07/1996
Plan/Scheme of Mining		FMCP under 23C(1)	18/02/2013
		Modif.of approved Mining Plan	20/03/2013
		Mining Scheme rule 12 MCDR1988	12/07/2013
		MP modif under MCR 1960	07/06/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	As per modification in approved mining plan dated 07.06.2017, there is no backlog proposal of exploration.	Lessee drilled two boreholes in the year 2014-15 instead of 2013-14 as approved scheme of mining.	Nil
1b	Exploration over lease area for geological axis 1 or 2	No proposal	During the year 2011-12, lessee had made six (06) trenches and twelve (12) trial pits in the lease area. The dimension of each trench area was 20m x 5m x 5m and the dimension of each trial area was 10m x 5m x 5m. Later on six (06) boreholes were drilled during the year 2011-12 & 2014-15 in the lease area. Out of which two (02) boreholes, i.e BH1 & BH2 are negative. Average depth of boreholes were 30m.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	All trenches , trial pits and boreholes were made by the lessee himself.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal as no area left for exploration.	During the year 2011-12, lessee had made six (06) trenches and twelve (12) trial pits in the lease area. The dimension of each trench area was 20m x 5m x 5m and the dimension of each trial area was 10m x 5m x 5m. Later on six (06) boreholes were drilled during the year 2011-12 & 2014-15 in the lease area. Out of which two (02) boreholes, i.e BH1 & BH2 are negative. Average depth of boreholes were 30m.	Nil

1e	Balance reserve as on 01/04/20	In the modification in approved mining plan, the reserves & resources were estimated as on 01.04.2016, which is given as under:- Proved reserves (111): 0.52 million tonnes & Pre-feasibility mineral resources (221): 0.129 million tonnes.	As on 01.04.2017, the available reserves & resources is as given below:- Proved reserves (111): 0.472 million tonnes and Pre-feasibility mineral resources (221): 0.24 million tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No change in the geology of the area. Besides, no exploration was proposed in the modification in approved mining plan for the plan period 2016-17 to 2020-21.	No exploration was carried out in the lease area during the year 2016-17.	Nil

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	During the year 2017-18, it was proposed to develop Quarry No. 1 in between grid lines 1010 N-1060N & 2132E-2261E in depth and one bench will be formed to work out the vein. RL of the bench is from 293m to 290m.	The development in the mine were being undertaken in Quarry Nos. 1 as per the proposal given in the modification in approved mining plan for the plan period 2016-17 to 2020 - 21.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	One bench in depth was proposed to be formed to work out graphite vein during the year 2017-18.	Three benches in OB and two benches having 4m height each have already been developed. Another one bench is being developed to work out graphite during the year 2017-18.	Nil
2c	Stripping ratio or ore to OB ratio	The proposed stripping ratio was 1:0.97 in the year 2016-17, as envisaged in the modification in approved mining plan for the plan period 2016-17 to 2020- 2021.	The figures of OB generation was not available., Therefore, the stripping ratio for Ore to OB could not be calculated.	Nil
2d	Quantity of topsoil generation in m3	As per approved document, no proposal for top soil generation during the year 2016-17.	Nil	Nil

2e	Quantity of overburden generation in m3	It was proposed to generate 6688 cum. of overburden during the year 2016-17 as envisaged in the modification in approved mining plan for the plan period 2016-17 to 2020-21.	The figures of OB removal was not available.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicable.	As per proposal, work was in progress to form one bench in depth to work out the graphite vein.	Nil.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	The Quarry No. 1 was proposed for production during the year 2016-17 as envisaged in the modification in approved mining plan for the plan period 2016-17 to 2020-21.	The quarry no. 1 is being developed to work out graphite vein.	Nil
3b	Quantity of ROM mineral production proposed	It was proposed to be produced 8659 MT ROM during the year 2016-17 as envisaged in the modification in approved MP.	The actual production achieved during the year 2016-17 was 10343 tonnes.	Nil
3c	Recovery of sailable/usable mineral from ROM production	Average recovery was proposed to be around 80% during the year 2016-17.	Average recovery was around 30-32% due to high intercalated waste.	Nil

3d	Quantity of mineral reject generation	No proposal	Not applicable.	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable.	Not applicable.	Nil
3f	Quantity of sub grade mineral generation.	No proposal	Not applicable	Nil
3g	Grade of sub grade mineral generation	Not applicable	Not applicable	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manually	Manually	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	As no subgrade mineral or reject are generated hence no analysis or beneficiation study carried out.	Nil
3j	Provision of drilling and blasting in mineral benches	No drilling Blasting was proposed.	No drilling or blasting,Ore and OB excavated by excavator.	Nil
3k	Provision of mining machineries in mineral benches	Use of Hydraulic excavator, Tiper,Water pump,and disel generated were proposed.	Hydraulic excavator, Tiper,Water pump,and disel generated were used.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height and width were proposed to kept within 6m.	Bench height and width are to kept within 6m.	Nil
3m	Total area covered under excavation/pits	It was proposed to be worked further depth to work out graphite vein	A total of 2.75 ha area has been degraded by excavations.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	During 2016-17 ore to OB ratio proposed was 1:0.97.	The figures of OB removal was not available. Therefore, the ore to OB ratio could not be calculated.	Nil

3o	Total area put in use under different heads at the end of year	Quarry-1.88hect dump-0.99hect	Quarry-2.75 hect Dump-0.99 hect	Nil
3p	Production of ROM mineral during the last five year period as applicable	Proposed production during the plan period from 2016-17 to 2020-21 is given below. 2016-17 : 16902 MT 2017-18: 19145 MT 2018-19 : 20051 MT 2019-20 : 22015 MT 2020-21 :24049 MT	Actual Production Yearwise given below: 2012-13 : 4102 MT 2013-14 : 9260 MT 2014-15: 12178 MT 2015-16 : 11305 MT 2016-17 : 10343 MT	Nil
3q	General remarks of inspecting officers on method of mining etc.	Not applicable.	Other Than Fully Mrchanised(OTFM) method of mining was adopted in the mine by deploying machinerie like- i. Hydraulic Excavator- 02 nos. (0.6 cu.m & 0.3 cu.m), ii. Hydraulic Excavator with Rock Breaker- 01 no. (0.9 cu.m), iii. Dumper- 03 nos. (10 Tes), iv. Water sprinkler- 01 no. (5000 lts) etc. The bench height was also maintained within stipulated dimension.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	As per modification in approved mining plan, proposed for separate dumping of OB and waste on the earmarked area for dumping. The entire Overburden consisting of gritty soil and schistose rock are proposed to be dumped on the SW part of the lease area.	Presently the entire Overburden material was being dumped on a single dump located on the SW part of the lease area. There was no separate dump for top soil and mineral reject as no generation was reported for the same. The dimension of dump is 243 m x 100m x 10m.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Dumping proposed towards South Western side of lease boundary.	Dumping yard located towards South Western side as proposed.	Nil
4c	Number of dumps within lease area and outside of lease area	There was proposal for only one dump on the SW part of the lease area. During second year 0.353 Ha area was proposed to be used for dumping of waste. No dump was proposed outside the lease area.	The only dump was situated within the lease area covering about 0.99 Ha area and attaining a gradual height upto 5-6m.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed to keep in South Western part of the lease area.	The dump has been created in South western part of the lease area outside ultimate pit limit.	Nil
4e	Number of active and alive dumps.	The only existing dump was proposed to be active as no backfilling was proposed during the plan period 2016-17 to 2020-21.	There was only one (01) OB/Waste dump present within the lease area which was active dump having dimension of 102m X 60m X 5-6m located on the SW part of the lease.	Nil

4f	Number of dead dumps.	There was no proposal for dead dump within the lease area.	There was no dead dump within the lease area.	Nil
4g	Number of dumps established.	There was no proposal for establishment of dump during the plan period 2016-17 to 2020-21 modification in approved Mining plan.	Not applicable.	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain along the dump was proposed.	Garland drain and parapet wall was constructed along the dump. length of the retaining wall was 174m.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall was proposed.	174m retaining wall was constructed during the plan period.	Nil
4j	Number of settling ponds	No proposal.	No such settling pond was there.	Nil
4k	Specific comments of inspecting officer on waste dump management	Not applicable.	Lessee had created 01 no. of OB/Waste dump within the lease area which was active. The active Dump was of moderate height (5-6m). The parapet/retainig wall all along the toe of the dump was constructed. There was no problem in dump management as the active dump was of moderate height. The mine management was advised to make terrace over the dump for stability.	Nil

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 proposal for backfilling as mine is not going to exhaust during the plan period.	No Backfilling was done as it was not proposed. The backfilling process will innitiate after complete extraction of mineral.	Nil

5b	Area under backfilling of mined out area	Backfilling was not proposed during the plan period 2016-17 to 2020-21.	Not Applicable	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposal available. The area contains gritty soil hence concurrent use of top soil is not feasible. Further, there was no proposal of backfilling.	Since there was no proposal of backfilling hence concurrent use of top soil is not applicable. Further, the area contains gritty soil hence concurrent use of top soil is not feasible.	Nil
5d	Total area fully reclaimed and rehabilitated	No proposal.	Not applicable	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not applicable.	There was no proposal for backfilling and Reclamation within the lease area as such no area has been Backfilled/Reclaimed. Hence no remark on the item can be offered. Moreover, the area is not matured for backfilling and reclamation.	Nil

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).	No proposal.	Lessee is regularly submitting annual report on PMCP.	Nil
6b	Area available for rehabilitation (ha) .	NA	NA	Nil
6c	afforestation done (ha).	0.06 hect proposed for afforestation.	300 no. of trees were planted in a 0.15 hect area during the year 2016-17. The survival rate is around 73%	Nil

6d	No. of saplings planted during the year	150 sapplings were proposed to be planted during 2016-17.	300 plants were planted during 2016-17.	Nil
6e	Cumulative no .of plants	Proposed cumulative plantation is 475 plants during the plan period 2016-17 to 2020-21.	As on date 300 no. of trees were plantated	Nil
6f	Any other method of rehabilitation	NA	NA	Nil
6g	Cost incurred on watch and care during the year	NA	Lessee has not reported cost incurred on watch and care of trees planted.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA	Nil

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	Waste land is being used for afforestation.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	NA	Air, water and noise monitoring is carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not applicable	The report on PMCP is regularly being submitted by the lessee.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposal.	Not applicable.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	NA	NA	Nil
7c	Different grade of mineral sorted out at mines.	NA	ROM is diectly sent to Processing plant at Rajderwa.	Nil
7d	Any beneficiation process at mines	NA	No	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	Whatever ROM produced from the mine, is diectly sent to processing plant at Rajderwa. As such there is no problem mineral conservation.	Nil
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposal.	Not applicable.	Nil
8b	Concurrent use or storage of topsoil	No proposal	No top soil generation.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	proposed in the approved document for the plan period 2016-17 to 2020 -21.	There is no generation of top soil or sub grade. Waste materials are dumped at southwestern part of the leasehold area.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	N o backfilling has been proposed in the approved document for the plan period 2016-17 to 2020-21.	No backfilling has not been proposed for restoration the land to its original use. .	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed.	Not applicable.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	As per approved document, 475 plants over an area of 0.19 ha has been proposed to be planted duringthe plan period 2016-17 to 2020-21 .	Cumulative plantaion as on 01.04.2017 was 380 plants on 0.15 hect area within ML area and 120 plants out side lease area of 0.1hect. Reported survival rate is 73% and 65% respectively.	Nil

8g	Survival rate	Not proposed.	Reported survival rate is 73% and 65% respectively.	Nil
8h	Water sprinkling on roads to control airborne dust	Proposed	Water sprinkler is used to control airborne dust.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not applicable.	The lessee is planting trees within and outside lease area to maintain aesthetic beauty around the area.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Lessee has submitted Monthly and annual Returns.	Lessee is regularly submitting Monthly and annual Returns within time frame.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr Rahul Kumar Jha is working as Geologist and Sri Mangal Hansda as Manager cum Mining Engineer.	Mr Rahul Kumar Jha is working as Geologist and Sri Mangal Hansda as Manager cum Mining Engineer.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Under current working, 0.55 hect, Waste disposal - 0.28 hect and for office building - 0.29 Hect.	up to 2016-17, current working -1.241ha, road- 0.26ha, OB dump-1.27 ha, total area put on use -2.77ha.	Nil
9d	Scrutiny of Annual return on afforestation	350 plants within and 150 outside lease during 2016-17 with 70% survival rate.	As on 01.04.2017- 730 plants with 70% survival rate.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NA	No mineral reject generation.	Nil

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock-70754 MT, Production -10343 MT,Closing stock-107.653 MT. Grade-8-10% carbon	Opening stock-70754 MT, Production -10343 MT,Closing stock-107.653 MT. Grade-8-10% carbon	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production-Rs 865/MT	The cost of operation appears to be correct.	Nil
9h	Scrutiny of Annual return on fixed assets	Not mentioned	NA	NIL
9k	Scrutiny of Annual return on mining machineries	Excavator 0.5cum-01.and 0.32cum-01 Dumper-10T-03no.	During inspection, it was observed that one Excavator was deployed in the mine.	Nil

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 27(2)	16/11/2017		MCDR17 Rule 27(2)	16/11/2017	
Rule 27(2)	16/11/2017		Rule 27(2)	16/11/2017	

Date :

(SAGAR BODRA)

Indian Bureau of Mines