

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

**MCDR inspection REPORT**

**Kolkata regional office**

**Mine file No :** CAL/BH/SB/FE(G-12)

**Mine code :** 30BHR27030

- (i) Name of the Inspecting : **K004** ) **B.P KERKETTA**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sri Samar Das, Geologist.  
Official with  
Designation
- (iv) Date of Inspection : 08/02/2020
- (v) Prev.inspection date : 08/03/2015

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **GHATKURI**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : JHARKHAND  
District : SINGHBHUM (WEST)  
Village : TATIBA  
Taluka : NAOMUNDI  
Post office : BARAJAMDA  
Pin Code : 833221  
FAX No. : 916582256781  
E-mail : nkpkcbsa@yahoo.in  
Phone : 06596-262261
- (f) Police Station : GUA
- (g) First opening date : 28/07/1953
- (h) Weekly day of rest : SUN
2. Address for : PO: BARAJAMDA  
correspondance : DIST: SINGHBHUM (W).  
JHARKHAND.
3. (a) Lease Number : BHR0184
- (b) Lease area : 149.74
- (c) Period of lease : 20
- (d) Date of Expiry : 27/07/1999
4. Mineral worked : MANGANESE ORE Associated  
IRON ORE Main

## 5. Name and Address of the

Lessee : NIRMAL KUMAR PRADEEP KUMAR  
 JAIN MANDIR ROAD P.O.-  
 CHAIBASA SINGHBHUM (WEST)  
 JHARKHAND  
 Phone:0651-2330999  
 FAX :

Owner : PRADEEP KUMAR JAIN  
 GODREJ HOUSE,MAIN ROAD,  
 UPPER BAZA R RANCHI  
 SINGHBHUM (WEST) JHARKHAND  
 Phone: 0651-2330999  
 FAX :

Agent : PRADEEP KUMAR JAIN  
 GODREJ HOUSE, MAIN ROAD  
 UPPER BAZAR , RANCHI  
 SINGHBHUM (WEST) JHARKHAND  
 Phone:  
 FAX :

## Mining Engineer

Name : R. N. PANDEY,Full Time  
 Qualification : B. SC.(MIN.ENGG.  
 Appointment/ : 01/11/2005 31/05/2017  
 Termination date

## Mining Engineer

Name : ANIL KUMAR RAHI,Full Time  
 Qualification : B.E.(MINING)  
 Appointment/ : 01/06/2017  
 Termination date

## Geologist

Name : SAMAR DAS,Full Time  
 Qualification : M.Sc.(Geo)  
 Appointment/ : 01/04/2004  
 Termination date

## Geologist

Name : C. V. TAMHANE,Full Time  
 Qualification : M. SC.(APP. GEO)  
 Appointment/ : 15/03/2013 01/04/2015  
 Termination date

## Manager

Name : R. N. PANDEY  
 Qualification : B. SC.(MIN. ENGG.), FCC(Restricted)  
 Appointment/ : 01/11/2005 31/05/2017  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Mining Scheme rule 12 MCDR1988 15/10/2004  
 Mining Scheme rule 12 MCDR1988 31/12/2008  
 Modif.approved Mining Scheme 21/07/2010  
 Mining Scheme rule 12 MCDR1988 24/07/2013  
 MP review under 17(1) MCR 2016 18/05/2017

MP review under 17(1) MCR 2016  
FMCP under 23C(1)

18/12/2017  
04/04/2019

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	36	Nil	Not done due to want of forest clearance.
1b	Exploration over lease area for geological axis 1 C) or 2	Total 3 zones (Zone A, B & C)	Nil	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Specified	Nil	Due to want of forest clearance
1d	Balance area to be explored to bring Geological axis in 1 or 2	Total 3 zones (Zone A, B & C)	Nil	
1e	Balance reserve as on 01/04/20	170.93 million tons	Proved Reserve (111) 37353996MT Probable Reserve (122) 6779801MT	
1f	General remarks of inspecting officers on geology, exploration etc		Proposed exploration could not be done ,as no Forest Clearance has been granted for the remaining Forest area.	

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Total 3 zones (Zone A, B & C) Total= 4999245 MT	Zone A, 268575MT (2018-19)	Upto Jan'2020 IronOre Production :1,36,550MT
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB& Mineral proposed. There is no Top Soil. Bench Height OB 10m,Ore 10m.	Separate benches in OB& Mineral made. There is no Top Soil. Bench Height OB 10m,Ore 6m.	
2c	Stripping ratio or ore to OB ratio	1:0.025	1: 0.00	

2d	Quantity of topsoil generation in m3	NA	Nil
2e	Quantity of overburden generation in m3	115367 m3	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Due to market condition only 268575MT has been produced compared to target of 4699290MT. Mine is developed as per proposal.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3 Zones (A, B & C ) consisting of 11 nos. of pits.	Zone A, Production from Bottom Pit & Crushing & Screening at Tiger Pit.	
3b	Quantity of ROM mineral production proposed	4.69 Million Ton	0.268Million Tonne (268575MT)	
3c	Recovery of saleable/usable mineral from ROM production	94 % is saleable	94 % is saleable	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Mineral Reject <45%Fe, Threshold value 45% Fe	Nil	
3f	Quantity of sub grade mineral generation.	1699743.3 MT or 607051.2 cum	Nil	
3g	Grade of sub grade mineral generation	+45 to -58 % Fe	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method 1x 250 TPH Mobile crusher & 2 x 250 TPH Mobile Screen	Mechanized Method 1x 250 TPH Mobile crusher & 2 x 250 TPH Mobile Screen	

- 3i Any analysis or Mineral Cut No beneficiation study  
beneficiation off Grade: ROM carried out for subgrade  
study proposed 58 % Fe. Out mineral and rejects at  
and carried out of 10MTPA ROM present as the proposed  
for sub grade to be produced beneficiation plant has  
mineral and after not come up.  
rejects. expansion,  
about 4.50MTPA  
of subgrade  
and low grade  
material is  
proposed to be  
beneficiated  
for improving  
its quality to  
+64%. A  
beneficiation  
plant with  
4.50MTPA  
capacity is  
planned within  
the lease  
area.
- 3j Provision of Wagon drill of Drilling & blasting  
drilling and 100 mm dia. to done.  
blasting in be used.  
mineral benches Blasting to be  
done.

3k	Provision of mining machineries in mineral benches	Excavators (0.9,2.1cum & 4.3cum capacity), Dozer 2nos., dumpers 85te ,60te,30te, capacity 04, 08,10,4nos., respectively. Volvo- waste handling 30te. 06nos., drill machine, DP 1100 ,30m /hr, 02nos. drill machine 30m/hr 01no. Rock breaker 02nos., Mobile screening & crushing plant 1500TPH, 3nos, Mobile screening & crushing plant 1500TPH, 3nos, Mobile screening & crushing plant 250TPH, 2nos., Mobile Screen plant 250TPH (Reclaimer) 03nos., Wheel Loader 2.2cum, 5nos., Water tanker 12K 3nos compressor proposed.	Back Hoe( 4.2cum) 2nos., Back Hoe( 1.5cum) 1nos., Front end loader (1.8cum) 2nos., Tippers (17cum) 10nos. Water tanker (6000Ltrs.) 4nos.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes, For mineral-Bench Ht-6 m  For OB Bench Ht.- 10m	mineral-Bench Ht-6 m OB Bench Ht.- 10m
3m	Total area covered under excavation/pits	12.581 Ha	12.581 Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.025	1:0.00

3o	Total area put in use under different heads at the end of year	Area to be excavated 35.589ha.,O.B. Dump area 3.703ha.,Infra structure( workshop, administrative building) 0.10ha.,Roads 0.143ha.,Mineral separation plant 7.314ha.,Way bridge work shop 0.510ha.,explosion area 0.005ha.	Area to be excavated 12.581ha.,O.B. Dump area 0.364ha.,Infrastructure( workshop, administrative building,roads) 1.015ha.
3p	Production of ROM mineral during the last five year period as applicable	2013-14 0.403 MTPA 2014-15 0.403 MTPA 2015-16 0.403 MTPA 2016-17 0.403 MTPA 2017-18 0.403 MTPA 2018-19 4.699 MTPA	2013-14 Nil 2014-15 Nil 2015-16 Nil 2016-17 Nil 2017-18 138430MT 2018-19 268575MT
3q	General remarks of inspecting officers on method of mining etc.		Method of mining adopted is Fully mechanised Opencast mining. Backhoe 1.5cum & 4.2cum bucket capacity & 10 Tippers 17cum.capacity,4 water tankers of 6000 Ltrs capacity are used.

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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)	Separate dumping of O.B.and mineral proposed.There is no top soil.	Separate dumping of O.B.and mineral proposed.There is no top soil.	



4b	Location of topsoil, OB and mineral reject dumps	No top soil dump proposed.To be utilised for haul road maintenance.	No top soil dump made.Utilised for haul road maintenance.
4c	Number of dumps within lease area and outside of lease area	4 subgrade dumps ,i.e. Dump No. ED-1,ED-2,ED-3,ED-4 within lease area.	4 subgrade dumps ,i.e. Dump No. ED-1,ED-2,ED-3,ED-4 within lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side Ultimate pit limit.	Out side Ultimate pit limit.
4e	Number of active and alive dumps.	1	1
4f	Number of dead dumps.	3	3
4g	Number of dumps established.	3	3
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall( around dump) 540mx1mx2m,Garland Drain ( around dump) 540mx1mx1.5m,Settling tank (near dump) 1no(12mx10mx4m)	Retaining wall( around dump) 540mx1mx2m,Garland Drain ( around dump) 540mx1mx1.5m,Settling tank (near dump) 1no(12mx10mx4m)
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall( around dump) 540mx1mx2m,Garland Drain ( around dump) 540mx1mx1.5m,Settling tank (near dump) 1no(12mx10mx4m)	Retaining wall( around dump) 540mx1mx2m,Garland Drain ( around dump) 540mx1mx1.5m,Settling tank (near dump) 1no(12mx10mx4m)
4j	Number of settling ponds	Settling tank (near dump) 1no(12mx10mx4m)	Settling tank (near dump) 1no(12mx10mx4m)
4k	Specific comments of inspecting officer on waste dump management		Waste dump management is carried out as per approved Mining Plan.

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	During the current plan period upto 2018-19 the full extraction of mineral is envisaged before starting backfilling	The mineral is not exhausted in the pits, therefore, no reclamation by backfilling done.	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No generation of Top soil.	No generation of Top soil.	
5d	Total area fully reclaimed and rehabilitated	2.5ha.	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Though 2.5ha. area for rehabilitation of waste land was proposed. But, since mineral is still continuing at depth, hence the backfiling not done.	

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).	Annual Report on PMCP to be submitted in time.	Annual Report on PMCP submitted in time.	
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	Not proposed.	Nil	
6d	No. of saplings planted during the year	Not proposed.	Nil	
6e	Cumulative no .of plants	Not proposed.	Nil	

6f	Any other method of rehabilitation	Not proposed.	Nil
6g	Cost incurred on watch and care during the year	Not proposed.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not proposed.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not proposed.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not proposed.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not proposed.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not proposed.	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation of 4687saplings	Plantation of 4900saplings
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air monitoring Rs 280800/- ,Water monitoring Rs447800/- ,Noise monitoring Rs 33600/-	Air monitoring Rs 40320/- ,Water monitoring Rs70000/- ,Noise monitoring Rs 20000/-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP compliance and progressive closure operations are carried out as per approved Mining Plan as far as possible.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	60% of ROM having Grade (+58%Fe)is marketable Ore, 34% is Subgrade (+45% to 58% Fe) & 6% (<45% Fe) is waste.	60% of ROM having Grade (+58%Fe)is marketable Ore, 34% is Subgrade (+45% to 58% Fe) & 6% (<45% Fe) is waste.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanically by Mobile Crushing and screening plant.	Mechanically by Mobile Crushing and screening plant.	
7c	Different grade of mineral sorted out at mines.	Saleable ore @60% (+58% Fe)of total excavation, Mineral Reject @34% (grade +45-58% Fe) of total excavation, intercalated waste @ 6%(grade < 45%Fe)	Saleable ore @60% (+58% Fe)of total excavation, Mineral Reject @34% (grade +45-58% Fe) of total excavation, intercalated waste @ 6%(grade < 45%Fe)	

7d	Any beneficiation process at mines	Only crushing & screening.	Only crushing & screening.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Due regard is given to the mineral conservation and mineral beneficiation. Low grade ore is blended with high grade ore and sold.

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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil present.	Nil	
8b	Concurrent use or storage of topsoil	Not proposed.	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of Overburden, waste rock, rejects and fines proposed.	Separate dumping of Overburden, waste rock, rejects and fines proposed.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Overburden, waste rock, rejects to be utilised for maintaining haul roads.	Overburden, waste rock, rejects utilised for maintaining haul roads.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed as the quarries are not matured for reclamation.	Nil.	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	About 10000nos.existing plantation. 4687nos to be planted as gap filling during year 2018-19 in safety zone waste land area.	Cumulative 27661nos.existing plantation.in 3.585ha. within lease area. and Cumulative 4450nos.existing plantation.in 1.59ha. outside lease area.100saplings were planted during year 2018-19 in safety zone area in 0.5ha area.
8g	Survival rate	Not proposed.	77%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads proposed.	Water sprinkling on roads done.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The aesthetic beauty in and around the mines area is good.

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Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns and Annual Return for 2018-19 submitted .	Found correct.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Sri Anil Kumar Rahi, Geologist : Sri Samar kumar Das	Found correct.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under current O/C working 12.581ha, area used for waste disposal 0.364ha., area occupied by road, Office Building etc.1.015ha. All are in Reserved Forest Land.	Found correct.	

9d	Scrutiny of Annual return on afforestation	475nos ,survival rate 36%	It should be 4900nos ,survival rate 77%
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	ROM Opening & Closing Stock 126170.456Te & 292815.316Te respectively., ROM production 268575Te. Lump 62% to below 65% Fe Opening & Closing Stock 47307.38Te & 19142.93Te, respectively.Lump 60% to below 62% Fe Opening & Closing Stock Nil & 10350.64Te,58% to below 60% Fe Opening & Closing Stock Nil & 887.45Te,55% to below 58% Fe Opening & Closing Stock Nil & 20000TFines 58% to below 60% Fe Opening & Closing Stock 23926.725Te, Fines 60% to below 62% Fe Opening , Closing Stock 37739.975 Te.	Appears to be correct.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value varies from :Rs 1716/te to Rs 3287/te for different grades.and sold to different Industries. Ex.Mine Price: Rs 2776/te for 62 to below 65% Fe Lumps& Rs 600/te for 55 to 58% Fe Fines Production Cost : Rs 304.15/te including Royalty.	Appears to be correct.
9h	Scrutiny of Annual return on fixed assets	Rs.3523998/-	Appears to be correct.
9k	Scrutiny of Annual return on mining machineries	Back Hoe( 4.2cum) 2nos.,Back Hoe( 1.5cum) 1nos.,Front end loader (1.8cum)2nos., Tippers (17cum) 10nos.Water tanker (6000Ltrs.) 4nos.	Apart from above Two Contractual Mobile Crushing & Screening Plants were working.

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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
MCDR17	Rule 11(1)	24/02/2020			
MCDR17	Rule 26(2)	24/02/2020	09/09/2020		
MCDR17	Rule 35(2)	24/02/2020	09/09/2020		

**Date :**

**(B.P KERKETTA)**

Indian Bureau of Mines