INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/SNG/MCDR-16/BBS Mine code : 400RI13005

(i) Name of the Inspecting : U11) DAYANAND UPADHYAY

Officer and ID No.

(ii) Designation : Sr. Asst. Contrl. Mines

(iii) Accompaning mine : Shri H. H. Panda, Mines Manager

Official with Designation

(iv) Date of Inspection : 08/01/2018
(v) Prev.inspection date : 30/07/2016

PART-I : GENERAL INFORMATION

1. (a) Mine Name : GANUA

(b) Registration NO. : IBM/135/2011

(e) Postal address

State : ORISSA

District : SUNDARGARH

Village : GANUA Taluka : BONAI Post office : MALDA

Pin Code

FAX No. : 06767-275362
E-mail : snmbbl@gmail.com
Phone : 06767-275362

(f) Police Station : Koira

(g) First opening date : 06/06/1980

(h) Weekly day of rest : MON

2. Address for : VILL: GONUA, PO:MALDA correspondance DIST: SUNDERGARH, ORISSA

POLICE STATION . KOIRA

3. (a) Lease Number : ORIO694
(b) Lease area : 13.79
(c) Period of lease : 20

(d) Date of Expiry : 05/06/2020

4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : PRABODH MOHANTY (L/HOF S.N.MOHANTY.)

AT: STATION ROAD, P.O. BARBIL DIST. KEONJHAR, ORISSA KEONJHAR ORISSA

Phone: FAX:

Owner : P. K. MOHANTY, L.H. OF LATE S.N. MOHANTY

AT: STATION ROAD, P.O. BARBIL DIST. KEONJHAR, ORISSA KEONJHAR ORISSA Phone: 06767-275362

FAX : 06767-275362

Agent : T.C.Sei

Barbil, Keonjhar, Odisha SUNDARGARH ORISSA Phone: 06767-275362 FAX: 06767-212164

Mining Engineer

Name : B. Samal, Full Time

Qualification : BE Mining Appointment/ : 02/12/2012

Termination date

Manager

Name : H. H. Panda

Qualification : AMIE

Appointment/ : 22/12/2009

Termination date

6. Date of approval of Mining : Renewal under rule 24 MCR1960 11/11/2004
Plan/Scheme of Mining Modif.of approved Mining Plan 17/03/2008
Modif.approved Mining Scheme 02/08/2013
Mining Scheme rule 12 MCDR1988 22/05/2014

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	07 number of bore holes in 2016-17.	There is no backlog. In 2016-17, 05 nos. of bore holes have been drilled by lessee.	There is no backlog of bore holes. In 2016-17, 05 nos. of bore holes have been drilled by lessee.
1b	Exploration over lease area for geological axis 1 or 2	Exploration under G1 axis.	In 2016-17, 05 nos. of bore holes have been drilled by lessee. Total 10.32 ha area is explored under G1 level through 72 no. of bore holes covering a total metarage of 2429.92m.	Almost all the mineralised area has been explored by lessee covering total metarage of 2429.92m under G1 level.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Exploration agency involved in drilling was M/s Gemcokati exploration Pvt Ltd. Cost incurred in drilling was Rs 64.20 lakh/	Exploration agency involved in drilling was M/s Gemcokati exploration Pvt Ltd. Cost incurred in drilling was Rs 64.20 lakh/
1d	Balance area to be explored to bring Geological axis in 1 or 2	About 10.32 ha area was proposed to cover under G1 level during scheme period.	Almost all the mineralised area has been explored by lessee covering area of 10.32 ha of total metarage 2429.92m under G1 level.	Almost all the mineralised area has been explored by lessee covering area of 10.32 ha of total metarage 2429.92m under Gl level.
le	Balance reserve as on 01/04/20	Balance reserve as per Scheme of mining approved on 22.05.2014 was 69256.2T under 111 category and 32747T under 121 category.	Balance reserve as on 01/04/2017 is 67191T under 111 category and 5676T under 121 category.	Balance reserve as on 01/04/2017 is 67191T under 111 category and 5676T under 121 category.

1f General remarks of inspecting officers on geology, exploration etc

In 2016-17, 05 nos. of bore holes have been drilled by lessee. Almost all the mineralised area has been explored by lessee covering area of 10.32 ha of total metarage 2429.92m under G1 level.

Almost all the mineralised area has been explored by lessee covering area of 10.32 ha of total metarage 2429.92m under G1 level.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Manganese Quarry-1(E- 200/450 & N- 100/170) & Goda pit (E- 620/725N- 130/170)	The development is concentrated in Manganese Quarry-1(E-200/450 & N-100/170) & Goda pit (E-620/725N-130/170)	Development is carried out in two quarried as proposed i.e Manganese Quarry-1 & Goda pit.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and ore of 3m height. Top soil bench not proposed.	Separate benches in OB and ore of 3m height have been made.	There is no top soil bench.
2c	Stripping ratio or ore to OB ratio	1 : 6.923 T/cu.m	1 : 6.90 T/cu.m	
2d	Quantity of topsoil generation in m3	Not proposed in approved scheme of mining.	Nil.	Not applicable.
2e	Quantity of overburden generation in m3	16051.5 cu.m	Overburden generated in 2016-17 is 16000 cu.m	Overburden generated in 2016- 17 is 16000 cu.m
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The whole mineralised area is fully exlpored and development is concentrated in two pits i.e Manganese Quarry-1 & Goda pit.	The whole mineralised area is fully exlpored and development is concentrated in two pits i.e Manganese Quarry-1 & Goda pit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pits.	Working is concentrated in mainly 02 pits, Manganese Quarry-1 & Goda pit.	Working is concentrated in mainly 02 pits, Manganese Quarry-1 & Goda pit.
3b	Quantity of ROM mineral production proposed	4141.20 T of manganese ore.	In 2016-17, 1090.0 tonnes manganese ore has been produced.	Manganese ore ia almost low grade and due to poor market demand production acheived is less.
3c	Recovery of sailable/usable mineral from ROM production	Saleable ore 10% of Total ROM production.	Manganese deposit is occured pocket in nature and recovery of saleable ore is about 10% of total ROM.	Manganese deposit is occured pocket in nature and recovery of saleable ore is about 10% of total ROM.
3d	Quantity of mineral reject generation	3805.2 T	Sub grade/ mineral reject generated during 2016-17 is 550T.	Due to poor market demand less production of ROM is being carried out. Therefore sub grade generation is less.
3e	Grade of mineral rejects generation and threshold value declared.	+10 to 20% Mn.	The sub grade/mineral reject produced is +10 to 20% Mn.	The sub grade/mineral reject produced is +10 to 20% Mn.
3f	Quantity of sub grade mineral generation.	3805.2 T	Sub grade/ mineral reject generated during 2016-17 is 550T.	Due to poor market demand less production of ROM is being carried out. Therefore sub grade generation is less.
3g	Grade of sub grade mineral generation	+10 to 20% Mn.	The sub grade/mineral reject produced is +10 to 20% Mn.	The sub grade/mineral reject produced is +10 to 20% Mn.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual.	Manual.	Manual segregation of manganese ore from ROM is being practiced.

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	Nil.	Not applicable.
3j	Provision of drilling and blasting in mineral benches	Jack hammer drilling of 32mm dia. hole and blasting with nitro compounds explosive.	Jack hammer drilling of 32 mm dia. hole with nitro compounds exlposive is being practiced for drilling and blasting. Depth of for blasting 3.3m with burden- 1.2m and spacing- 1.5m. are maintained in row blasting.	Depth of blasting- 3.3m Burden- 1.2m spacing- 1.5m.
3k	Provision of mining machineries in mineral benches	Jack hammer Drill-1, Air compressor-1, Tipper 10 T-4, Excavator 0.9 cu.m-1, Water tanker 18KL-1	The machinaries used for mining are Jack hammer Drill-1, Air compressor-1, Tipper 10 T-4, Excavator 0.9 cu.m-1, Water tanker 18KL-1.	The machinaries used for mining are Jack hammer Drill-1, Air compressor-1, Tipper 10 T-4, Excavator 0.9 cu.m-1, Water tanker 18KL-1.
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height 3m.	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits		About 4.32 ha. has been covered under excavation pits.	Area covered under exvavation pit is 4.32 ha.
3n	Ore to OB ratio for the pit/mine during the year.	1 : 6.923 T/cu.m	1 : 6.90 T/cu.m	

30 Total area put in use under different heads at the end of year

Area covered under different heads are Pit-4.32 ha, waste dump-1.60 ha, Plant, residential & building, roads-1.034ha & Mineral storage, plantation & others -

Area covered under different heads are Pit-4.32 ha, waste dump-1.60 ha, Plant, residential & building, roads-1.034ha & Mineral storage, plantation & others -0.731ha.

Area covered under different heads are Pit-4.32 ha, waste dump-1.60 ha, Plant, residential & building, roads-1.034ha & Mineral storage, plantation & others -0.731ha.

Production of 3р ROM mineral during the last five year period 2014-15: as applicable

2012-13: 11648T 4072.8T 2015-16:

2016-17: 4141T

0.731ha.

4108.8T

2013-14: 520T 2013-14: 2496T 2014-15: 882.336T 2015-16: 1120.67T 2016-17: 1090T

2012-13: 1525.725T

Manganese ore ia almost low grade and due to poor market demand production acheived is less.

General remarks of inspecting officers on method of mining etc.

The ROM production has been carried out from Manganese Quarry-1 & Goda pit. Jack hammer drilling of 32mm dia. hole with nitro compounds exlposive is being practiced for drilling and blasting. Manganese ore ia almost low grade and due to poor market demand production acheived is less.

The ROM production has been carried out from Manganese Quarry-1 & Goda pit. Jack hammer drilling of 32mm dia. hole with nitro compounds exlposive is being practiced for drilling and blasting. Manganese ore ia almost low grade and due to poor market demand production acheived is less.

Solid Waste Management - Dumping:

Sl.No. Propasals Actual work Remarks Item

4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not proposed.	Waste generated during mining operation is being utilised for back filling.	There is no dumping proposal of waste in approved plan period. Waste generated during mining operation is being utilised for back filling.
4b	Location of topsoil, OB and mineral reject dumps	Dumping of waste & top soil not proposed.	Waste generated during mining operation is being utilised for back filling.	There are two old dump in north western part of the lease which are ehabilitated by plantation.
4c	Number of dumps within lease area and outside of lease area	Dumping of waste not proposed.	Waste generated during mining operation is being utilised for back filling.	There are two old dump in north western part of the lease which are ehabilitated by plantation.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumping of waste not proposed.	There are two old dumps (Dump-1, E55/100 & N-125/175: Dump-2, E-120/220 & N-20/185) in north western part of the lease which are ehabilitated by plantation.	Waste generated during mining operation is being utilised for back filling.
4e	Number of active and alive dumps.		There are two old dumps (Dump-1, E55/100 & N-125/175: Dump-2, E-120/220 & N-20/185) in north western part of the lease which are ehabilitated by plantation.	Waste generated during mining operation is being utilised for back filling.
4f	Number of dead dumps.	Proposal not furnished in approved scheme of mining.	There are two old dumps (Dump-1, E55/100 & N-125/175: Dump-2, E-120/220 & N-20/185) in north western part of the lease which are ehabilitated by plantation.	Dead dump has been stabilised by plantation.

4g	Number of dumps established.	Proposal not furnished in approved scheme of mining.	There are two old dumps (Dump-1, E55/100 & N-125/175: Dump-2, E-120/220 & N-20/185) in north western part of the lease which are ehabilitated by plantation.	Dead dump has been stabilised by plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal not furnished in approved scheme of mining.	Retaining wall and garland drain have made around the old waste dump.	Retaining wall and garland drain have made around the old waste dump.
4i	Length of Retaining wall or garland drain all along dumps	Proposal not furnished in approved scheme of mining.	Nil.	Retaining wall and garland drain have made around the old waste dump.
4 j	Number of settling ponds	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
4k	Specific comments of inspecting officer on waste dump management		Waste generated during mining operation is being utilised for back filling. There are two old dumps in north western part of the lease which are ehabilitated by plantation.	Waste generated during mining operation is being utilised for back filling. There are two old dumps in north western part of the lease which are ehabilitated by plantation.

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.	area about 0.247 ha	Backfilling has been carried out in partially mined out covering about 0.242 ha.	Backfilling has been carried out in partially mined out covering about 0.242 ha.
5b	Area under backfilling of mined out area	0.247 ha area proposed for backfilling.	Backfilling has been carried out in partially mined out covering about 0.242 ha.	Backfilling has been carried out in partially mined out covering about 0.242 ha.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Top soil not proposed.	Nil.	Not applicable.
5d	Total area fully reclaimed and rehabilitated	0.04 ha backfilled area.	About 0.04 ha backfilled area has been rehabilitated by plantation.	Old dumps of 0.63 ha. area has been rehabilitated by plantation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Concurrent backfilling of mined out area has been carried out by lessee. In 2016-17, 0.242 ha mined out area has been filled by waste.	Old dumps of 0.63 ha. area has been rehabilitated by plantation.

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).	Not spcefied.	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
6b	Area available for rehabilitation (ha) .	0.04 ha backfilled area.	About 0.04 ha backfilled area has been rehabilitated by platation.	Old dumps of 0.63 ha. area has been rehabilitated by plantation.
6c	afforestation done (ha).	0.04 ha. area.	About 0.04 ha backfilled area has been rehabilitated by platation.	About 0.04 ha backfilled area has been rehabilitated by platation.
6d	No. of saplings planted during the year	500 saplings.	In 2016-17, total 6000 nos. of saplings have been planted by lessee.	In 2016-17, total 6000 nos. of saplings have been planted by lessee.
6e	Cumulative no .of plants		Cumulative nos. of saplings planted in the lease area is about 35800 nos.	Cumulative nos. of saplings planted in the lease area is about 35800 nos. covering area 4.81 ha.

6f	Any other method	By plantation	About 0.04 ha backfilled	About 0.04 ha
	of rehabilitation	on backfilled area.	area has been rehabilitated by platation.	backfilled area has been rehabilitated by platation.
6g	Cost incurred on watch and care during the year	Not specified.	Around Rs 85000/- cost incurred by lessee on watch and care.	Around Rs 85000/- cost incurred by lessee on watch and care.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	0.247 ha area proposed for backfilling.	Backfilling has been carried out in partially mined out covering about 0.242 ha.	Backfilling has been carried out in partially mined out covering about 0.242 ha.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	proposed for	Backfilling has been carried out in partially mined out covering about 0.242 ha.	Backfilling has been carried out in partially mined out covering about 0.242 ha.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	of 0.04 ha backfilled area by	About 0.04 ha backfilled area has been rehabilitated by platation.	About 0.04 ha backfilled area has been rehabilitated by platation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Rehabilitation of 0.04 ha backfilled area by plantation.	About 0.04 ha backfilled area has been rehabilitated by platation.	About 0.04 ha backfilled area has been rehabilitated by platation.
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Rehabilitation of 0.04 ha backfilled area by plantation.	About 0.04 ha backfilled area has been rehabilitated by platation.	About 0.04 ha backfilled area has been rehabilitated by platation.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Proposal not furnished.	Nil.	Not applicable.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposal not furnished.	Nil.	Not applicable.
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation		Nil.	Not applicable.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring.	Quarterly monitoring of air, water and noise level are being carried out.	Quarterly monitoring of air, water and noise level are being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Backfilling has been carried out in partially mined out covering about 0.242 ha. About 0.04 ha backfilled area has been rehabilitated by plantation.	Old dumps in north western part of the lease hav been ehabilitated by plantation.

Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	25% Mn & +25-	Gradewise sorting of +10-25% Mn & +25-35% Mn is being practiced.	the mine sorted
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	Manual.	Manual sorting is being practiced.	Manual sorting is being practiced.
7c	Different grade of mineral sorted out at mines.	+10-25% Mn & +25-35% Mn	Different grades of minerals sorted out at mines are +10-25% Mn & +25-35% Mn.	Different grades of minerals sorted out at mines are +10-25% Mn & +25-35% Mn.
7d	Any beneficiation process at mines .		Nil.	Manual sorting and sizining is being practiced.

7e	General remarks
	of inspecting
	officer on
	Mineral
	conservation and
	beneficiation
	issues

Different grades of minerals sorted out at mines are +10-25% Mn & +25-35% Mn. The sub grade generated during mining has also been dispatched time to time as per market demand.

Manual sorting and sizining is being practiced to separate the different grades +10-25% Mn & +25-35% Mn.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	in approved	Nil.	Not applicable.
d8	Concurrent use or storage of topsoil	Not proposed in approved scheme of mining.	Nil.	Not applicable.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Dumping of waste & top soil not proposed.	Waste generated during mining operation is being utilised for back filling.	Waste generated during mining operation is being utilised for back filling.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling.	Waste generated during mining operation is being utilised for back filling.	Waste generated during mining operation is being utilised for back filling.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	0.04 ha backfilled area.	About 0.04 ha backfilled area has been rehabilitated by plantation.	Old dumps of 0.63 ha. area has been rehabilitated by plantation.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	500 nos. saplings	6000 nos. of saplings have been planted by lessee in dump and backfilled area.	Cumulative nos. of saplings planted in the lease area is about 35800 nos. covering area 4.81 ha.
8g	Survival rate	Not specified.	Rate of survival is about 80%.	Rate of survival is about 80%.
8h	Water sprinkling on roads to control airborne dust	Water sprinkler.	One water sprinkler are used to control air borne dust.	Water sprinkler of 18 KL capacity is used to control air borne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthic beauty in and aroun mined area is maintained by plantation. As reported cumulative no. of trees planted by lessee is about 38500 nos. covering area of 4.5 ha.	Aesthic beauty in and aroun mined area is maintained by plantation. As reported cumulative no. of trees planted by lessee is about 38500 nos. covering area of 4.5 ha.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are being regularly submitted by lessee.	The annual return for the year 2016-17 has been submitted by lessee.	Monthly & Annual returns are being regularly submitted by lessee.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer-1, Diploma mining Engineer-1, Geologist-1, Surveyor-1.	Graduate Mining Engineer-1, Diploma mining Engineer-1, Geologist-1, Surveyor-1.	Graduate Mining Engineer-1, Diploma mining Engineer-1, Geologist-1, Surveyor-1.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	different heads are Pit-4.32 ha,	Area covered under different heads are Pit-4.32 ha, waste dump-1.60 ha, Plant, residential & building, roads-1.034ha & Mineral storage, plantation & others -0.731ha.	Area covered under different heads are Pit-4.32 ha, waste dump-1.60 ha, Plant, residential & building, roads-1.034ha & Mineral storage, plantation & others -0.731ha.
9d	Scrutiny of Annual return on afforestation	6000 nos. of saplings.	6000 nos. of saplings.	6000 nos. of saplings have been plated by less.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		550T below 25% Mn.	550T below 25% Mn.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	at mine head	Closing stock at mine head 1625.751T of +20% to 46% Mn.	Closing stock at mine head 1625.751T of +20% to 46% Mn.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	-	Ex mine price: below 25% Mn- Rs 3000/- 25 to 35% Mn- Rs 5000/- 35 to 46% Mn- Rs 178260/-	Ex mine price: below 25% Mn- Rs 3000/- 25 to 35% Mn- Rs 5000/- 35 to 46% Mn- Rs 178260/-
9h	Scrutiny of Annual return on fixed assets	Fixed asset(Rs) : 5458000/-	Fixed asset(Rs) : 5458000/-	Fixed asset(Rs) : 5458000/-
9k	Scrutiny of Annual return on mining machineries	compressor-1,	Jack hammer Drill-1, Air compressor-1, Tipper 10 T-4, Excavator 0.9 cu.m-1, Water tanker 18KL-1	Jack hammer Drill- 1, Air compressor- 1, Tipper 10 T-4, Excavator 0.9 cu.m-1, Water tanker 18KL-1

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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 : (DAYANAND UPADHYAY)

Indian Bureau of Mines