# INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

#### MCDR INSPECTION REPORT

#### Bhubaneshwar regional office

Mine file No : ORI/IRON-BXT/SNG/MCDR-2/BBS Mine code : 300RI13023

(i) Name of the Inspecting : SRM ) SHRI SUDIP RANJAN MAZUMDAR

Officer and ID No.

(ii) Designation : Senior Mining Geologist

(iii) Accompaning mine : Shri S K Garnaik, Mines Manager

Official with Designation

(iv) Date of Inspection : 09/01/2018
(v) Prev.inspection date : 28/01/2016

PART-I : GENERAL INFORMATION

1. (a) Mine Name : SAN INDPUR

(b) Registration NO. : IBM/4585/2011

(c) Category : A Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : ORISSA

District : SUNDARGARH
Village : SAN INDUPUR

Taluka : BONAI
Post office : PATAMUNDA

Pin Code

FAX No. : 06767-276161

E-mail : rungtas@rungtamines.com

Phone : 09437077202

(f) Police Station : Koira

(g) First opening date : 01/08/1989

(h) Weekly day of rest : SAT

2. Address for : SANINDPUR IRON &BUXITE MINES

correspondance VILL-SAINDPUR.PO-PATMUNDA

DIST-SUNDERGARH

3. (a) Lease Number : ORIO147 (b) Lease area : 147.1

(c) Period of lease : 50

(d) Date of Expiry : 05/09/2035

4. Mineral worked : BAUXITE Associated

IRON ORE Main

5. Name and Address of the

Lessee : M/s Rungta Sons (P) Ltd

Rungta House P.O. Chaisabasa SINGHBHUM

(WEST) JHARKHAND

Phone: (06582) 56861/56761

FAX :91 6582 56442

Owner : M D RUSTAGI, NOMINATED OWNER

RUNGTA OFFICE, MAIN ROAD, BARBIL AT/PO- BARBIL, DIST-KEONJHAR SUNDARGARH ORISSA

Phone: FAX:

Agent : A. S. Mahapatra

Rungta office, Main Road Barbil Disr-Keonjhar KEONJHAR ORISSA

Phone: 06767-276441 FAX : 06767-275481

Mining Engineer

Name : Laxkhan Saw, Full Time

Qualification : AMIE (Mining)
Appointment/ : 14/04/2014

Termination date

Geologist

Name : D.K.Naik, Full Time

Qualification : MSc (Geology)
Appointment/ : 01/11/2015

Termination date

Manager

Name : S K GARNAIK

Qualification : AMIE MINING, 1ST CLASS CERTIFICATE OF CC

Appointment/ : 17/11/2008

Termination date

6. Date of approval of Mining Plan/Scheme of Mining

: Mining Scheme rule 12 MCDR1988 09/06/2003 Renewal under rule 24 MCR1960 14/03/2006 Modif.of approved Mining Plan 25/02/2010 Mining Scheme rule 12 MCDR1988 28/05/2010 Modif.approved Mining Scheme 31/07/2013 FMCP under 23C(1) 20/01/2015 Mining Scheme rule 12 MCDR1988 26/02/2015 MP modif under 17(3) MCR 2016 27/12/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

### Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	10 nos. of bore hole proposed in 2016-17	15 nos. of bore hole drilled in 2016-17	No back log of previous year
1b	Exploration over lease area for geological axis 1 or 2	No Specific Proposal	Exploration under G1: 88.737 Ha and G2 is Nil.	Non-mineralised area of 9 ha.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Specific Proposal	Exploration agency: M/s Geotech India (P) Ltd. Expenditure incurred: Rs.2882774.00	Exploration agency: M/s Geotech India (P) Ltd. Expenditure incurred: Rs.2882774.00
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Specific Proposal	Unexplored lease area : 58.363 ha	The unexplored area 58.363 ha land is applied for surrender which is under process with State Govt.
1e	Balance reserve as on 01/04/20	Reserve as on 01.11.2016: 35391427 MT, Resource as on 01.11.2016: 11878604 MT, Total Resources: 47270031MT	Production from Nov-2016 to March-2016: 986723.810 MT. Reserve as on 01.04.2017 (111) 34404703.190 MT and Resource (211): 11878604.00 MT. Total Resource as on 01.04.2017 46283307.19 MT	Production from Nov-2016: 986723.810 MT. Reserve as on 01.04.2017 (111) 34404703.190 MT and Resource (211): 11878604.00 MT. Total Resource as on 01.04.2017 46283307.19 MT
1f	General remarks of inspecting officers on geology, exploration etc	No Comments	The exploration has been carried out as per the proposal and the total area explored under G1 level of Exploration is 88.737 Ha	The exploration has been carried out as per the proposal and the total area explored under G1 level of Exploration is 88.737 Ha

### Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area		C-Top Quarry N960-E155,N340-E219 N596-E482,N832-W228	C-Top Quarry N960-E155,N340- E219 N596-E482,N832- W228
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	for excavation of top soil .	No top soil extracted. There are 2no of OB bench & 6 no of ore benches are developed	No Top soil benches are there
2c	Stripping ratio or ore to OB ratio	1:0.046	1:0.045	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	132280 Cum	116300.918 Cum	The less waste generation due to less production
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No Comments	The advancing direction of development of the pit has been done as per the proposal. But the waste generation is less due to less production.	The advancing direction of development of the pit has been done as per the proposal. But the waste generation is less due to less production.

## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One Pit named C-Top Quarry	One Pit named C-Top Quarry	One Pit named C- Top Quarry
3b	Quantity of ROM mineral production proposed		ROM Produced in 2016-17 was 25,65,081 MT	ROM Produced in 2016-17 was 25,65,081 MT

3c	Recovery of sailable/usable mineral from ROM production	89%	99.8%	99.8%
3d	Quantity of mineral reject generation		4650 tonnes of MR generated in 2016-17.	4650 tonnes of MR generated in 2016-17.
3e	Grade of mineral rejects generation and threshold value declared.	Threshold value of Iron	45%-55% Fe	45%-55% Fe
3f	Quantity of sub grade mineral generation.		4650 tonnes of MR generated in 2016-17.	4650 tonnes of MR generated in 2016-17.
3g	Grade of sub grade mineral	45%-55% Fe,	45%-55% Fe	45%-55% Fe
	generation			

3i Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.

Two sets of One set of wet wet benefication plant of beneficiation 250 tph has been plants of commissioned 250tph

One set of wet benefication plant of 250 tph has been commissioned

3 ј Provision of drilling and blasting in mineral benches Deep Hole 4.8 & burden 3.6m & proposed and few rock breakers will be used for hard Ore breaking.

throughput

will be

generated from this plant viz. -20+8mm, -8+2mm and -1mm fines. Tailings of (-) 75microns will be

thickened in Hi-rate

further dewatered in Filter Press.

Thickeners and the thickened sludge will be

capacity each (total 500tph capacity) are proposed to install within the ML area. There will be three products

Controlled blasting drilling depth technique with depth 10m 10m , spacing , spacing 4.8 m & burden 3.6m has been adopted. The rock breakers have blasting was been used for hard Ore breaking.

Controlled blasting technique with depth 10m , spacing 4.8 m & burden 3.6m has been adopted. The rock breakers have been used for hard Ore breaking.

Provision of 3k mining machineries in mineral benches Yes

Yes

Yes

31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	Area under excavation/pit s/mining: 27.85 ha	Area under excavation/pits/mining: 27.85 ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.046	1:0.045	
30	Total area put in use under different heads at the end of year	Area under mining: 27.85 Ha. Waste dump site: 15.46 Ha. Mineral Storage: 2.84 Ha. Infrastructure: 2.0 Ha. Roads: 1.2 Ha. Green belt: 7.0 Ha. ETP: 0.1 Ha. Mineral processing plant: 2.518Ha.	Green belt: 7.0 Ha.	Area under mining: 27.85 Ha. Waste dump site: 15.46 Ha. Mineral Storage: 2.84 Ha. Infrastructure: 2.0 Ha. Roads: 1.2 Ha. Green belt: 7.0 Ha. ETP: 0.1 Ha. Mineral processing plant: 2.518Ha.
3p	Production of ROM mineral during the last five year period as applicable	2012-13 :5002410 MT 2013-14 :3850000 MT 2014-15 :4500000 MT 2015-16 :4500000 MT 2016-17 :4500000 MT	2012-13 :1634931.430 MT 2013-14 :2633621.140 MT 2014-15 :2340281.140 MT 2015-16 :2600040.550 MT 2016-17 :2565081.880 MT	2012-13 :1634931.430 MT 2013-14 :2633621.140 MT 2014-15 :2340281.140 MT 2015-16 :2600040.550 MT 2016-17 :2565081.880 MT
3q	General remarks of inspecting officers on method of mining	No Comments	The exploitation of mineral work is done as per the proposal.	The exploitation of mineral work is done as per the proposal.

etc.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Dump-B is the proposed dumping site for OB	In Dump-B ,the dumping has been done.	In Dump-B ,the dumping has been done.
4b	Location of topsoil, OB and mineral reject dumps	Dump-B(680m Top RL & 623.55m Bottom RL) N955W352,N514W 495; N587W204,N571W 521		Dump-B(680m Top R & 623.55m Bottom RL) N955W352,N517W391 N683W185,N557W497
4c	Number of dumps within lease area and outside of lease area	No of dumps within lease area three: Dump-A(Low Grade Ore) Dump-B(Mixed Ore) Dump-C(Mixed Ore)	No of dumps within lease area three: Dump-A(Low Grade Ore) Dump-B(Mixed Ore) Dump-C(Mixed Ore)	No of dumps within lease area three: Dump-A(Low Grade Ore) Dump-B(Mixed Ore) Dump-C(Mixed Ore)
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	W04) (N289E279,N346 W40) DumpB: (N514W495,N955 W352)	B(N517W391,N955W352), (N683W185,N557W497) Dump- C(N769E528,N1069E44), (N1109E353,N846E556)	Dump- A(N242E175,N433E1), (N289E279,N346W40) Dump- B(N517W391,N955W32), (N683W185,N557W49)) Dump- C(N769E528,N1069E4), (N1109E353,N846E56)
4e	Number of active and alive dumps.	01(Dump-B)	01(Dump-B)	01(Dump-B)
4f	Number of dead dumps.	01(Dump-C)	01(Dump-C)	01(Dump-C)
4g	Number of dumps established.	01	01(Dump-B)	01(Dump-B)
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	

4i	Length of Retaining wall or garland drain all along dumps		Garland drain: 89 m X 1.5 m X 1.0 m	Retaining wall: 462 m X 1.5 m X 1.0 m Garland drain: 89 m X 1.5 m X 1.0 m
4j	Number of settling ponds	Nil	01	01
4k	Specific comments of inspecting officer on waste dump management	No Comments	Dumping has per done as per proposal within the proposed dumping side. Retaining wall and garland drain are present all along the dump.	Dumping has per done as per proposal within the proposed dumping side. Retaining wall and garland drain are present all along the 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 Proposal	Nil	Nil
5b	Area under backfilling of mined out area	No Proposal	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	No Proposal	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No Comments	No backfilling proposal.	No backfilling proposal.

#### Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
ба	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	Nil	3.0	
6d	No. of saplings planted during the year	14100	14100	
6e	Cumulative no .of plants	155924	155222	
6f	Any other method of rehabilitation	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)Afforestati on on backfilled area	No proposal	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nikl	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)		done.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No Comments	Complaince on PMCP is done as per proposal.	Complaince on PMCP is done as per proposal.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Not Specified	Mineral dispatch Lumps:-273053.730(-65%) 291916.570(-62%) 17529.630(-60%) 14132.360(-58%) Fines:- 1573738.510(-65%) 249030.450(-62%) 30867.440(-58%)	Mineral dispatch Lumps:- 273053.730(-65%) 291916.570(-62%) 17529.630(-60%) 14132.360(-58%) Fines:- 1573738.510(-65%) 249030.450(-62%) 30867.440(-58%)
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	mechanical
7c	Different grade of mineral sorted out at mines.	Not Specified	Lump: 55% to below 58%, 58% to below 60%, 60% to below 62%, 62% to below 65% Fines: Below 55%, 55% to below 58%, 60% to below 62%, 62% to below 65%	Lump: 55% to below 58%, 58% to below 60%, 60% to below 62%, 62% to below 65% Fines: Below 55%, 55% to below 62%, 60% to below 65%
7d	Any beneficiation process at mines .	Yes	Yes	Yes
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No Comments	The beneficiation plant is commissioned. Low grade material is suitably blended with high grade ROM.	The beneficiation plant is commissioned. Low grade material is suitably blended with high grade ROM.

#### Environment:

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

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps Separate dumps for for overburden overburden and low grade and low grade stacks are present. stacks are proposed		Separate dumps for overburden and low grade stacks are present.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	There is a proposal for OB to be stacked in dumps which will be utilized for backfilling in future.	The OB are stacked now in dump-B, which will be utilized for back filling in future.	The OB are stacked now in dump-B, which will be utilized for back filling in future.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed number of sapings to be planted in 2016-17 is 15000 nos.	Total 17000 nos of plantation has been done till 31.12.2017	Total 17000 nos of plantation has been done till 31.12.2017
8g	Survival rate	Not specified	89.36% within lease area	89.36% within lease area
8h	Water sprinkling on roads to control airborne dust	water tanker are proposed for dust	3.25 km length of fixed water sprinklers and Three nos of water tanker of 18 KL and Three nos of water tanker of 12 KL has already been deployed to control dust on haul road.	3.25 km length of fixed water sprinklers and Three nos of water tanker of 18 KL and Three nos of water tanker of 12 KL has already been deployed to control dust on haul road.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No Comments	The environment protective measures are done as per proposal	The environment protective measures are done as per proposal

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### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks	
9a	submission of for year 2016- 20		Annual Return for year 2016-017 has been submitted.	Annual Return for year 2016-017 has been submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 4 Diploma Mining Engineer 3 Geologist 1	Graduate Mining Engineer 4 Diploma Mining Engineer 3 Geologist 1	Graduate Mining Engineer 4 Diploma Mining Engineer 3 Geologist 1	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Ha. Waste dump site: 15.46 Ha. Mineral Storage: 2.84 Ha. Infrastructure : 2.0 Ha.	Area under mining: 27.85 Ha. Waste dump site: 15.46 Ha. Mineral Storage: 2.84 Ha. Infrastructure: 2.0 Ha. Roads: 1.2 Ha. Green belt: 7.0 Ha. ETP: 0.1 Ha. Mineral processing plant: 2.518Ha.	Area under mining: 27.85 Ha. Waste dump site: 15.46 Ha. Mineral Storage: 2.84 Ha. Infrastructure: 2.0 Ha. Roads: 1.2 Ha. Green belt: 7.0 Ha. ETP: 0.1 Ha. Mineral processing plant: 2.518Ha.	
9d	Scrutiny of Annual return on afforestation		In 2016-17, 14100 nos. of plantation has been done within the lease area.	In 2016-17, 14100 nos. of plantation has been done within the lease area.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		In 2016-17, 4650.00 MT.of mineral reject (Fines below 55% Fe) has been generated.	In 2016-17, 4650.00 MT.of mineral reject (Fines below 55% Fe) has been generated.	

9f Scrutiny of Lump: Closing Lump: Closing stock at Annual return on stock at mine mine head (in tonne) ROM stock and/or head (in 55% to below 58% : graded ore tonne) 14.910MT 55% to below 60% to below 62% : 58% : 14.910MT 69966.47MT 60% to below 62% to below 65% : 62%: 25827.627 MT 69966.47MT 65% and above: 2.722 MT 62% to below Fines: Closing stock at 65%: 25827.627 MT mine head (in tonne) 65% and above: Below 55%: 112861.42 MT 2.722 MT 55% to below 58%: 67597.92 MT Fines: Closing 58% to below 60%: stock at mine 7854.62 MT head (in 60% to below 62%: tonne) 811711.63 MT Below 55%: 62% to below 65%: 112861.42 MT 253858.659 MT 55% to below 65% and above: 502.758 58%: 67597.92 MT МТ 58% to below 60%: 7854.62 MT60% to below 62%: 811711.63 MT

62% to below

253858.659 MT 65% and above: 502.758 MT

65%:

Lump: Closing stock at mine head (in tonne) 55% to below 58%: 14.910MT 60% to below 62%: 69966.47MT 62% to below 65%: 25827.627 MT 65% and above: 2.722 MT

Fines: Closing stock at mine head (in tonne) Below 55%: 112861.42 MT 55% to below 58%: 67597.92 MT 58% to below 60%: 7854.62 MT 60% to below 62%: 811711.63 MT 62% to below 65%: 253858.659 MT 65% and above: 502.758 MT

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	price (in . Per Tonne) 55% to below 58% : Rs 800.00 58% to below 60% : Rs 926.08 60% to below 62% : Rs 1967.53 62% to below 65% : Rs 2169.65	Lump: Ex-mine price (in . Per Tonne) 55% to below 58% : Rs 800.00 58% to below 60% : Rs 926.08 60% to below 62% : Rs 1967.53 62% to below 65% : Rs 2169.65  Fines: Ex-mine price (in . Per Tonne) Below 55% : Rs 401.15 55% to below 58% : Rs 1229.69 60% to below 62% : Rs 746.04 62% to below 65% : Rs	Lump: Ex-mine price (in . Per Tonne) 55% to below 58%: Rs 800.00 58% to below 60%: Rs 926.08 60% to below 62%: Rs 1967.53 62% to below 65%: Rs 2169.65  Fines: Ex-mine price (in . Per Tonne) Below 55%: Rs 401.15 55% to below 58%: Rs 1229.69 60% to below 62%: Rs 746.04 62% to below 65%: Rs 1011.50
9h	Scrutiny of Annual return on fixed assets	Assets (in Rs) 175302240 (in respect of the mine,	Value of Fixed Assets (in Rs) 175302240 (in respect of the mine, beneficiation plant, mine work-shop, power and water installation)	Value of Fixed Assets (in Rs) 175302240 (in respect of the mine, beneficiation plant, mine work- shop, power and water installation)

9k	Scrutiny of	SHOVEL	SHOVEL (HYDRAULIC) : 19	SHOVEL (HYDRAULIC)
	Annual return on	(HYDRAULIC) :	Nos.	: 19 Nos.
	mining	19 Nos.	DOZER : 2 Nos.	DOZER : 2 Nos.
	machineries	DOZER : 2 Nos.	MOTOR GRADER: 1 No	MOTOR GRADER: 1 No
		MOTOR GRADER:	FRONT END LOADER: 17	FRONT END LOADER:
		1 No	Nos.	17 Nos.
		FRONT END	WHEEL LOADER: 1No	WHEEL LOADER: 1No
		LOADER: 17	DUMPER: 58 Nos.	DUMPER: 58 Nos.
		Nos.	BLASTHOLE DRILL: 2 No	BLASTHOLE DRILL: 2
		WHEEL LOADER:		No
		1No		
		DUMPER: 58		
		Nos.		
		BLASTHOLE		
		DRILL: 2 No		

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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 NC	o. Issued on Compliance o

#### Date:

(SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines