

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

MCDR INSPECTION REPORT

Goa regional office

Mine file No : MAH/SDG/FE-1/GOA

Mine code : 30MSH28017

- (i) Name of the Inspecting : **J003**) **JANGID G K**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Subhash Lingayat, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 15/03/2016
- (v) Prev.inspection date : 18/05/2014

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TIRODA (34-48-12 HECTRS**
- (b) **Registration NO.** : **IBM/585/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **MAHARASHTRA**
- District : **SINDHUDURG**
- Village : **TIRODA**
- Taluka : **SAWANTWADI**
- Post office : **TIRODA**
- Pin Code : **590006**
- FAX No. : **0831-2426487**
- E-mail : **gogte.minerals@gmail.com**
- Phone : **0831-2407756**
- (f) **Police Station** : **SIRODA**
- (g) **First opening date** : **02/10/1980**
- (h) **Weekly day of rest** : **FRI**
2. **Address for** : **VILLAGE - TIRODA,**
correspondance : **TALUKA - SAWANTWADI,**
: **DISTRICT - SINDHUDURG.**
3. (a) **Lease Number** : **MSH0052**
- (b) **Lease area** : **34.48**
- (c) **Period of lease** : **10**
- (d) **Date of Expiry** : **03/04/2010**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : GOGTE MINERALS
 Arvind B. Gogte GOGTE
 MINERALS 146, TILAKWADI,
 BELGAUM KARNATAKA
 Phone:0831-2426487
 FAX :0831-2426487

Owner : ARVIND B. GOGTE
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Agent : D. R. VAZE
 Cidade de Goa, Dona Paula,
 Goa NORTH GOA GOA
 Phone: 0832-2454575, 9850477966
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Geologist

Name : Victor Fernandes, Full Time
 Qualification : M.Sc. In Geology
 Appointment/ : 01/02/2013
 Termination date

Manager

Name : S.P.LINGAYAT
 Qualification : DIPLOMA IN MINING, FCMM
 Appointment/ : 01/02/2013
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	20/11/2007
Plan/Scheme of Mining		Renewal under rule 24 MCR1960	12/04/2011
		MP modif under MCR 1960	18/05/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Every year 6 boreholes were proposed in Mining Plan and 20 holes were backlog.	Total four bore holes were drilled during 2011-12 and thereafter mining operations were suspended during 2011-12 and 2012-13.	
1b	Exploration over lease area for geological axis 1 or 2	Additional xploration was proposed. Total 31 boreholes are drilled so far.	Western block has been explored with covering 20ha area in G-1 and G-2.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Additional 30 bore holes were proposed during five-year period upto 2014-15. Expenditure details is not indicated.	Total expenditure incurred so far is 3.0 lacs for 31 boreholes.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Eastern block has to be explored. Further exploration in north and eastern part of western block is needed at 100m grid interval. Eastern block is having 14.48ha area and western block area is 20.0ha.	Total eastern block is to be explored and additional exploration in western block from section line 5-5 to 10-10.	

1e	Balance reserve as on 01/04/20	Scheme of mining was approved on 18.05.2015 and reserves were re-estimated as on 01.04.2015. Proved in 111-389400t, 122-592800t, 221-537630t, 222-129900t and 333-320100t.	There is no change, as these are updated reserves as on 01.04.2015.
1f	General remarks of inspecting officers on geology, exploration etc	Nil	Exploration is lacking in eastern and western block.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Western block of lease was proposed for development.	Working pit is developed on western block of lease area.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Topsoil is not present in area. Separate benches in waste and ore is planned.	Topsoil is not present in area. Separate benches in waste and ore is made.	
2c	Stripping ratio or ore to OB ratio	Ore to OB ratio is 0.3.	Ore to OB ratio is 0.3.	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	Waste generation of 5.0 lacs m3 was planned.	Waste generation of 3.2 lacs m3 was planned.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Nil	Nil	

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	Development and production in one pit was proposed.	Development and production in one pit is carried out. Lease area is having two separate blocks and eastern block is virgin land.	
3b	Quantity of ROM mineral production proposed	Total 399000 tonnes ROM production was proposed as per Environment clearance.	Total 231421 tonnes of ROM production was reported during the year.	
3c	Recovery of sailable/usable mineral from ROM production	The recovery of ore from ROM was planned 100% after screening.	The recovery of ore from ROM was 100% after screening.	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Nil	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Diesel operated mechanical screen plants were proposed.	Diesel operated mechanical screen plants (three numbers) are in use for grade wise production of iron ore in lumps and fines.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	
3j	Provision of drilling and blasting in mineral benches	Nil	Nil	

3k	Provision of mining machineries in mineral benches	Yes, backhoe excavators were proposed for excavation of ROM material. Dozer is also used in hard strata.	Backhoe excavators of 1.1m ³ to 3.9 cum bucket capacity were proposed for excavation of ROM material. Development in waste is also without drilling & blasting with the use of small excavators.
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 waste and Ore.	Yes, maximum bench height is upto 6-7m.
3m	Total area covered under excavation/pits	Total 5.2ha area was proposed under pit.	Total 5.32ha area is put in use under pit.
3n	Ore to OB ratio for the pit/mine during the year.	Ore to OB ratio was proposed as 1:2.9	Actual Ore to OB ratio was 1:2.95.
3o	Total area put in use under different heads at the end of year	Area under pit- 5.20ha, area under dump-3.50ha outside the lease, roads - 0.50ha.	Area under pit- 5.32ha, area under dump-7.47ha, plants 0.61ha and roads - 0.25ha at the end of 2014-15.
3p	Production of ROM mineral during the last five year period as applicable	Proposed production was 232000t, 255000t, 261000t, 28900t, 399000t from 2010-11 to 2014-15 respectively.	Actual production was 225247t, 0t, 0t, 126469t, 231421t from 2010-11 to 2014-15 respectively.
3q	General remarks of inspecting officers on method of mining etc.	Nil	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)	Separate dumping of waste was proposed.	Separate dumping of waste is carried out.
4b	Location of topsoil, OB and mineral reject dumps	Waste dumping was proposed outside the lease area.	Waste has been dumped outside the lease area and within lease area during 2014-15.
4c	Number of dumps within lease area and outside of lease area	Proposal was dump the waste outside the lease area and permission was taken from State Government.	There is one dump within lease area and one dump outside the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposal was dump the waste outside the lease area at 3-4 kms distance.	Dump is located within UPL due to limited space in western block. Eastern block is virgin with dense trees.
4e	Number of active and alive dumps.	One active dump was proposed outside the ML area.	Dump outside the lease area is dead now due to Supreme Court order and one dump within lease is alive.
4f	Number of dead dumps.	Nil	Nil
4g	Number of dumps established.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes, proposal was built 480m retaining wall all along the dump located outside the lease.	Yes, retaining wall is made of 480m for dump within lease area.
4i	Length of Retaining wall or garland drain all along dumps	Yes, proposal was built 480m retaining wall all along the dump located outside the lease.	Yes, retaining wall is made of 480m all along dump and lease boundary of western block of lease area.
4j	Number of settling ponds	One settling pond was proposed.	Three settling ponds are made within lease area.

4k	Specific comments of inspecting officer on waste dump management	Waste dumping was proposed outside the lease area during 2014-15.	Waste has been dumped outside the lease area and within lease area during 2014-15. Presently dumping within lease area is carried out.
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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.	Not applicable. Pit is still in operation.	Not applicable. Pit is still in operation.	
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)	Nil	Nil	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Nil	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).	It should be on or before 1st July every year.	Yes, it is submitted in the office on the 14th August 2015.	
6b	Area available for rehabilitation (ha) .	Nil	Nil	

6c	afforestation done (ha).	1000 trees were proposed every year over 0.5ha area.	Plantation carried out from 2010-11 to 2014-15 was 9500, 6545, 1000, 1000, 1000 trees. Total area covered is 3.4ha.
6d	No. of saplings planted during the year	1000 trees were proposed every year over 0.5ha area.	Plantation carried out from 2010-11 to 2014-15 was 9500, 6545, 1000, 1000, 1000 trees.
6e	Cumulative no .of plants	Total 19045 trees were planted as on 01.04.2015.	Total 19045 trees were planted as on 01.04.2015.
6f	Any other method of rehabilitation	NA	Waste dump has been covered under plantation.
6g	Cost incurred on watch and care during the year	NA	Total six lacs was incurred during the year 2014-15.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA, there is one working pit.	NA
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	The land within lease area is having natural plantation. Additional afforestation was proposed on dumps.	The land within lease area is having natural plantation. Additional afforestation was carried out on dumps.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil, dump is still active by increasing its height and plantation has been carried out on slope and matured part of dump.
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)	Quarterly environment monitoring is required and report has to be sent to IBM Regional office.	Quarterly environment monitoring is carried out through private agency from Mineral Engineering Services.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Nil	Nil

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting of ore is proposed within lease area.	Grade-wise sorting of ore is carried out within lease area during screening operation. Mineral is screened in lumps and fines.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical diesel operated mobile screen plants are proposed.	Two mechanical diesel operated mobile screen plants are in use.	

7c	Different grade of mineral sorted out at mines.	The grades of iron ore estimated in the mining plan are +45-55% Fe, +55% Fe.	The grades of iron ore reported in the annual return of 2014-15 are below 55% Fe, +55-58% Fe and +58-60% Fe for lumps and fines.
7d	Any beneficiation process at mines .	No	No, mechanical screening is carried out by two diesel operated mobile plants.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Nil	Nil, the stacking of mineral is carried out outside the lease area for grade-wise sorting and sell to Fomento Resources Pvt. Ltd.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Topsoil generation is not there in the area.	Topsoil generation is not there.	
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal was to dump the waste on an area located outside the lease area.	Waste was dumped outside the lease area as well as inside the lease area separately.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	There is one working pit and separate dumping was proposed.	There is one working pit and separate dumping is followed within UPL of the pit.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable at present, as mineral is persisting in depth.	Not applicable at present, as mineral is persisting in depth.	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Existence of plantation is there on slopes of the hillocks, along the road and all part of lease area. Additional plantation was proposed after mining over dump area.	Existence of plantation is there on slopes of the hillocks, along the road and all part of lease area. Additional plantation has been carried out over dump area and total 1000 trees were planted during the year.
8g	Survival rate	Proposed survival rate was 80%.	Actual survival rate is 85% since last five years. Plantation carried out from 2010-11 to 2014-15 was 9500, 6545, 1000, 1000, 1000 trees.
8h	Water sprinkling on roads to control airborne dust	Proposal is there for water sprinkling on the haul road upto nearby village road connecting mine and to redden port; which is 2-3kms long.	Regular water sprinkling is carried out inside the mine roads and village road with two water tankers of 8000 liters.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Nil	Surrounding area beyond lease area is lush green and lessee has carried out plantation on dump, near office building etc.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Annual return of mine for year 2014-15 submitted in hard copy on 30.06.2015. Monthly returns are submitted in online system upto February 2016.	All the monthly returns are submitted online and annual return in hard copy.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Appointment of Mining Engineer is not reported in the A.R. of 2014-15.	Shri Nilesh Raut, graduate in mining engineering is working as Mining Engineer in the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under current working pit- 5.32ha, already exploited & abandoned - 0ha, Reclaimed & rehabilitated - 0ha, Used for waste disposal - 7.47ha, Occupied by plant/building, residential, welfare building & roads - 0.61ha.	Details given in the annual returns are correct and found at par with information given in scheme of mining approved on 18.05.2015.
9d	Scrutiny of Annual return on afforestation	1000 nos trees planted are reported in the A.R.	Yes, trees are planted on dump slopes.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM opening stock from opencast workings - 1489.86t, Production - 231421.56t and closing stock - 23283.42t. Grade-wise opening stock of below 55% Fe lumps- 92.18t, Production - 18978t and closing stock - 59.78t. below 55% Fe fines- 535.84t, Production - 91276.50t and closing stock - 2466.50t. 55% to 58% Fe lumps - 239.72t, Production - 26037t and closing stock - 771.41t. 55% to 58% Fe fines - 40.02t, Production - 52164.5t and closing stock - 4104.93t.	ROM and grade-wise production reported in A.R. is in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value of below 55% Fe is Rs. 1039.86/- and 55 to 58 % Fe is Rs. 1166.11/- . Ex. mine price of lumps below 55% Fe is Rs. 1039.86/- and 55 to 58 % Fe is Rs. 1166.11/- , 58 to 60 % Fe is Rs. 987.80/- . Production cost - Rs. 606.52/- .	Sale value and Ex. mine price are same; as iron ore is sold to trader before export. The trader M/s Foemento Resources Pvt. Ltd. is raising contractor also at mines. The transportation cost from mines to Reddi Port is around Rs.200 per tonne for 15kms distance.

9h	Scrutiny of Annual return on fixed assets	Fixed assests detail is given for industrial building and machineries and own capital as source of finance is indicated Rs. 4939962/-	All the fixed assests ie.building & machineries belongs to M/s Fomento Resources Pvt. Ltd.
9k	Scrutiny of Annual return on mining machineries	Seven hydraulic shovels of 1.1 to 2.9 cum bucket, two dozer of 350 tph, forty tippers of 10t and two water tanker of 8000 ltrs are indicated.	Use of mobile screening plant are not reported in the return.

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
Rule 13(1)	13/04/2016				
Rule 42(1)(C)(I)	13/04/2016				

Date :

(JANGID G K)

Indian Bureau of Mines