

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

MCDR inspection REPORT

Goa regional office

Mine file No : Goa/FEMN/16

Mine code : 30GOA01074

- (i) Name of the Inspecting : **K03**) **G. S. KANNAN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : S/Shri.K.B.Haldankar (Mine Superintendent), Mohan.G(C)
Official with
Designation
- (iv) Date of Inspection : 15/09/2017
- (v) Prev.inspection date : 15/06/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JAQUELA**
- (b) **Registration NO.** :
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : GOA
District : NORTH GOA
Village : PALE
Taluka : BICHOLIM
Post office : PALE
Pin Code : 403105
FAX No. : (0832)2513431
E-mail : rnsb@sancharnet.in
Phone : (0832)2372275
- (f) Police Station :
- (g) First opening date :
- (h) Weekly day of rest : SUN
2. Address for : Village:Pale
correspondance Taluka:Bicholim
Distt.North Goa.
3. (a) Lease Number : GOA0106
(b) Lease area : 99.45
(c) Period of lease :
(d) Date of Expiry : 22/11/2027
4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : BANDEKAR BROTHERS PRIVATE LIMITED
 Suvarn Bandekar Building
 P.B.No.11Swatantra Path
 Vasco-Da-Gama SOUTH GOA GOA
 Phone:(0832) 512557,513209,512334,513022(R)
 FAX :91-832-513431/513427

Owner : Suvarn R.Bandekar
 M/s Bandekar Bros.Pvt.Ltd
 P.B.No.11S.Bandekar Bldg.
 Vasco-da-gama SOUTH GOA GOA
 Phone: (0832)512557,51
 FAX : 90-832-513431/5

Agent : ASHOK S. DESHPANDE
 C/o M/s Bandekar Brothers
 Pvt. Ltd Plae Bicholim, Goa
 NORTH GOA GOA
 Phone:
 FAX :

Mining Engineer

Name : JAYNATH JHA,Full Time
 Qualification : B. TECH (MINING)
 Appointment/ : 12/11/2009
 Termination date

Mining Engineer

Name : Prakash Chandra,Full Time
 Qualification : B.E.(Mining)
 Appointment/ : 01/12/2003
 Termination date

Mining Engineer

Name : PASUMARTHI NAGARAJU,Full Time
 Qualification : B.E. (MINING)
 Appointment/ : 01/10/2005
 Termination date

Mining Engineer

Name : Pramod Kumar H. Rai,Part Time
 Qualification : BE(Mining)
 Appointment/ : 01/08/2000 30/11/2003
 Termination date

Geologist

Name : MAHESHWAR M.KINNAL,Full Time
 Qualification : M.SC (GEOLOGIST)
 Appointment/ : 01/10/2001 31/03/2003
 Termination date

Geologist

Name : S.R.Suresh,Full Time
 Qualification : M.Sc. (Geology)
 Appointment/ : 02/12/1999 15/11/2001
 Termination date

Geologist

Name : K.VENKAT REDDY, Full Time
 Qualification : M.Sc. in Applied Geology
 Appointment/ : 25/11/2009
 Termination date

Manager

Name : S.A.DWARAKANATHA
 Qualification : B.SC, FCC
 Appointment/ :
 Termination date

Manager

Name : VASANT Y.KADAM
 Qualification : FIRST CLASS MINES MANAGERS CERTIFICATE
 Appointment/ : 12/11/2009
 Termination date

Manager

Name : J.Padmanabhan
 Qualification : Diploma in Mining with 1st class manager
 Appointment/ : 05/05/1993 30/06/2002
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	18/09/2002
		Modif.approved Mining Scheme	18/05/2005
		Renewal under rule 24 MCR1960	22/06/2007
		MP modif under MCR 1960	14/12/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	The proposal was to drill 13 boreholes with 650m in Previous approved Plan	9 Boreholes has been drilled during 2010-2012 with 647m.	Form-J has been submitted
1b	Exploration over lease area for geological axis 1 or 2	Additional exploration of 8 boreholes has proposed in modified mining plan.	Additional exploration is not carried out after re-commencement of mining operations in September 2015. Area explored under G-1 category is 63.34 Hect. Total 129 boreholes were drilled since 1977 till date.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Own drilling and/ or Contract drilling machines were used for Exploration in the past.	Total 129 boreholes were drilled. Total Rs. 111.12 lac was spent on exploration	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration was carried out at 100m X 50m grid interval. Additional exploration was proposed in 50m X 50m	Exploration was carried out at 100m X 50m grid interval. Balance area of 32.05 hect area has to be explored for availability of ore from G-3 to G-1.	
1e	Balance reserve as on 01/04/20	As on 01.04.2017 Proved Mineral Reserves (111) = 8375860 Tons Probable Mineral Reserves (122) = 1765740 Tons	As on 01.04.2017 Proved Mineral Reserves (111) = 9113770 Tons Probable Mineral Reserves (122) = 1765740 Tons	Hence there is no mining activity; R & R has not been changed
1f	General remarks of inspecting officers on geology, exploration etc	The deposit is part of Pale Velguem Deposit	The general Structure of Ore body is folded along both longitudinal & lateral directions.	For the presently, no exploration proposals drawn.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	S-350 to 850/ E-100 to 300	S-350 to 850/ E-100 to 300	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	7 Bench's Proposal in Both Ore & OB	Worked in Single bench only	
2c	Stripping ratio or ore to OB ratio	1 : 1.65	1 : 0.03	
2d	Quantity of topsoil generation in m3	Nil	Nil	No Top Soil is Existing
2e	Quantity of overburden generation in m3	137400 m3/ 369000 Tons	Nil	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed 137400 m3 from 7 benches	Developed only 4000 tons for single bench	Due to Local Problem & Transporter issue, mine developed quantity is very less.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Development and production was proposed in Pit-3. In between S-350 to 850/ E-100 to 300	Development and production are carried out as per proposed area, but quantity not achieved.	
3b	Quantity of ROM mineral production proposed	The total target of ROM Production was 369000 tons during 2016-2017 as per distribution from lessee on capping on EC limit.	Only 90 Tons has been achieved.	After mines have started the working, due to Local Problem & Transporter issue the mine has temporary discontinued.
3c	Recovery of sailable/usable mineral from ROM production	100 %	Nil	
3d	Quantity of mineral reject generation	No Proposal	Nil	

3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	Nil	
3f	Quantity of sub grade mineral generation.	No Proposal	Nil	
3g	Grade of sub grade mineral generation	No Proposal	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Dry Mobile screening was proposed for grade-wise production.	Because of Non-Working, Mobile screening is not in use.	
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	Drilling and blasting was not proposed.	Nil	Drilling and blasting is not carried out and ripper dozer is Proposed for excavation.
3k	Provision of mining machineries in mineral benches	Excavator- 4 No Ripper Dozer - 1 No Dozer - 1 No Truck - 10 No W/ Loader - 3 No Water tanker - 3 No Mobile Screen - 1 No Water Pump - 1 No Portable generator - 3 No	Machineries are present but not in use because of temporary discontinued.	
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.	As per the Proposal all bench height is maintained.	Because of Non-Working for last five years few benches are eroded/ collapsed with each other's due to monsoon.

3m	Total area covered under excavation/pits	44.83 hect areas are under Pit and no additional hect is required during this plan period.	44.83 hect areas are under Pit only.	
3n	Ore to OB ratio for the pit/mine during the year.	1 : 1.65	1 : 0.03	
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2017. Mines = 44.83 hect Dump = 5.15 hect Mineral Storage = 3.62 hect Infrastructure = 0.13 hect Mine road = 2.22 hect Green belt = 6.01 hect Township = 1.38 hect Unused = 32.05 hect	Land use Pattern as on 01.04.2017. Mines = 44.83 hect Dump = 5.15 hect Mineral Storage = 3.62 hect Infrastructure = 0.13 hect Mine road = 2.22 hect Green belt = 6.01 hect Township = 1.38 hect Unused = 32.05 hect	There are no Changes in land use Pattern because of Non-Working.
3p	Production of ROM mineral during the last five year period as applicable	2016-2017 = 369000 tons 2015-2016 = 369000 tons 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = 799000 tons	2016-2017 = 90 Tons 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = 210799 Tons	During the Period 2012 to 2015, the Mine was not working due to want of statutory order
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)	There is no Topsoil and Mineral rejects, only OB is proposed as temporary backfilling inside the bottom of pit.	There is no backfilling as per proposal.	Due to less development quantity, the backfilling won't achieve.
4b	Location of topsoil, OB and mineral reject dumps	North of Pit no-3 & Pit no-6	Nil	
4c	Number of dumps within lease area and outside of lease area	Lease area = 2 Dumps Non Lease area = Nil	Lease area = 2 Dumps Non Lease area = Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump No.1: Northern Side of Lease area Dump No.2: South western side of Lease area. Both are outside UPL	Dump No.1: Northern Side of Lease area Dump No.2: South western side of Lease area. Both are outside UPL	
4e	Number of active and alive dumps.	Active Dump = Nil Alive Dump = Nil	There is no active dump within lease area for waste dumping.	Now there is no dumping proposal in Approved plan and only Backfilled has been proposed
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Two	
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain, Settling Pond was proposed on different terraces of Backfilled area to avoid wash-off.	Retaining walls, Garland drain, Settling ponds are constructed as per proposal.	
4i	Length of Retaining wall or garland drain all along dumps	500 mts length of Retaining wall & 900m of Garland drainage proposed	Retaining walls, Garland drain, Settling ponds are constructed as per proposal.	Existing retaining wall all along the dump & roads are maintenance.
4j	Number of settling ponds	8 Check dams proposed	8 Check dams have constructed.	

4k	Specific comments of inspecting officer on waste dump management	Nil	There is no generation of Topsoil and Mineral rejects. OB waste has proposed temporary backfilled inside the Pit. Trench's, Settling Pond is maintained and cleaning was done to avoid wash off.
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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.	Due to non-availability of area, it is proposed for temporary backfilling within Pit.	Nil	
5b	Area under backfilling of mined out area	13.17 hect	13.17 hect	Due to less development quantity, backfilling has not done and no changes in area
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	13.17 hect has been backfilled from 2001.	

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.	Submitted within time	

6b	Area available for rehabilitation (ha) .	Mineral is persisting in pit bottom and temporary backfilling is proposed in it for Void available in this Pit No-3 of Northern side and Pit No-6	As per proposal there is no backfilling due to Non-working of Mines.	
6c	afforestation done (ha).	1.0ha in existing dump	Gap fillings on dumps	
6d	No. of saplings planted during the year	1600 Gap filling Plant	6000 Gap filling Plant	
6e	Cumulative no .of plants	Total 50000 saplings were proposed during last approved document period from 2008-09 to 2012-13.	Total 95185 saplings were planted during 2008-09 to 2012-13.	Cumulatively 235428 plants has planted within lease area and 277357 plants outside the lease area
6f	Any other method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch and care during the year	Nil	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Temporary backfilling is proposed in it for Void available in Pit No-3 of Northern side and Pit No-6	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	
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	Quarterly environment monitoring is carried out through own as well as private agency.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Nil	Even the Mine is nonworking from 2012. They have taken more protective measures as per PMCP	Cumulatively 241428 plants has planted within lease area and 277357 plants outside the lease area

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	As per approved mining plan proposed ROM was classified as High Grade ore +60% Fe, Low Grade Ore +55-60% Fe and below +45-55% Fe is considered as Mineral reject due to low market price.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical processing i.e. dry screening was proposed for grade-wise production.	Nil
7c	Different grade of mineral sorted out at mines.	The grade-wise production of High Grade ore +60% Fe, Low Grade Ore +55-60% Fe was proposed in modified mining plan.	Nil
7d	Any beneficiation process at mines .	Mechanical processing i.e. dry screening was proposed for grade-wise production.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Nil	After mines have started the working, due to Local Problem & Transporter issue the mine has temporary discontinued.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	Nil	

8b	Concurrent use or storage of topsoil	Nil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal was to temporary backfill the waste inside the pit due to non-availability of other area for dumping and mineral is persisting in the pits.	Nil	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Existence of plantation is there on slopes of the dump, along the road and other part of lease area. Cumulatively 238628 plants proposed.	6000 Plants has been planted during the plan period. Cumulatively 241628 plants were achieved.	Cumulatively 241428 plants has planted within lease area and 277357 plants outside the lease area
8g	Survival rate	70%	Survival rate is around 60 to 70% for previous plantation	
8h	Water sprinkling on roads to control airborne dust	Yes, it is proposed for waster sprinkling on haul roads.	Water sprinkling on road is observed during the inspection.	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Nil	Surrounding area beyond lease area is greenery and lessee has carried out plantation on dump, along road etc.	Cumulatively 241428 plants has planted within lease area
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	MR Submitted up to = May 2017 AR Submitted up to = 2016-2017	Both Annual & Monthly returns are submitting in online system.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist & Surveyor are appointed.	During Inspection geologist has been terminated.	These Technical people are working as part time in other Non-working mines also.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use pattern as given as per approved modified mining plan	Land use pattern as per approved modified mining plan and AR are coinciding	Due to No Production & development, there is no changes in landuse pattern
9d	Scrutiny of Annual return on afforestation	Within Lease = Nil Outside Lease = Nil	6000 Plants has been planted during the plan period. Cumulatively 241628 plants were achieved.	It is advice to enter the data correctly. The lessee has actually planted but not shown in A.R.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No Proposal	Nil	Due to No Production & development, there is no mineral reject generation
9f	Scrutiny of Annual return on ROM stock and/or graded ore	90 tons	Due to Non-Working from 2013, there is no stock and all are nil only.	After mines have started the working, due to Local Problem & Transporter issue the mine has temporary discontinued.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex.Mine Price is Zero	Due to less production and no dispatch the Ex.Mine Price cost is Zero.
9h	Scrutiny of Annual return on fixed assets	Fixed assets have filled	Fixed asset have filled properly.
9k	Scrutiny of Annual return on mining machineries	Shovel & Wheel Loader	They are used for maintain of road and protective measures only.

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 :

(G. S. KANNAN)

Indian Bureau of Mines