

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

MCDR inspection REPORT

Goa regional office

Mine file No : GOA/FEMN/292

Mine code : 30GOA02037

- (i) Name of the Inspecting : **K03**) **G. S. KANNAN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : S/Shri.Dash-Geologist, Deepti-Geologist
Official with
Designation
- (iv) Date of Inspection : 24/02/2018
- (v) Prev.inspection date : 09/11/2010

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **COLOMBA MINE**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : GOA
District : SOUTH GOA
Village : RIVONA
Taluka : SANGUEM
Post office : RIVONA
Pin Code :
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 04/04/1952
- (h) Weekly day of rest : SUN
2. Address for : VILL.: RIVONA,
correspondance TQ.: SANGUEM,
DIST.: SOUTH GOA, GOA.
3. (a) Lease Number : GOA0388
- (b) Lease area : 98.46
- (c) Period of lease :
- (d) Date of Expiry : 22/11/2007
4. Mineral worked : IRON ORE Main
MANGANESE ORE Associated

5. Name and Address of the

Lessee : SESA RESOURCES LIMITED
 VISHWAS BLDG PANJIM NORTH
 GOA GOA
 Phone:
 FAX :

Owner : KISHORE KUMAR RAJGOPAL
 Sesa Mining Corporation
 Ltd. Sesa Ghor, 20 EDC
 Complex, Patto-Panaji, Goa
 NORTH GOA GOA
 Phone: 0832-2460601
 FAX : 0832-2460612

Manager

Name : A.B.SOHONI
 Qualification : B.SC (GEOLOGY)
 Appointment/ : 20/03/2006
 Termination date

Manager

Name : K. H. BABU
 Qualification : Dip. in Min. & Mine Surveying, First Cla
 Appointment/ : 20/03/2006
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	21/10/1988
		Mining Scheme rule 12 MCDR1988	22/07/2005
		Renewal under rule 24 MCR1960	23/07/2008
		MP modif under MCR 1960	17/03/2016
		MP modif under 17(3) MCR 2016	08/06/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	There is no Proposal of Exploration in 2016-2017	Nil	
1b	Exploration over lease area for geological axis 1 or 2	Additional exploration was not 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 51.94 Hect. Total 169 boreholes were drilled with 9209m drilling.	
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 169 boreholes were drilled. Total Rs. 40 lac was spent on exploration.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Exploration was carried out at 50m X 50m grid interval. Additional exploration was not proposed	Exploration was carried out at 50m X 50m grid interval. Balance area of 46.48 hect area has to be explored for availability of ore from G-3 to G-2/G-1.	
1e	Balance reserve as on 01/04/20	As on 01.04.2017 Proved Mineral Reserves (111) = 0.992 Million Tons Probable Mineral Reserves (121) = 0.04 Million Tons Feasibility Mineral Reserves (211) = 0.11 Million Tons Pre-Feasibility Mineral Reserves (221) = 4.3 Million Tons	As on 01.04.2017 Proved Mineral Reserves (111) = 0.992 Million Tons Probable Mineral Reserves (121) = 0.04 Million Tons Feasibility Mineral Reserves (211) = 0.11 Million Tons Pre-Feasibility Mineral Reserves (221) = 4.3 Million Tons	Hence there is no mining activity; R & R has not been changed.

1f	General remarks of inspecting officers on geology, exploration etc	This deposit falls under Sanguem deposit.	The general Structure of Ore body is tightly folded into asymmetrical anticlinal folds associated with phyllitic, limonitic.	For the presently, no exploration proposals drawn.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	In between Section 2 to 5	Nil	Mine is not Working because want of Statuary Clearances - Forest Clearance.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	4 Bench's Proposal in OB and 3 bench in Ore	Nil	
2c	Stripping ratio or ore to OB ratio	1 : 6.90	Nil	
2d	Quantity of topsoil generation in m3	Nil	Nil	No Top Soil is Existing
2e	Quantity of overburden generation in m3	309510 Tons	Nil	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Nil	Nil	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Development and production was proposed in Pit-1.	Development and production are not carried out.	

3b	Quantity of ROM mineral production proposed	The total target of ROM Production was 44867 tons during 2016-2017 as per distribution from lessee on capping on EC limit.	Nil	
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- 3 No Ripper Dozer - 2 No Truck/ Dumper - 20 No W/ Loader - 2 No Water tanker - 1 No Mobile Screen - 1 No Water Pump - 2 No DG set - 2 No	Machineries are present but not in use because of want of Statuary Clearances	
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 collapsed with each other's due to monsoon.
3m	Total area covered under excavation/pits	21.54 hect area is under Pit	21.54 hect area is under Pit	
3n	Ore to OB ratio for the pit/mine during the year.	1 : 6.90	Nil	
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2017. Mines = 21.54 hect Dump = 3.974 hect Mineral Storage = 0.1946 hect Office = 0.023 hect Mine road = 2.21 hect	Land use Pattern as on 01.04.2017. Mines = 21.54 hect Dump = 3.974 hect Office = 0.023 hect Mine road = 2.21 hect	
3p	Production of ROM mineral during the last five year period as applicable	2016-2017 = 44867 tons 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil	2016-2017 = Nil 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil	During the Period 2012 to till date, 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
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no Mineral rejects, only Topsoil and OB is proposed as dumping in the new area.	There is no generation of Top Soil & OB because of Non-working	
4b	Location of topsoil, OB and mineral reject dumps	OB Dump between Section line 19 to 22	Nil	Mine is not Working because want of Statuary Clearances
4c	Number of dumps within lease area and outside of lease area	Lease area = 2 Dumps	Lease area = 2 Dumps	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB Dump between Section line 19 to 22 and outside UPL	Nil	Dump is not formed because of non-working
4e	Number of active and alive dumps.	Active Dump = Two Alive Dump = Nil	Active Dump = Two Alive Dump = Nil	
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.	Garland drain, Settling Pond was proposed on different terraces of Backfilled area/ Surface Dump to avoid wash-off.	Because of no activity, Garland drain, Settling ponds are not constructed.	Trench, Settling Pond is maintenances and cleaning was done in existing area.
4i	Length of Retaining wall or garland drain all along dumps	Garland Drainage = 275m Retaining wall = 50m	Trench & Settling Pond are maintenance and cleaned	
4j	Number of settling ponds	One	One	
4k	Specific comments of inspecting officer on waste dump management	Nil	Nil	

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	There is no proposal for backfilling during this plan period.	Nil	
5b	Area under backfilling of mined out area	Nil	Nil	There is no proposal for backfilling during this plan period.
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		The entire lease area is virgin and yet to start mining after getting Statuary Clearances

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) .	Mining Lease area is mostly virgin, now there is no proposal for rehabilitation	Nil	
6c	afforestation done (ha).	Nil	Nil	
6d	No. of saplings planted during the year	1150 Nos	50 Nos	
6e	Cumulative no .of plants	1750 Saplings	650 saplings	
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	Nil	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

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	As per approved mining plan proposed ROM was classified as +54% Fe, +45-54% Fe and below 45% Fe is considered as waste 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 +54% Fe & +45-54% 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	Nil
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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)	OB Dump between Section line 19 to 22	Nil	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	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 along the road and other part of lease area.	Nil	Due to Non availability of forest permission, afforestation has not been carried out.
8g	Survival rate	No Proposal	70%	

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 along road etc. Due to Non availability of forest permission, afforestation has not been carried out.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Both Annual & Monthly returns are submitting in online system.	Submitted within the time limit	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Geologist & ME are appointed	Nil	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as per A.R. Mines = 21.545 hect Dump = 3.974 hect Office/ Infrastructure = 2.713 Unused = 70.185 hect	Land use pattern as per approved modified mining plan	Due to No Production & development, there is no changes in landuse pattern
9d	Scrutiny of Annual return on afforestation	50 nos	Nil	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No Proposal	Nil	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Nil	Due to Non-Working from 2013, there is no stock and all are nil only.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex.Mine Price & Production cost is Zero	Due to Non-Working, there is no ROM, hence Ex.Mine Price & Production 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	Nil	Due to unavailability of Statuary Clearances, no machineries are used in mines.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(G. S. KANNAN)

Indian Bureau of Mines