

**MCDR INSPECTION REPORT**

1) Name of Inspecting officer:	G. S. Kannan
2) Designation	Junior Mining Geologist
3) Accompanying mine official with designation	1) Shri. Vikil Kawale, (Mines Manager) 2) Shri. A.K.Dash - (Geologist)
4) Date of Inspection	12/06/2017
5) Date of Previous Inspection	14/04/2015

**General Information**

Sl.No	Particulars	Details
1	Name of the Mine	<b>Botvadeacho Dongar Mine (Tc.No.28/51)</b>
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Lease Area : 23.7344 Ha Forest Area: Nil Non Forest Area: 23.7344 ha
3	Minecode	30GOA01195
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/327/2011
5	Name of the lessee, Address, phone, email and fax number	Sesa Resources Ltd, Sesa Ghor, 20EDC Complex, Patto, Panaji, Goa- 403 001, Telephone No : (0832) 2460600 Fax No : 91 (0832) 2460690 E-mail : Arun.KumarGR@vedanta.co.in
6	Village	Pissurlem
7	Taluka/ Mandal	Sattari
8	District	North Goa
9	Pincode	403 530
10	State	Goa
11	Post office	Pissurlem
12	Nearest police station	Valpoi
13	Nearest Railway station	Thivim
14	Date of Grant of Mining Lease	
15	Date of Execution	09/01/2015
16	Date of opening of Mine	01/05/1979
17	Date of first Renewal, if applicable and its period & expiry	For 20 years upto 21.11.2007
18	Date of second Renewal, if applicable and its period & expiry	For 20 years upto 21.11.2027
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Nil
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri. Sauvick Mazumdar, Sesa Ghor, 20EDC Complex, Patto, Panaji, Goa- 403 001, Telephone No : (0832) 2460600 Fax No : 91 (0832) 2460690 E-mail : Sauvick.Mazumdar@vedanta.co.in

21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri.Vijay Kumar, Date of Appointment : 04.08.2016
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri.Vikil Kawale, B.E. Mining Engineering Date of Appointment : 25.02.2016
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri.Deepak Ranmale, Date of Appointment : 10.05.2017
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes appointed as per Rule.
25	Date of Approval of Mining Plan/ Modified Mining Plan with five-year period and specific condition in approval letter, if any.	MMP/MECH-14/GOA/2015-16.Vol-I Dt 13.07.2016. (Period 01.04.2013 to 31.03.2018)
26	Date of Approval of Scheme of Mining/ Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Nil
27	Mineral(s) granted in lease and proved for mining	Iron Ore
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanised
30	Captive/ Non Captive	Non Captive

### SCIENTIFIC MINING

Sl. No	Item	Proposals	Actual Work	Remarks
<b>A. EXPLORATION:-</b>				
1a	Backlog of Previous Year	The proposal was to drill 15 boreholes with 840m in Previous approved Plan	15 Boreholes has been drilled during 2008-2013 with 720 meterage.	Form-J has been submitted
1b	Exploration Over Lease area for Geological Axis 1 or 2	Additional exploration of 5 was proposed in modified mining plan during 2015-2016 & 2016-2017.	Additional exploration is not carried out after re-commencement of mining operations in September 2015. Total 39 boreholes were drilled with 1852m drilling.	Violation has been issued
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 39 boreholes were drilled. Total Rs. 8.33 lacs were spent on exploration.	24 no of Rotary Core with 1132m & 15 nos of DTH holes with 720m

1d	Balance area to be explored to bring Geological axis 1 or 2	Exploration was carried out at 100m X 100m grid interval. Additional exploration was proposed during 2016-2017	As per proposal, no exploration has been carried out.	
1e	Balance reserves as on 01/04/2017	As on 01.04.2017 Proved Mineral Reserves (111) = 0.646 Mil Tons Probable Mineral Reserves (121) = 0.291 Mill Tons Feasibility Mineral Reserves (211) = 0.399 Mill Tons Pre-Feasibility Mineral Resources (221) = 2.071 Mill Tons	As on 01.04.2017 Proved Mineral Reserves (111) = 0.893 Mil Tons Probable Mineral Reserves (121) = 0.291 Mill Tons Feasibility Mineral Reserves (211) = 0.399 Mill Tons Pre-Feasibility Mineral Resources (221) = 2.071 Mill Tons	Hence there is less mining activity; R & R has not been changed.
1f	General remarks of inspecting officer on geology, exploration etc.	This deposit falls under Pissurlem Deposit.	Shallow Deposit, True thickness of Iron Ore in 30 to 35m.	For the presently, no exploration proposals drawn.

Sl. No	Item	Proposals	Actual Work	Remarks
<b>B. DEVELOPMENT:-</b>				
2a	Location of development w.r.t. lease area	In between Section 2 to 6. From Level 74m to 46m	Worked as per in the proposed area.	Due to surface right issue, the mine has produced lesser quantity.
2b	Separate benches in topsoil, overburden and mineral	4 Bench's Proposal in OB & Minerals	4 Benches of OB & Minerals has been worked.	
2c	Stripping ratio or ore to OB ratio	1 : 2.39	1 : 1.85	
2d	Quantity of topsoil generation in m3	Nil	Nil	No Top Soil is Existing
2e	Quantity of overburden generation in m3	94215 Tons	51458 Tons	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Proposed 94215 Tons from 4 benches during 2016-2017	Developed 51458 Tons from 4 benches during 2016-2017	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>C. EXPLOITATION:-</b>				
3a	Number of Pit Proposed for Production	Only Development has proposed in Pit-1.	As per proposed the working was carried out in Pit-1	

3b	Quantity of ROM mineral production proposed	224836 Tons of ROM Proposed. (Ore-163885 Tons + Mineral Rejects 60951 Tons)	95420 Tons of ROM achieved. (Ore-74040 Tons + Mineral Rejects 21380 Tons)	
3c	Recovery of Sailable/ Usable Mineral from ROM Production	No Proposal	Nil	
3d	Quantity of mineral reject generation	60951 Tons	21380 Tons	
3e	Grade of mineral reject generation and threshold value declared	<54% Fe	<54% Fe	
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.	Dry Mobile screening was using for grade-wise production.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	Nil	
3j	Provision of drilling & 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- 2 No Ripper Dozer - 1 No Truck – 20 No W/ Loader – 1 No Water tanker - 1 No	Machineries are present as per proposal	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/ SOM	Bench height of 7m and 8-10m of width was proposed.	Bench height & width are maintain as per proposal	
3m	Total area covered under excavation/pits	3.7029 hect area is under Pit and additional 0.4087 hect is required	4.00 hect areas are under Pit only.	
3n	Ore to OB ratio for the pit/ mine during the year	Nil	Nil	

3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2017. Mines = 4.116 hect Dump = 2.8390 hect Infrastructure = 0.250 hect Road = 0.750 hect Unused = 15.785 hect	Land use Pattern as on 01.04.2017. Mines = 4.00 hect Dump = 0.50 hect Mine road = 0.205 hect Unused = 19.03 hect	There are no Changes in land use Pattern because of Non-Working and surface right issue.
3p	Production of ROM mineral during last five-year period, as applicable	2016-2017 = 224836 tons 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = 329000 tons	2016-2017 = 95420 Tons 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = Nil	During the Period Sep 2012 to Oct 2015, the Mine was not working due to statutory order
3q	General remarks of inspecting officer on method of mining etc.	Nil	Nil	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>D. SOLID WASTE MANAGEMENT - DUMPING:-</b>				
4a	Separate Dumping of Topsoil, OB and Mineral Rejects	There is no Top soil, only Mineral rejects is proposed to stock and OB is proposed to backfill in working pit as temporary.	Mineral reject is stock and used as beneficiation and OB has backfilled for 50m.	
4b	Location of Topsoil, OB and Mineral Rejects Dumps	No Proposal	In between Section 3 & 5.	Mineral rejects have stock temporary in Pit in between Section-3 & 5.
4c	Number of Dumps within Lease & Outside Lease area	Lease area = Nil Non Lease area = Nil	Lease area = Nil Non Lease area = Nil	
4d	Location of Dumps, within Ultimate Pit Limit	No Proposal	Nil	
4e	Number of Active & Alive Dumps	Active Dump = Nil Alive Dump = Nil	Active Dump = Nil Alive Dump = Nil	
4f	No of Dead Dumps	Nil	Nil	
4g	No of Dumps Established	Nil	Nil	
4h	Whether Retaining Wall or Garland drain along Dumps are there	No Proposal	Nil	
4i	Length of Retaining Wall or Garland drain along Dumps	No proposal	Nil	

4j	No of Settling tanks	No proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management	Nil	There is no dump in the Mines area.	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>E. SOLID WASTE MANAGEMENT - BACKFILLING:-</b>				
5a	Status of part or full extraction of mineral from mined out area before starting backfilling	Backfilling in the working pit from Section 2 to 3	Backfilling has done in between Section 2 to 3	
5b	Area under backfilling of mined out area	Nil	Nil	Backfilling is temporary backfilling and re-handled in the subsequent years
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	Nil	Nil	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Nil	Backfilling is temporary backfilling and re-handled in the subsequent years	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>F. PROGRESSIVE MINE CLOSURE PLAN:-</b>				
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	It should be on or before 1st July every year.	Submitted within time	
6b	Management of worked/ mined out benches			
	i) Area available for rehabilitation (ha)	i) Mining Lease area is entirely virgin, now there is no proposal for rehabilitation.	i) Nil	
	ii) Afforestation done (ha)	ii) Nil	ii) Nil	
	iii) No. of saplings planted during the year	iii) Nil	iii) Nil	
	iv) Cumulative no. of plants	iv) Nil	iv) Nil	
	v) Any other specific	v) Nil	v) Nil	

	method of rehabilitation			
	vi) Cost incurred on watch & care during the year	vi) Nil	vi) Nil	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/ tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	i) Nil ii) Nil iii) Nil iv) Nil v) Nil	i) Nil ii) Nil iii) Nil iv) Nil v) Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i) Nil ii) Nil iii) Nil	i) Nil ii) Nil iii) Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Quarterly environment monitoring is required and report has to be sent to IBM Regional office.	Quarterly environment monitoring is carried out through own as well as private agency.	
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations		They have afforested in nearby lease and taken protective measures as per PMCP	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>G. MINERAL CONSERVATION:-</b>				
7a	ROM mineral dispatch or grade wise sorting within lease area	224836 Tons of ROM Proposed. (Ore-163885 Tons >54% Fe + Mineral Rejects 60951 Tons <54% Fe)	95420 Tons of ROM achieved. (Ore-74040 Tons >54% Fe + Mineral Rejects 21380 Tons <54% Fe)	
7b	Method of Grade-wise mineral sorting i.e. manual or mechanical	Mechanical processing i.e. dry screening was proposed for grade-wise production.	Mechanical processing i.e. dry screening was proposed for grade-wise production.	

7c	Different grade of mineral sorted out at mines	The grade wise mineral has sorted as >54% Fe as ore and <54% Fe as Mineral Rejects	As per proposal the grades are sorted	
7d	Any beneficiation process at mines	Mechanical processing i.e. dry screening was proposed for grade-wise production.	Mechanical processing i.e. dry screening was proposed for grade-wise production.	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Nil	Nil	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>H. ENVIRONMENT:-</b>				
8a	Separate removal and utilization of topsoil	No Proposal	Nil	
8b	Concurrent use or storage of topsoil	No Proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines	No Proposal	Nil	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Mineral rejects are used after beneficiation	Mineral rejects are used after beneficiation	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	
8f	Baseline information on existence of plantation & additional plantation done	Existence of plantation is there along the road and other part of lease area.	Existence of plantation is there along the road and other part of lease area.	
8g	Survival rate	60%	60%	
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.	



Sl. No	Item	Comments		Remarks
<b>I. COMPLIANCE OF RULE-45:-</b>				
9a	Status of Submission of Monthly & Annual Returns	MR Submitted up to = May 2017 AR Submitted up to = 2016-2017		Both Annual & Monthly returns are submitting in online system.
Sl. No	Item	Details Given in A.R	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Total employment is one	It is advised to appoint technical person in full time	A.R. is under preparation. Observation is made based on draft A.R.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern is given	Land use pattern as per approved modified mining plan and AR are coinciding	A.R. is under preparation. Observation is made based on draft A.R.
9d	Scrutiny of Annual return on afforestation	Within Lease = Nil Outside Lease = Nil	Within Lease = Nil Outside Lease = Nil	A.R. is under preparation. Observation is made based on draft A.R.
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	No Proposal	Nil	A.R. is under preparation. Observation is made based on draft A.R.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	95420 Tons	Due to Surface right issue the production would not achieved.	A.R. is under preparation. Observation is made based on draft A.R.
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	ROM has stocked and there is no Sales.	Cost of production is wrongly given. Its advice to rectify and give correct data and final A.R	A.R. is under preparation. Observation is made based on draft A.R.
9i	Scrutiny of Annual return on fixed assets	Fixed assets have filled	Fixed asset have filled properly.	A.R. is under preparation. Observation is made based on draft A.R.
9k	Scrutiny of Annual return on mining machineries	Mining Machineries are given	Mining Machineries as per approved modified mining plan and AR are coinciding	A.R. is under preparation. Observation is made based on draft A.R.

**Details of violations observed during current inspection and compliance position of earlier violation pointed out:-**

Violation has issued under Rule 11(1) of MCDR, 2017 on 29/06/2017.

**G.S.Kannan**  
**Junior Mining Geologist**