

**MCDR INSPECTION REPORT**

1) Name of Inspecting officer:	G. S. Kannan
2) Designation	Junior Mining Geologist
3) Accompanying mine official with designation	1) Shri. Prakash Chandra - (Mines Manager) 2) Shri. A.K.Dash - (Geologist)
4) Date of Inspection	16/06/2017
5) Date of Previous Inspection	15/09/2015

**General Information**

Sl.No	Particulars	Details
1	Name of the Mine	<b>Sem Denominacao Esp Mine (Tc.No.40/54)</b>
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Lease Area : 50.7161 Ha Forest Area: 50.7161 Ha Non Forest Area: Nil
3	Minecode	30GOA02103
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/5456/2011
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 : Kishore.Kumar@vedanta.co.in
6	Village	Curpem & Sulcorna
7	Taluka/ Mandal	Sanguem & Quepem
8	District	South Goa
9	Pincode	403 704
10	State	Goa
11	Post office	Vaddem
12	Nearest police station	Sanguem
13	Nearest Railway station	Kalay
14	Date of Grant of Mining Lease	
15	Date of Execution	
16	Date of opening of Mine	
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. Kishore Kumar rajagopal, Sesa Ghor, 20EDC Complex, Patto, Panaji, Goa- 403 001, Telephone No : (0832) 2460600 Fax No : 91 (0832) 2460690 E-mail : Kishore.Kumar@vedanta.co.in

21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri.Joseph Coelho, Date of Appointment : 10.08.2016
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri.Prakesh Chandra, 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.Abani Kumar Dash, Date of Appointment : 19.03.2014
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-51/GOA/2015-16 Dt 19/11/2015. (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 7 boreholes with 420m in Previous approved Plan	14 Boreholes has been drilled during 2008-2012 with 1150 meterage.	Form-J has been submitted
1b	Exploration Over Lease area for Geological Axis 1 or 2	Additional exploration not 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. Area explored under G-1 category is 10 Hect. Total 21 boreholes were drilled with 1499m drilling.	3 boreholes have been proposed during 2017-2018 to explore in G2 area of 5.0 hect.
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 21 boreholes were drilled. Total Rs. 46.34 lacs were spent on exploration.	18 no of Conventional holes with 1195m & 3 nos of Coring holes with 304m

1d	Balance area to be explored to bring Geological axis 1 or 2	Exploration was carried out at 100m X 75m grid interval. Additional exploration was not proposed during 2016-2017	Exploration was carried out at 100m X 75m grid interval. Balance area of 5.0 hect area has to be explored for availability of ore from G-2 to G-1.	
1e	Balance reserves as on 01/04/2017	As on 01.04.2017 Proved Mineral Reserves (111) = 0.226 Mil Tons Feasibility Mineral Reserves (211) = 0.011 Mill Tons Pre-Feasibility Mineral Resources (221) = 0.274 Mill Tons	As on 01.04.2017 Proved Mineral Reserves (111) = 0.226 Mil Tons Feasibility Mineral Reserves (211) = 0.011 Mill Tons Pre-Feasibility Mineral Resources (221) = 0.274 Mill Tons	Hence there is no mining activity; R & R has not been changed.
1f	General remarks of inspecting officer 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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<b>B. DEVELOPMENT:-</b>				
2a	Location of development w.r.t. lease area	In between Section 6 to 7	Nil	Mine is not Working because want of Statuary Clearances – Forest Clearance.
2b	Separate benches in topsoil, overburden and mineral	2 Bench's Proposal in OB only	Nil	
2c	Stripping ratio or ore to OB ratio	0.0	Nil	There is no proposal for production; therefore Ore to OB ratio is 0.
2d	Quantity of topsoil generation in m3	Nil	Nil	No Top Soil is Existing
2e	Quantity of overburden generation in m3	7101 m3/ 8465 Tons	Nil	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Proposed 8465 Tons from 2 benches during 2016-2017	Nil	Mine is not Working because want of Statuary Clearances – Forest Clearance.

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.	Development was not carried out. Because of Forest Clearance.	
3b	Quantity of ROM mineral production proposed	No Proposal of ROM during 2016-2017	Nil	As per distribution from lessee on capping on EC limit for Curpem Mine is 90000 tons. Curpem Mine consists of Cantor lease & Sem Dem Esp lease. ROM Proposed during 2016-2017 for Sem Dem Esp lease is Nil.
3c	Recovery of Sailable/ Usable Mineral from ROM Production	No Proposal	Nil	
3d	Quantity of mineral reject generation	No Proposal	Nil	
3e	Grade of mineral reject 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	No Proposal	Nil	
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- 1 No Ripper Dozer - 1 No Truck – 8 No W/ Loader – 1 No Water tanker - 1 No	Machineries are present but not in use because 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.	Due to Non-working there is no bench in the mine	
3m	Total area covered under excavation/pits	0.4593 hect area is under Pit and additional 0.7520 hect is required	0.4593 hect areas are under Pit only.	Due to Non-working of Mines, additional area is not in use.
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 = 0.4593 hect Mine road = 0.2731 hect Unused = 49.9837 hect	Land use Pattern as on 01.04.2017. Mines = 0.4593 hect Mine road = 0.2731 hect Unused = 49.9837 hect	There are no Changes in land use Pattern because of Non-Working.
3p	Production of ROM mineral during last five-year period, as applicable	2016-2017 = Nil 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = 8624 tons	2016-2017 = Nil 2015-2016 = Nil 2014-2015 = Nil 2013-2014 = Nil 2012-2013 = Nil	The mine is not in operation from 2007 for unavailability of tree felling permission
3q	General remarks of inspecting officer on method of mining etc.	Nil	The Mines is entirely under forest land, because of this issue the mine is not in operation for unavailability of tree felling permission.	

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 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 Rejects Dumps	OB Dump between Section line 2.5 to 3.5 Top Soil Dump between Section line 4.5 to 5.0	Nil	Mine is not Working because want of Statuary Clearances
4c	Number of Dumps within Lease & Outside Lease area	Lease area = 2 Dumps Non Lease area = Nil	Lease area = Nil Non Lease area = Nil	Due to Non operation dump is not formed.
4d	Location of Dumps, within Ultimate Pit Limit	OB Dump between Section line 2.5 to 3.5 Top Soil Dump between Section line 4.5 to 5.0 Both are outside UPL	Nil	Dump is not formed because of non-working

4e	Number of Active & Alive Dumps	Active Dump = Two 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	The Mines is entirely under forest land, because of this issue the mine is not in operation for unavailability of tree felling permission.	

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	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 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	The entire lease area is virgin and yet to start mining after getting tree felling permission.	

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	<p>Management of worked/ mined out benches</p> <p>i) Area available for rehabilitation (ha)</p> <p>ii) Afforestation done (ha)</p> <p>iii) No. of saplings planted during the year</p> <p>iv) Cumulative no. of plants</p> <p>v) Any other specific method of rehabilitation</p> <p>vi) Cost incurred on watch &amp; care during the year</p>	<p>i) Mining Lease area is entirely virgin, now there is no proposal for rehabilitation..</p> <p>ii) Nil</p> <p>iii) Nil</p> <p>iv) Nil</p> <p>v) Nil</p> <p>vi) Nil</p>	<p>i) Nil</p> <p>ii) Nil</p> <p>iii) Nil</p> <p>iv) Nil</p> <p>v) Nil</p> <p>vi) Nil</p>	
6c	<p>Compliance on reclamation and rehabilitation by backfilling</p> <p>i) Voids available for backfilling (L X B X D)</p> <p>ii) Void filled by waste/ tailings</p> <p>iii) Afforestation on the backfilled area</p> <p>iv) Rehabilitation by making water reservoir</p> <p>v) Any other specific means</p>	<p>i) Nil</p> <p>ii) Nil</p> <p>iii) Nil</p> <p>iv) Nil</p> <p>v) Nil</p>	<p>i) Nil</p> <p>ii) Nil</p> <p>iii) Nil</p> <p>iv) Nil</p> <p>v) Nil</p>	
6d	<p>Compliance of Rehabilitation of waste land within lease</p> <p>i) Afforestation</p> <p>ii) Area rehabilitated (ha)</p> <p>iii) Method of rehabilitation</p>	<p>i) Nil</p> <p>ii) Nil</p> <p>iii) Nil</p>	<p>i) Nil</p> <p>ii) Nil</p> <p>iii) Nil</p>	<p>Due to Non availability of forest permission, there is no afforestation has been carried out.</p>
6e	<p>Compliance of Environmental monitoring (core zone &amp; buffer zone)</p>	<p>Quarterly environment monitoring is required and report has to be sent to IBM Regional office.</p>	<p>Quarterly environment monitoring is carried out through own as well as private agency.</p>	
6f	<p>General remarks of inspecting officer on PMCP compliance &amp; progressive closure operations</p>		<p>Even the Mine is nonworking from 2007. They have afforested in nearby lease and taken protective measures as per PMCP</p>	

Sl. No	Item	Proposals	Actual Work	Remarks
<b>G. MINERAL CONSERVATION:-</b>				
7a	ROM mineral dispatch or grade wise sorting within lease area	As per approved mining plan No proposal of ROM	Nil	
7b	Method of Grade-wise mineral sorting i.e. manual or mechanical	No Proposal	Nil	
7c	Different grade of mineral sorted out at mines	No Proposal	Nil	
7d	Any beneficiation process at mines	No Proposal	Nil	
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	Top Soil Dump is proposed in between Section line 4.5 to 5.0	Nil	
8b	Concurrent use or storage of topsoil	Storage of topsoil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines	OB Dump between Section line 2.5 to 3.5 Top Soil Dump between Section line 4.5 to 5.0	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 & additional plantation done	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	Nil	
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.	

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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 nil	It is advised to appoint technical person in full time	These Technical people are working as part time in other working mines also. Hence they have not shown in this mines
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 = 0.4593 hect Mine road = 0.2731 hect Unused = 49.9837 hect	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	Within Lease = Nil Outside Lease = Nil	Due to Non availability of forest permission, afforestation has not been carried out.
9e	Scrutiny of Annual return on mineral reject generation (Grade & 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	Nil	Due to Non-Working, there is no stock and all are nil only.	The mine is not in operation from 2007 for unavailability of tree felling permission

9g	Scrutiny of Annual return on sale value, Ex. Mine price & 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.	
9i	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 tree felling permission, no machineries are used in mines.	

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

There is no Violation pointed out because of mine is not working for tree felling permission from forest department.

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