

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

**MCDR inspection REPORT**

**Goa regional office**

**Mine file No :** GOA/FE/62

**Mine code :** 30GOA02133

- (i) Name of the Inspecting : **SP01** ) **SURESH PRASAD**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 19/07/2017
- (v) Prev.inspection date : 08/08/2012

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **BORCHI MORDI MINE**
- (b) **Registration NO.** :
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : GOA  
District : SOUTH GOA  
Village : MAINA  
Taluka : QUEPEM  
Post office :  
Pin Code :  
FAX No. : 2730372  
E-mail : GNA@SANCHARNET.IN  
Phone : (0832)2704131
- (f) Police Station : Quepem
- (g) First opening date : 16/02/1959
- (h) Weekly day of rest : SUN
2. Address for : VILLAGE: MAINA  
correspondance : TQ:QUEPEM  
SOUTH GOA,GOA
3. (a) Lease Number : GOA0302
- (b) Lease area : 55.78
- (c) Period of lease :
- (d) Date of Expiry :
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : AGRAWAL MINERALS (GOA) PVT LTD  
 ANAND BHUVAN OLD STATION  
 ROAD MARGAO SOUTH GOA GOA  
 Phone:  
 FAX :

Owner : G.N.Agrawal  
 Po.Box.No.: 107 Station  
 Road Margao, Goa SOUTH GOA  
 GOA  
 Phone: 0832-221131 (to  
 FAX : 0832-220372

## Geologist

Name : BENEDITO JOAQUIM FERNANDES, Full Time  
 Qualification : M. Sc. (Geology), Goa University  
 Appointment/ : 01/06/2009  
 Termination date

## Manager

Name : K.RAMANI  
 Qualification : B.E.(MINING)  
 Appointment/ : 20/08/2004  
 Termination date

|                               |   |                                |            |
|-------------------------------|---|--------------------------------|------------|
| 6. Date of approval of Mining | : | Mining Scheme rule 12 MCDR1988 | 23/02/2006 |
| Plan/Scheme of Mining         |   | Renewal under rule 24 MCR1960  | 01/02/2008 |
|                               |   | MP modif under MCR 1960        | 11/08/2015 |
|                               |   | MP modif under 17(3) MCR 2016  | 20/09/2016 |
|                               |   | MP modif under 17(3) MCR 2016  | 21/02/2017 |

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

| Sl.No. | Item  | Proposals | Actual work | Remarks  |
|--------|---|-----------|-------------|--|
| 1a     | Backlog of previous year  | 02        | Nil         | Violation issued on 25.1.17 for deviation in exploration, lessee has submitted reply and Mining Plan was modified. |
| 1b     | Exploration over lease area for geological axis 1 or 2              |           | 27.1617 Ha  |  |
| 1c     | Exploration Agencies and Expenditure in lakh rupees during the year |           | Nil         |  |
| 1d     | Balance area to be explored to bring Geological axis in 1 or 2      | 30.0756Ha | 30.0756Ha   |  |
| 1e     | Balance reserve as on 01/04/20                                      |           | 2.157MT     |  |
| 1f     | General remarks of inspecting officers on geology, exploration etc  |           |             |  |

## Development :

| Sl.No. | Item   | Proposals                                  | Actual work                                | Remarks  |
|--------|--|--|--|--|
| 2a     | Location of development w.r.t.lease area                       | N1672700 to N1673070<br>E402150 to E402660 | N1672700 to N1673070<br>E402150 to E402660 |  |
| 2b     | Separate benches in topsoil, overburden and minerals (Rule 15) | yes  | yes  | No top soil.separate benches for overburden and minerals |
| 2c     | Stripping ratio or ore to OB ratio                             | 1 : 3.80                                   | 1 : 2.54                                   |  |
| 2d     | Quantity of topsoil generation in m3                           | nil  | nil  |  |

|    |   |         |          |                       |
|----|---|---------|----------|-----------------------|
| 2e | Quantity of overburden generation in m3   | 5.5Lcum | 3.16LCUM |                       |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc |         |          | No top soil proposal. |

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Exploitation:

| Sl.No. | Item  | Propasals   | Actual work | Remarks                              |
|--------|---|-------------|-------------|--------------------------------------|
| 3a     | Number of pit proposed for production   | one         | one         |                                      |
| 3b     | Quantity of ROM mineral production proposed   | 4.0 L T     | 3.40LT      |                                      |
| 3c     | Recovery of sailable/usable mineral from ROM production   | 4.0LT       | 3.40LT      |                                      |
| 3d     | Quantity of mineral reject generation   | 5000T       | NIL         |                                      |
| 3e     | Grade of mineral rejects generation and threshold value declared.                               | +45% to 54% | +45% to 54% | Threshold valua of Normal Ore 45% Fe |
| 3f     | Quantity of sub grade mineral generation.   | nil         | nil         |                                      |
| 3g     | Grade of sub grade mineral generation   |             |             |                                      |
| 3h     | Manual / Mechanised method adopted for segregating from ROM                                     | mechanised  | mechanised  |                                      |
| 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  | no  | nil   |                   |
| 3k | Provision of mining machineries in mineral benches   | yes   | yes   | 2 No's Excavators |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | yes   | yes   |                   |
| 3m | Total area covered under excavation/pits   |   | 25.2818 Ha  |                   |
| 3n | Ore to OB ratio for the pit/mine during the year.  | 1 : 3.80  | 1 : 2.54  |                   |
| 3o | Total area put in use under different heads at the end of year                                       |   | 37.8166 Ha  |                   |
| 3p | Production of ROM mineral during the last five year period as applicable                             | 2013-14 - Nil<br>2014-15 Nil<br>2015-16 2.25LT<br>2016-17 4.0LT | 2013-14 - Nil<br>2014-15 Nil<br>2015-16 Nil<br>2016-17 3.40LT |                   |
| 3q | General remarks of inspecting officers on method of mining etc.                                      |   |   | satisfactory      |

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Solid Waste Management - Dumping:

| Sl.No. | Item   | Propasals                                  | Actual work                                | Remarks                |
|--------|--|--|--|------------------------|
| 4a     | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | yes  | yes  | No top soil.generated. |
| 4b     | Location of topsoil, OB and mineral reject dumps                 | N1673090 to N1673360<br>E402390 to E402760 | N1673090 to N1673360<br>E402390 to E402760 |                        |

|    |  |   |   |                                     |
|----|--|---|---|-------------------------------------|
| 4c | Number of dumps within lease area and outside of lease area        | Within the Lease area = One<br>Outside of the Lease Area = One  | Within the Lease area = One<br>Outside of the Lease Area = One  | old dump outside the lease.         |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16)              |   | within  |                                     |
| 4e | Number of active and alive dumps.                                  | one   | one   |                                     |
| 4f | Number of dead dumps.  | one   | one   | outside the Lease                   |
| 4g | Number of dumps established.                                       | nil   | nil   |                                     |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | yes   | yes   |                                     |
| 4i | Length of Retaining wall or garland drain all along dumps          | garland drain 1000 x 0.5x 0.5<br>laterite bund 1000 x 1.5 x 1.5 | garland drain 1000 x 0.5x 0.5<br>laterite bund 1000 x 1.5 x 1.5 |                                     |
| 4j | Number of settling ponds   |   |   | available series of settling ponds. |
| 4k | Specific comments of inspecting officer on waste dump management   |   |   | satisfactory                        |

#### 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. | NIL       | Nil         |         |
| 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.                |     |     | NO back filling and reclamation proposed. |

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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).                               |           | Yes         |   |
| 6b     | Area available for rehabilitation (ha) .   | Nil       | Nil         |   |
| 6c     | afforestation done (ha).   | Nil       | Nil         | planatation proposed for gapfilling in the afforesated area . |
| 6d     | No. of saplings planted during the year  | 3760 nos. | 3760 nos.   |   |
| 6e     | Cumulative no .of plants   |           | 389520nos.  |   |
| 6f     | Any other method of rehabilitation   | nil       | nil         |   |
| 6g     | Cost incurred on watch and care during the year  |           | Rs. 1.0Lakh |   |
| 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 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)  | yes | yes |

|    |   |  |
|----|---|--|
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | Mineral has not exhausted from the pit. Therefore, no reclamation and rehabilitation work were proposed. |
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Mineral Conservation:

| Sl.No. | Item   | Propasals           | Actual work  | Remarks  |
|--------|--|---------------------|--|--|
| 7a     | ROM Mineral dispatch or grade-wise sorting within lease area                           | Mechanical shorting | Mechanical shorting  | screening unit.  |
| 7b     | Method of grade-wise mineral sorting i.e. manual or mechanical.                        | mechanised          | mechanised   |  |
| 7c     | Different grade of mineral sorted out at mines.  |                     | Below 55 % of Fe. and 55 - 58 % of Fe.   |  |
| 7d     | Any beneficiation process at mines .   |                     | There is no wet beneficiation at mine. However, ROM is dry screened at mine by Mobile Screening<br><br>Plant (Sand wick 340) to produce Lumps & Fines. |  |
| 7e     | General remarks of inspecting officer on Mineral conservation and beneficiation issues |                     |  | There is no wet beneficiation at mine. However, ROM is dry screened at mine by Mobile Screening<br><br>Plant (Sand wick 340) to produce Lumps & Fines. |

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Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

|    |   |     |   |  |
|----|---|-----|---|--|
| 8a | Separate removal and utilization of topsoil (Rule 32)   | Nil | Nil   |  |
| 8b | Concurrent use or storage of topsoil  | nil | nil   |  |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33)                                      | yes | separate dumps for overburden, waste rock, rejects and fines. |  |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use           | Nil | nil   | not proposed   |
| 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)                    |     |   | Cumm no. plants 389520nos.   |
| 8g | Survival rate   | 80% | 80%   |  |
| 8h | Water sprinkling on roads to control airborne dust  |     | yes   |  |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area                          |     |   | Top soil handling not proposed and area not matured for backfilling. |

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Compliance of Rule 45:

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| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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|    |   |                            |  |
|----|---|----------------------------|--|
| 9a | Status of submission of Monthly and Annual returns  | Submitted                  |  |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager           | Provided                   |  |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | land use pattern furnished |  |
| 9d | Scrutiny of Annual return on afforestation  | furnished                  |  |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity)                   | furnished                  |  |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost                   | furnished                  | As per AR 2016-17<br>Production cost<br>599.22 Rs/T, |
| 9h | Scrutiny of Annual return on fixed assets   | furnished                  |  |
| 9k | Scrutiny of Annual return on mining machineries   | provided.                  |  |

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**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 :**

**(SURESH PRASAD)**

Indian Bureau of Mines