

INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
MCDR Inspection Report
Goa Regional Office

- (i) Name of the Inspecting Officer and ID No. : **(K07) KRISHNENDU CHATTERJEE**
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine Official with Designation : S/Shri Akshay Shetter- Mining Engineer,
G. Deva Krishna Reddy-Geologist
- (iv) Date of Inspection : 17.12.2024
- (v) Prev. inspection date : 24.03.2023

PART-I: GENERAL INFORMATION

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1. (a) **Mine Name** : Sulikeri Limestone & Dolomite Mine
ML No. 2391
- (b) IBM Registration Number under rule 45 of MCDR, 1988 : **IBM/694/2011**
- (c) Mine code : 38KAR26050
- (d) Type of Working (Opencast, Underground) : Opencast
- (e) Category (Fully Mechanized, Others or Manual) : Cat. A, Fully Mechanised
- (f) Captive/ Non captive : Non-captive
- (g) Postal Address
- Village : Sulikeri
- Taluk/Mandal : Badami
- District : Bagalkot
- Pin code : 587205
- State : Karnataka
- Post office : Katageri
- Nearest police station : Bagalkot
- Nearest Railway station : Bagalkot
- 2 Address for correspondence : Smt. V.S. Raikar, Lessee
C/o Vijaylaxmi Jewellers
Vallabhai Chowk, Bagalkot
Karnataka 587 101
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|---|-----|--|---|---|
| 3 | (a) | Total Lease Area (Ha) with breakup of Non-forest and forest land | : | 10.60 Ha. (Non-Forest) |
| | (b) | Date of Grant of Mining Lease | : | 13.03.2003 |
| | (c) | Date of Execution | : | 13.03.2003 |
| | (d) | Date of opening of Mine | : | 01.04.2003 |
| | (e) | Date of expiry | : | 12.03.2053; as per MMDR Amendment Act, 2015 |
| 4 | | Mineral(s) granted in lease and proved for mining | : | Limestone & Dolomite |
| 5 | (a) | Name of the lessee, Address, phone, email and fax number | : | Smt. V.S. Raikar C/o Vijaylaxmi Jewellers Vallabhai Chowk, Bagalkot Karnataka 587 101 Phone: 9480533560 e-mail: minesmailbox@gmail.com |
| | (b) | Name of the Nominated Owner with Address, phone, email, fax number and date of appointment | : | Not applicable |
| | (c) | Name of the Mine Agent with Address, phone, email, fax number and date of appointment | : | Smt. V.S. Raikar, Lessee |
| | (d) | Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines | : | Shri Akshay Shetter. Sulikeri Limestone & Dolomite Mine At Post: Katageri, Badami Taluk Bagalkot District. Karnataka 587205 Mail ID: minesmailbox@gmail.com Date of Appointment: 01.07.2022 |
| | (e) | Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine | : | Shri Akshay Shetter, B.E-Mining. Experience: 15 years. Date of Appointment: 01.07.2022 |
| | (f) | Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine | : | Shri G. Deva Krishna Reddy M.Sc-Geology. Experience: 5 years. Mail ID: minesmailbox@gmail.com Date of Appointment: 01.07.2023 |
| 6 | | Date of Approval of Mining Plan/Review of Mining Plan/Modified Mining Plan with five-year period and specific | : | Approval of RMP MCDR-MPCOLST/2/2023-GOA-IBM_RO_GOA Dated 14/07/2023 Period: 2023-24 to 2027-28 |

condition in approval letter,
if any.

PART - II: OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|----------------------------|--|---|
| 1a | Backlog of previous year | No proposal | Nil | |
| 1b | Exploration over lease area for Geological axis 1 or 2. | No proposal | G1: 10.60 Ha. | |
| 1c | Exploration Agency & Expenditure in lakh Rupees during the year | No proposal | Nil | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | No proposal | Entire ML explored under G1. | |
| 1e | Balance reserves as on <u>01.04.2024</u> | | Total reserve of Limestone: 1.274 million tonnes. Dolomite Reserve: 3.822 million tonnes. | Limestone quality: CaO +34 to 44.55%. Dolomite quality: MgO +15 to 19.98%. |
| 1f | General remarks of inspecting officer on geology, exploration etc. | Entire ML area is explored | under G1 Stage by drilling 09 Core Boreholes during April- 2017 with total meterage of 255 mts. and subsequently by drilling 04 Boreholes during 2018-19 & 2019-20 with total meterage of 120 mts. | |

Development:

| Sl.No. | Item | Proposals | Actual work | Remarks |
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| 2a | Location of development w.r.t. lease area | Between coordinates N1781120 To 1781250 E569050 To 569350 | No change. | |

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| 2b | Separate benches in topsoil, overburden and mineral (Rule 15) | Separate benches in ore proposed. | Benches in Ore: 3 Benches in Overburden: 0 |
| 2c | Stripping ratio or ore to OB ratio | 1:0.05 | 1: 0.048 S.R maintained. |
| 2d | Quantity of topsoil generation in m3 | No proposal | Nil |
| 2e | Quantity of overburden generation in m3 | 2390 m3 | 1850 m3 B.D: 2.6 tonnes/m3 |
| 2f | General remarks of inspecting officer on development of pit w.r.t. type of deposit etc. | Working benches height and width are proposed to be maintained by 6m and 8m respectively. But during the inspection it was observed that working benches, in between Section nos. D-D' to F-F' (Northen Face), were formed unsystematic manner with height of the benches more that 6m and width were also less than the bench height. Highwall of 8 to 9 m height was also observed along the North Eastern side of the mine pit (at Section no. F-F'). Violation of rule 11(1) issued on 06.01.2025. | |

Exploitation:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|--|---|
| 3a | Number of pits proposed for production | Single pit proposed | Single pit. | Dimension of existing pit was: 430m x 110m x 18m |
| 3b | Quantity of ROM mineral proposed | 5,187 tonnes of Limestone & 111,140 tonnes of Dolomite | Limestone: 5180 tonnes & Dolomite: 92,000 tonnes of production was reported in 2023-24. | |
| 3c | Recovery of salable/usable mineral from ROM production | 95% recovery proposed | Approx. recovery of ROM 95% | |
| 3d | Quantity of mineral reject generation | No proposal | Nil | |

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| 3e | Grade of mineral reject generation and threshold value declared | No proposal | Not applicable | |
| 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 | Mechanised | Mechanised mine | |
| 3i | Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject | No proposal | Nil | |
| 3j | Provision of drilling & blasting in mineral benches | Proposed to drill by jack hammer and blasting using slurry and UNFO | Jack Hammer drilling & blasting by using slurry explosives | |
| 3k | Provision of mining machineries in mineral benches | Air Compressor-1 Excavator-1 Dumper-2 Water Tanker-1 | Air Compressor-1 Excavator-1 Dumper-1 Water Tanker-1 | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | 6m bench height proposed. | Bench height not maintained. Highwall of 8 to 9 m height was observed along the North Eastern side of the mine pit | Violation issued on 06.01.2025. |
| 3m | Total area covered under excavation/pits | 4.39 Ha. | 4.39 Ha. | Actual area utilizations are furnished as per submitted AR 2023-24. |
| 3n | Ore to OB ratio for the pit/mine during the year | 1:0.05 | 1: 0.048 | S.R maintained. |

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| 3o | Total area put in use under different heads at the end of year | Area under mining: 4.39 Ha. Dump: 0.06 Ha. Mineral Storage: 0.57 Ha. Infrastructures & Road: 0.15 Ha. | Area under mining: 4.39 Ha. Mineral Storage & Others: 1.49 Ha. Infrastructures & Road: 0.18 Ha. | Actual area utilizations are furnished as per submitted AR 2023-24. |
| 3p | Production of ROM mineral during last five-year period, as applicable | Limestone: 2019-20: Nil 2020-21: Nil 2021-22: Nil 2022-23: Nil 2023-24: 5187 (in tonnes) Dolomite: 2019-20: 111140 2020-21: 111140 2021-22: 111140 2022-23: 111140 2023-24: 111140 (in tonnes) | Limestone: 2019-20: Nil 2020-21: Nil 2021-22: Nil 2022-23: Nil 2023-24: 5180 (in tonnes) Dolomite: 2019-20: 96120 2020-21: 97000 2021-22: 97750 2022-23: 105750 2023-24: 92000 (in tonnes) | |
| 3q | General remarks of inspecting officer on method of mining etc. | Opencast Mining is being carried out with jack hammer drilling & blasting using slurry explosives and excavator - tippers combination. Blasted oversized boulders were found scattered along the northern face of the pit which defies systematic and scientific mining in that area. Violation of rule 11(1) issued on 06.01.2025. | | |

Solid Waste Management-Dumping:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|---|--|
| 4a | Separate dumping of topsoil, OB & mineral reject (Rule 32, 33) | Separate dumping of OB proposed in F.Y 2023-24 | Disposed along the ML boundary (Near BP-5). | |
| 4b | Location of topsoil, OB & mineral reject dumps | OB dumping proposal given near BP-5. | No change in waste disposal location. | No top soil and Mineral reject generated in 2023-24. |
| 4c | Number of dumps within lease area and outside lease area | 01 no. of dump within ML area proposed. | 01 small waste dump present within ML | Dump is located near BP-5, along the ML boundary. |

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| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Outside UPL proposed. | Located Outside UPL |
| 4e | Number of active & alive dumps | 01 No. | 01 No. |
| 4f | Number of dead dumps | No proposal | Nil |
| 4g | Number of dumps stabilized | No proposal | Nil |
| 4h | Whether Retaining wall or garland drain all along dumps are there | Proposed along the toe of dump. | Constructed as per proposal. |
| 4i | Length of Retaining wall or garland drain all along dump | 52 m retaining wall proposed in F.Y 2023-24. | 50m Retaining wall constructed along the waste dump. |
| 4j | Number of settling ponds | No proposal | Nil |
| 4k | Specific comments of inspecting officer on waste dump management. | OB Waste was disposed near the 7.5 m safety barrier area by formation of bund (Near BP-5). Retaining Wall along the toe of the waste dump constructed as per proposal. | |

Solid Waste Management-Backfilling:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|---------------|--|------------------|--------------------|----------------|
| 5a | Status on part or full extraction of mineral from mined out area before starting backfilling | No proposal | Nil | |
| 5b | Area under backfilling of mined out area | No proposal | Nil | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32) | No proposal | Nil | |
| 5d | Total area fully reclaimed & rehabilitated | No proposal | Nil | |

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| 5e | General remarks of inspecting officer on backfilling, reclamation etc | Mine lease is not matured for rehabilitation by backfilling. |
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Progressive Mine Closure Plan:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|--------------------------|---|---------|
| 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. | Proposed. | Submitted for F.Y. 2023-24 along with A.R | |
| 6b | Area available for rehabilitation (ha) | No proposal | Nil | |
| 6c | Afforestation done (ha) | 0.08 Ha. during 2023-24. | 0.10 Ha. during F.Y 2023-24. | |
| 6d | No. of saplings planted during the year | 100 nos. | 500 nos. within the ML area in 2023-24. | |
| 6e | Cumulative no. of plants | Not specified | Apprx. 1000 nos. saplings planted along the safety barrier. | |
| 6f | Any other specific method of rehabilitation | No proposal | Nil | |
| 6g | Cost incurred on watch & care during the year | Rs. 10,000/- | Rs. 50,000/- as reported by the lessee representative | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D) | No proposal | Nil | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings | No proposal | Not applicable | |

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| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area | No proposal | Not applicable |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | No proposal | Not applicable |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means | No proposal | Not applicable |
| 6m | Compliance of Rehabilitation of waste land within lease (i) Afforestation | No proposal | Not applicable |
| 6n | Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) | No proposal | Not applicable |
| 6o | Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation | No proposal | Not applicable |
| 6p | Compliance of Environmental monitoring (core zone & buffer zone) | Proposed. | Environmental monitoring is carried out periodically and parameters are found within stipulated limit. |
| 6q | General remarks of inspecting officer on PMCP compliance & progressive closure operations | PMCP compliances being carried out as per approved proposals. Apprx. 1000 nos. saplings were planted within the ML area along the safety barrier. | |

Mineral Conservation:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|--|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | ROM/Mineral dispatch proposed after sizing and sorting. | ROM & grade wise dispatch after sizing and sorting. | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical | Mechanical crushing and screening proposed. | Mechanical crushing and screening. | Crusher has been installed within ML area for sizing and screening of ore. |
| 7c | Different grade of mineral sorted out at mines | Proposed for all +34% CaO in respect of Limestone. | BF grade Limestone dispatch reported in F.Y. 2023-24 | |
| 7d | Any beneficiation process at mines | No proposal | Nil except crushing and dry screening. | |
| 7e | General remarks of inspecting officer on Mineral conservation & beneficiation issues | Grade wise mineral being dispatched from the mine after sizing and sorting of ores. 5161 tonnes of BF grade Limestone and 54158 tonnes of Dolomite were dispatched form the mine during 2023-24. | | |

Environment:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|-------------------------------|--|--|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal | No Top Soil generation in F.Y. 2023-24 | |
| 8b | Concurrent use or storage of topsoil | No proposal | Not Applicable | Top soil earlier used for plantation along the ML boundary at Northern side. |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Dumping of waste is proposed. | Separate dumping of waste has been made. | |

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| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No proposal | Mine pit is not matured for backfilling. | |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Proposed during conceptual stage. | Not Applicable | |
| 8f | Baseline information on existence of plantation & additional plantation done (Rule 41) | Plantation of local Spices | Baseline information submitted. | Apprx. 1000 nos. saplings were planted within ML area. |
| 8g | Survival rate | Not specified. | 50 to 60% | |
| 8h | Water sprinkling on roads to control airborne dust | Proposed. | Water tanker arrangement for water sprinkling on mine roads has been made. | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Aesthetic beauty in and around the mining area is good. At northern side, 0.50 Ha. of the existing ML area is covered under plantation. | | |

Compliance of Rule 45:

| Sl.No. | Item | COMMENTS | Remarks |
|--------|--|---|--|
| 9a | Status of submission of Monthly and Annual returns | M.R. Submitted up to March 2025 A.R. Submitted up to 2023-2024 | Date of submission of AR was 30.06.2024. |

| S.N. | Item | Propasals | Actual work | Remarks |
|------|---|--|-------------|---|
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Manager cum Mining Engineer: Shri Akshay Shetter. Geologist: Shri G. Deva Krishna Reddy | No change. | Notices of appointments of Mining Engineer and Geologist submitted. |

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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Area under mining: 4.39 Ha. Mineral Storage & Others: 1.49 Ha. Infrastructures & Road: 0.18 Ha | Area under mining: 4.39 Ha. Waste Bund: 0.06 Ha. Mineral Stock: 0.57 Ha. Infrastructures & Road: 0.18 Ha. Plantation: 0.5 Ha. |
| 9d | Scrutiny of Annual return on afforestation | 500 nos. within the ML area | Carried out along safety barrier area and Northern side of the ML. with survival rate of 50% |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade & quantity) | Furnished as Nil | No mineral reject generation in 2023-24. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | ROM closing stocks: Nil in respect of Limestone and Dolomite both. Graded ore closing Stock of BF grade Limestone: 19 tonnes. Graded ore closing Stock of Dolomite: 53644 tonnes. | Actual was also same at that time as per mine production and dispatch register. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price & production cost | Ex-Mine Price for BF grade Limestone: Rs. 508 / tonne and Ex-Mine Price for Dolomite: Rs. 472/tonne | Some of the invoices were checked during inspection and sale values given were found correct. |

Production Cost:
Rs. 364.60 /tonne

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| 9i | Scrutiny of Annual return on fixed assets | Net closing balance and estimated market values are mentioned in AR. | Details furnished. |
| 9k | Scrutiny of Annual return on mining machineries | Air Compressor: 1 no. Excavator: 1 no. Tippers: 1 no. Crusher: 1 no. Water tanker: 1 no. | No change. |

| Details of violations observed during current inspection and compliance position of violation pointed out | | | | | |
|--|------------|---------------|----------------------------|-----------|---------------|
| <u>Violation observed</u> | | | <u>Show cause position</u> | | |
| Rule NO. | Issued on | Compliance on | Rule NO. | Issued on | Compliance on |
| 11(1) | 06.01.2025 | | | | |

(KRISHNENDU CHATTERJEE)
Indian Bureau of Mines