

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

Review and updation of Mining Plan REPORT

Bangalore regional office

Mine file No : KNT/BLR/Fe-492/BNG

Mine code : 30KAR03183

- (i) Name of the Inspecting : **OM5**) **Dr.OMKESHA MURTHY.M.G**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mr. Nishant Kumar Sharma - AGM (Mine Manager), Mr. Viv
Official with
Designation
- (iv) Date of Inspection : 20/10/2022
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DEVADARI IRON ORE MINE**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : KARNATAKA
District : BELLARY
Village :
Taluka :
Post office :
Pin Code :
FAX No. : 022-42863000
E-mail : sunil.singh@jsw.in
Phone : 022-42861000
- (f) Police Station : Sandur
- (g) First opening date : 28/12/2018
- (h) Weekly day of rest : SUN
2. Address for : Lakshmipura Village
correspondance Sandur Taluk, Bellary
Karnataka
3. (a) Lease Number :
(b) Lease area :
(c) Period of lease :
(d) Date of Expiry :
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : JSW STEEL LIMITED
 JSW Mining office, Near
 Talur Cross Vidyanagar
 Post, Toranagallu Sandur,
 Bellary BELLARY KARNATAKA
 Phone:9448286155
 FAX :

Owner : Shri Jayant Acharya Deputy Managing Director
 BELLARY KARNATAKA
 Phone: jayant.acharya@
 FAX :

Agent : SUNIL KUMAR SINGH,
 JSW steel Ltd., Vijayanagar
 works, Vidyanagar Po,
 Bellari, Karnataka BELLARY
 KARNATAKA
 Phone: 9448286155
 FAX : 08395250132/142

Mining Engineer

Name : B.P.UMAPATI,Full Time
 Qualification :
 Appointment/ : 18/08/2020
 Termination date

Geologist

Name : VIVEK.G,Full Time
 Qualification : MSc (GEO)
 Appointment/ : 25/02/2022
 Termination date

Manager

Name : Nishant Kumar Sharma
 Qualification : B E (Mining)
 Appointment/ : 22/12/2018
 Termination date

6. Date of approval of Mining : MP under 16(1) of MCR 2016 31/03/2017
 Plan/Scheme of Mining : MP modif under 17(3) MCR 2016 21/10/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	NIL
1b	Exploration over lease area for geological axis 1 or 2	No proposal	NIL	NIL
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	NIL	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	G1 - 59.79 Ha G2- 0.64 Ha G3-0.84 Ha Non-mineralized Area- 39.27 Ha
1e	Balance reserve as on 01/04/20	--	35,073,126 Metric Tonnes (as on 01.04.2022) as per AR	--
1f	General remarks of inspecting officers on geology, exploration etc			No exploration proposals for the year 2021-22 Total lease area explored as on 01.04.2022 is as follows: G1 - 59.79 Ha, G2- 0.64 Ha, G3-0.84 Ha, Non-mineralized Area- 39.27 Ha

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	E/W: 669394 to 669783 N/S: 1665991 to 1666465	E/W: 6699401 to 669780 N/S: 1665998 to 1666452	Development carried out within the extent of proposal
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Benches in Overburden & Mineral: 6	Benches in Overburden & Mineral: 6	No Topsoil Generation

2c	Stripping ratio or ore to OB ratio	1: 0.19 T/T	1: 0.44 T/T	Difference in Ore to OB ratio is due to internal burden and change in nature of ore body as reported mine management team during inspection
2d	Quantity of topsoil generation in m3	NIL	NIL	No Topsoil Generation,
2e	Quantity of overburden generation in m3	1,02,230 m3	242,972 m3	Reported for the year 2021-22
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development in the mine carried out within the extent of proposal in the approved mining plan.

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	1	1	For year 2021-22
3b	Quantity of ROM mineral production proposed	1,164,990.00 Metric Tonnes	1,164,745.01 Metric Tonnes	AS per AR
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Whole ROM ore from ore zone recovered during mining operation .
3d	Quantity of mineral reject generation	No Proposals	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No Proposals	NIL	NIL
3f	Quantity of sub grade mineral generation.	No Proposals	NIL	NIL
3g	Grade of sub grade mineral generation	No Proposals	NIL	NIL

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method for ROM Segregation by means of crushing and screening	Crushing and screening carried out as per plan	Capacity Crushing and Screening - 250 TPH.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	Drilling and Blasting is proposed for mineral benches.	As per proposals	As per proposals
3k	Provision of mining machineries in mineral benches	Proposed Mining Machineries: Excavators-5 (1.6m ³) Rock breaker - 1 (0.9-1.1m ³) Tippers-25(20 Tons) Drill-2 (102-115mm dia) Front End-6 (2.6m ³) Back hoe loader-1 (1.1 m ³)	Deployed Mining Machineries: Excavators-5(1.6m ³) Rock breaker -1(1.6m ³) Tippers-22(20 Tons) Drill-1(102mmdia) Front End-4(2.6m ³) Back hoe loader - 2(0.6m ³)	As per proposals
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height- 8m Bench Width- 8m	Maintained to the maximum extent as per as possible	NIL

3m	Total area covered under excavation/pits	Mining Area: 49.00 Ha Low Grade Storage: 2.03 Ha Backfilling- 2.05 Ha(proposal for this year)	Mining Area =50.83 Ha (49.00+2.03-0.20) Backfilling-2.95 Ha(utilized during this year)	The material proposed till now has been utilized. The area under mining differs from the proposed land use in the Approved Mining Plan. Part of the existing area under mining was supposed to be utilized for low grade mineral storage.
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.19 T/T	1: 0.44 T/T	Due to change in nature of mineralization and inter burden
3o	Total area put in use under different heads at the end of year	Mining- 49.00 Ha Roads - 4.04 Ha Infrastructure - 0.59 Ha Waste Dumps- 20.71 Ha Others - 26.20 Ha Total - 100.54 Ha	Mining- 50.83 Ha Roads - 04.04 Ha Infrastructure - 0.59 Ha Waste Dumps-20.71 Ha Others - 24.37 Ha Total - 100.54 Ha	Part of the existing area under mining was supposed to be utilized for low grade mineral storage. The material proposed till now has been utilized. Therefore the area under mining differs from the proposed land use in the Approved Mining Plan.
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 1,165,000 2019-20: 1,165,000 2020-21: 1,164,996 2021-22: 1,164,990 2022-23: 1,164,998 (in Metric Tonnes)	2018-19: 1,163,958 2019-20: 1,164,619 2020-21: 1,164,700 2021-22: 1,164,745 (in Metric Tonnes)	Proposal shown as per Approved Mining Plan
3q	General remarks of inspecting officers on method of mining etc.			Exploitation of ore as per the approved proposal have been maintained

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of Overburden is proposed as backfilling.	Carried out as per proposal	NIL
4b	Location of topsoil, OB and mineral reject dumps	OB Dump Proposal: E/W: 669128 to 669315 N/S: 1666314 to 1666449	Backfilling done as per proposal	--
4c	Number of dumps within lease area and outside of lease area	Within Lease Area-3 Dumps (1 Backfilling, 2 Inactive Dump- ID1, ID2) Outside Lease Area- No Proposal	Within Lease Area-3 Dumps (1 Backfilling, 2 Inactive Dump- ID1, ID2) Outside Lease Area- No Proposal	Currently Active Dump is Backfilling. Inactive Dumps were made by the erstwhile lessee.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps are outside the UPL.	Dumps are outside the UPL.	Portions of ID-2 lie inside the UPL.
4e	Number of active and alive dumps.	Active Dump (Backfilling)-1	Active Dump (Backfilling)-1	NIL
4f	Number of dead dumps.	2 Inactive Dump	2 Inactive Dump	--
4g	Number of dumps established.	NIL	NIL	2 no. Inactive Dumps: Stabilization under progress Stabilization Under Progress as per approved R&R Plan
4h	Whether Retaining wall or garland drain all along dumps are there.	YES	Retaining wall & Garland drain not carried out as per the proposal.	VL issued by the previous I/O and same has been taken as complied
4i	Length of Retaining wall or garland drain all along dumps	Proposed in Approved Mining Plan: TW-1: 92m TW-2: 120m BWCD: 93 LWCD: 23 LBCD: 15	Actual Work Carried Out in this year: TW-1: 0m TW-2: 0m BWCD:101 LWCD: 13 LBCD: 46 TW-8: 90m	VL issued by the previous I/O and same has been taken as complied

4j	Number of settling ponds	SST- 2 ST- 2 GCD-24 LBCD-38 RWHP-20	SST- 2 ST- 2 GCD-21 LBCD-37 RWHP-16	Satisfactorily as per as possible
4k	Specific comments of inspecting officer on waste dump management			VL issued by the previous I/O and same has been taken as complied. Efforts were made to achieve the proposals and to stabilize the existing dumps for their stabilization.

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.	No proposals	NIL	No area is completely mined out during this plan period.
5b	Area under backfilling of mined out area	2.05 Ha	2.29 Ha	As informed by mine management, more waste handling has been done with respect to proposal given in the year 2021-22
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NIL	NIL	No Topsoil Generation
5d	Total area fully reclaimed and rehabilitated	NIL	NIL	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No area is completely mined out during this plan period for backfilling.

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).	Submission of Annual report on PMCP under rule 23E(2)	Submitted	NIL
6b	Area available for rehabilitation (ha) .	NIL	NIL	NIL
6c	afforestation done (ha).	Proposed in Safety Zone- 1.07 Ha Outside Lease area (in the encroached area):4.19 Ha	Achieved Inside the lease area-2.1Ha Outside Lease area (in the encroached area):4.19 Ha	Inside Lease: "Safety zone plantation- 1.07 Ha from LBS-4 to LBS-7 "1.03 Ha on ID-1 Outside Lease: "4.19 Ha on EID-1
6d	No. of saplings planted during the year	Proposed in Safety Zone- 1463 Outside Mining Lease: Plants-4190, Shrubs- 10475	Inside the lease area: Safety Zone- 1550 (LBS 4 to 7) Dump Area- 2200 (ID-1) Outside ML area (EID-1): Vetiver Grass -15000, Shrubs- 15000	Inside Lease: "Safety zone plantation- 1.07 Ha from LBS-4 to LBS-7 "1.03 Ha on ID-1 Outside Lease: "4.19 Ha on EID-1
6e	Cumulative no .of plants	Not specified	Inside Lease: 6970 Outside ML: 78565 Total 85535	NIL
6f	Any other method of rehabilitation	No Proposals	NIL	Implementation of Bio-engineering measures for Surface Water and Dump Management as per Approved R&R Plan.
6g	Cost incurred on watch and care during the year	No Proposals	NIL	NIL
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	192m x 142m x 20m	197m x 139m x 22m	NIL

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Cumulative Backfilling Area 4.31 Ha	Cumulative Backfilling Area 4.14 Ha	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposals	NIL	No area is completely Mined Out during this plan period. Backfilling of previously mined out area is under progress.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposals	NIL	No area is completely Mined Out during this plan period. Backfilling of previously mined out area is under progress.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposals	NIL	No area is completely Mined Out during this plan period. Backfilling of previously mined out area is under progress.
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposals	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposals	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposals	NIL	NIL

6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular Environmental Monitoring of Core and Buffer zone is proposed.	Environmental Monitoring of Core and Buffer zone is being carried out on regular basis. All the parameters are within the permissible limit	Monitoring Agency-Ecomen Laboratories Parameters which are being Monitored: "Ambient Air Quality "Ambient Noise "Surface Water "Dust Fall Measurement "Noise Monitoring (Personal Exposure) "Stack Monitoring "Personal Dust Monitoring "Fugitive Dust Monitoring "Soil Quality "Ground Water Quality
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The PMCP proposals implemented inside the mine as per the proposal.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Crushing and screening is proposed for the Approved quantity	As per plan	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No Proposals	Mechanical Sorting	Dry Crushing and Screening Method Product: 0-10mm, 10-40mm
7c	Different grade of mineral sorted out at mines.	No Proposals	NIL	NIL
7d	Any beneficiation process at mines	No Proposals	NIL	NIL

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Mineral conservation in the Mining lease area satisfactorily
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	NIL	Majority area is already broken.
8b	Concurrent use or storage of topsoil	NIL	NIL	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is proposed.	Carried out as per plan	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposals	NIL	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposals	NIL	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Green Belt development across safety zone. No. of plantation: 1463	Total plantation Inside the lease area 3750, and outside lease area reported is 30000	NIL
8g	Survival rate	85-90%	Reported 90% in the AR	NIL

8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads is proposed to control airborne dust.	4 Water tankers have been deployed for sprinkling on roads to control airborne dust.	No. of Water Tankers: 4 Capacity: 10000 Litre
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Green belt area developed in safety zone

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	A.R. Submitted up to: Year 2020-21	A.R. Submitted up to: Year 2020-21	Received in the online portal on 30.06.2022
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr. Nishant Kumar Sharma - AGM (Mine Manager) Mr. VivekG.- Dy. Manager (Mine Geologist) Mr. Sridhar B. - Dy. Manager (Mine Surveyor) Mr. B P Umapati- Sr. Manager (Mining Engineer) Mr. Nataraja BD- Manager(Geology)	Appears to be correct.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 50.83 Ha Roads - 04.04 Ha Infrastructure - 0.59 Ha Waste Dumps- 20.71 Ha Others - 24.37 Ha- Total - 100.54 Ha	Appears to be correct.	NIL

9d	Scrutiny of Annual return on afforestation	Total plantation carried out in the lease for the RY 2021-22 is 3750	Appears to be correct.	Plantation has been carried out across the Safety Zone and in the Inactive Dump area.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No Mineral Reject Generation in lease for the RY	NIL	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock:0.01 Tonne Production:11,64,745.01Tonnes Closing Stock: 0.01 Tonne	Appears to be correct.	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Lumps 55%>Fe -759.72 ?/T 58%>Fe?55%- 759.72 ?/T Fines 55%>Fe -759.72 ?/T 58%>Fe?55%- 759.72 ?/T 60%>Fe?58%- 759.72 ?/T	Appears to be correct.	NIL
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: ?. 858309849 Depreciation on Fixed Assets: ?. 55267648	Appears to be correct.	NIL
9k	Scrutiny of Annual return on mining machineries	Details given in the AR	Appears to be correct.	NIL

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
MCDR17	Rule 34(1)	02/11/2022	05/01/2023			

Date :

(Dr.OMKESHA MURTHY.M.G)

Indian Bureau of Mines