

**INDIAN BUREAU OF MINES**  
**MINERALS DEVELOPMENT AND REGULATION DIVISION**  
**RMP 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 Suresh Banoth -Mines Manager, Narayana S Panchagavi-Geologist.
- (iv) Date of Inspection : 18.12.2024
- (v) Prev. inspection date : 22.03.2024

**PART-I: GENERAL INFORMATION**

1.	(a)	<b>Mine Name</b>	:	Amingad Iron Ore Mine <b>ML No. 2642</b>
	(b)	IBM Registration Number under rule 45 of MCDR, 1988	:	IBM/5563/2011
	(c)	Mine code	:	30KAR26001
	(d)	Type of Working (Opencast, Underground)	:	Opencast
	(e)	Category (Fully Mechanized, Others or Manual)	:	Cat. A, OTFM
	(f)	Captive/ Non captive	:	Non-captive
	(g)	Postal Address		
		Village	:	Amingad
		Taluk/Mandal	:	Hungund
		District	:	Bagalkot
		Pin code	:	587112
		State	:	Karnataka
		Post office	:	Amingad
		Nearest police station	:	Ilkal
		Nearest Railway station	:	Bagalkot
2		Address for correspondence	:	Arihant Minerals Ward no.01, Near Spandana College, Hanamasagar Road, ILKAL-587125

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3	(a)	Total Lease Area (Ha) with breakup of Non-forest and forest land	:	4.86 Ha. (Non-Forest)
	(b)	Date of Grant of Mining Lease	:	28.06.2010
	(c)	Date of Execution	:	28.06.2010
	(d)	Date of opening of Mine	:	27.06.2030
	(e)	Date of expiry	:	27.06.2060; as per MMDR Amendment Act, 2015
4		Mineral(s) granted in lease and proved for mining	:	Iron Ore.
5	(a)	Name of the lessee, Address, phone, email and fax number	:	M/s Arihant Minerals Ward no.01, Near Spandana College, Hanamasagar Road, ILKAL-587125.
	(b)	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	:	Shri Raju Bora. Ward no.01, Near Spandana College, Hanamasagar Road, ILKAL-587125 Date of Appointment - 06.03.2024
	(c)	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	:	Shri Raju Bora. Ward no.01, Near Spandana College, Hanamasagar Road, ILKAL-587125 Mail ID: arihantminerals79@yahoo.com
	(d)	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	:	Shri Suresh Banoth. Mail ID: arihantminerals79@yahoo.com Date of Appointment: 18.12.2021
	(e)	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	:	Shri Suresh Banoth, B.E-Mining Total Experience: 15 years. Mail ID: arihantminerals79@yahoo.com Date of Appointment: 18.12.2021 Phone: 9448118845
	(f)	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	:	Shri Narayana S Panchagavi, M.sc. Geology Total Experience: 20 years. Mail ID: arihantminerals79@yahoo.com Date of Appointment: 01.05.2023
6		Date of Approval of Mining Plan/Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	:	Approval of RMP RMP/OFFM-04 (KNT)/GOA/2019-20 Dated 24/02/2020 Period: 2020-21 to 2024-25

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**PART - II: OBSERVATION/COMMENTS OF INSPECTING OFFICERS****Exploration:**

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2 nos. of Boreholes proposed during 2023-24.	6 nos. of boreholes drilled during the year.	
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal	G1: 4.86 Ha.	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not specified	By lessee, Expenditure incurred: Rs. 39,240/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1 proposed.	ML explored under G1.	
1e	Balance reserves as on <u>01.04.2024</u>		Total reserve: 0.0265 million tonnes.	Quality: +35 to 55% Fe.
1f	General remarks of inspecting officer on geology, exploration etc.	The lease area hosts Hematite Iron ore (Float) and Hematite Siliceous Iron ore (Float) deposits. The deposit extends over the length of 400 m and with an average width of 90 to 100 m. The quality of iron ore analyses average is 46.1% Fe. Total 12 nos. of boreholes and 11 Trial Pits drilled in the ML area; entire mineralized area is explored under G1 stage of exploration.		

**Development:**

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	From section nos. D-D' to section Nos. F-F'	No change in development area.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in ore proposed.	Separate benches in ore are maintained.	

2c	Stripping ratio or ore to OB ratio	1:0.21	1: 0.48	Generation of intercalated waste was more than proposal.
2d	Quantity of topsoil generation in m3	No proposal	Nil	
2e	Quantity of overburden generation in m3	6000 m3	6500 m3	B.D: 2.0 tonnes/m3
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Low grade, float ore mining operation; depth of the mineralization is varying from 4 to 6m. Ore is being recovered through mechanical screening and manual sorting.		

### Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Single pit proposed	Single pit.	
3b	Quantity of mineral production proposed	28,000 tonnes	27,000 tonnes production reported in F.Y 2023-24.	
3c	Recovery of salable/usable mineral from ROM production	80% proposed.	60% recovery achieved during 2023-24.	Lessee advised to carry out fresh recovery study of the deposit.
3d	Quantity of mineral reject generation	No proposal	Nil	
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	Mechanized	Mechanized mine, OTFM	
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	No proposal	Nil	Float Iron ore deposit.
3k	Provision of mining machineries in mineral benches	Proposed with hydraulic excavators and dumpers combination.	Hydraulic excavators and dumpers combination adopted.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	3m bench height proposed.	Average height 3m is maintained	
3m	Total area covered under excavation/pits	2.25 Ha.	2.25 Ha.	
3n	Ore to OB ratio for the pit/mine during the year	1:0.21	1: 0.48	
3o	Total area put in use under different heads at the end of year	Area under mining: 2.25Ha. Mineral Storage: 0.27Ha. Infrastructures & Road: 0.50Ha	Area under mining: 2.25 Ha. Waste Dump: 0.34 Ha. Mineral Storage: 0.10 Ha. Infrastructures & Road: 0.50 Ha	
3p	Production of ROM mineral during last five-year period, as applicable	2019-20: 30,000 2020-21: 28,900 2021-22: 29,000 2022-23: 27,000 2023-24: 28,000 (in tonnes)	2019-20: 14,000 2020-21: 28,500 2021-22: 28,900 2022-23: 26,500 2023-24: 27,000 (in tonnes)	
3q	General remarks of inspecting officer on method of mining etc.	OTFM method of mining has been observed as per approved RMP proposal. Depth of working is only 5 to 6m. Waste generation during 2023-24 was on higher side due to interstitial clay contamination issue in float ore. Lessee is advised to carry out		

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fresh recovery study of the deposit during F.Y  
2024-25.

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### Solid Waste Management-Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Concurrent Backfilling of mined out areas proposed	Concurrent backfilling.	
4b	Location of topsoil, OB & mineral reject dumps	No proposal	Nil during F.Y. 2023-24.	
4c	Number of dumps within lease area and outside lease area	No proposal	02 nos. of dumps within ML. Nil outside ML.	Old dumps
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL proposed.	Dumps were located within UPL	
4e	Number of active & alive dumps	No proposal	Nil	
4f	Number of dead dumps	No proposal	02 nos.	
4g	Number of dumps stabilized	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposed.	Constructed as per proposal.	
4i	Length of Retaining wall or garland drain all along dump	No proposal in 2023-24	Nil	Total 350m of retaining wall constructed so far.
4j	Number of settling ponds	No proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management.	Concurrent backfilling of exhausted part of pit has been carried out as per proposal.		

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**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	Concurrent backfilling proposed.	Concurrent backfilling carried out at mined out areas.	Back filling is Being carried out after complete extraction of float ore.
5b	Area under backfilling of mined out area	0.018 Ha.	0.02 Ha.	Total backfilled area 0.50 Ha. so far.
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	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Concurrent backfilling is being carried out at mined out areas as per approved proposal.		

**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	
6b	Area available for rehabilitation (ha)	No proposal	Nil	
6c	Afforestation done (ha)	0.10 Ha. during 2023-24.	0.10 Ha.	

6d	No. of saplings planted during the year	200 nos.	380 nos. within the ML area in 2023-24.
6e	Cumulative no. of plants	Not specified	Apprx. 1100 nos. Including saplings planted gap within the ML plantation. area.
6f	Any other specific method of rehabilitation	No proposal	Nil
6g	Cost incurred on watch & care during the year	Rs. 25,000/- during 2023-24.	Rs. 35,000/-
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
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. 1100 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 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 process proposed.	Mechanical sizing followed by manual sorting.	Crusher has been installed within ML for crushing and dry screening of ROM.
7c	Different grade of mineral sorted out at mines	Proposed for all +45% Fe.	45% to below 51% Fe grade ROM despatch reported.	As per submitted annual return of 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	Dry Screening of ROM is being carried out within the lease area.		

**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 safety barrier zone.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal	Nil during 2023-24.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling proposed.	Backfilling of mined out pits after complete extraction of ore.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposed during conceptual stage.	Not Applicable	Backfilled areas not matured for restoration.
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Plantation of local Spices	Baseline information submitted.	Apprx. 1100 nos. saplings were planted within ML area.
8g	Survival rate	Not specified.	70 to 80%	
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. Apprx. 1100 nos. saplings were planted within ML area.		

**Compliance of Rule 45:**

Sl.No.	Item	COMMENTS	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to Jan. 2025  A.R. Submitted up to 2023-2024	Date of submission of AR was 15.06.2024.

S.N.	Item	Propasals	Actual work	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager & Mining Engineer: Shri Suresh Banoth Geologist: Shri V. Venkateshwara Rao	Manager & Mining Engineer: Shri Suresh Banoth Geologist: Shri Narayana S Panchagavi	Notices of appointments of Mining Engineer and Geologist submitted.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining: 2.95 Ha. Mineral Storage: 0.10 Ha. Infrastructures & Road: 0.50Ha	Area under mining: 2.25 Ha. Waste Dump: 0.34 Ha. Mineral Storage: 0.10 Ha. Infrastructures & Road: 0.50 Ha	
9d	Scrutiny of Annual return on afforestation	380 nos. within the ML area	Carried out along safety barrier area and Eastern side of the ML.	
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: 10,790 tonnes. Graded ore closing Stock: Nil.	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 ROM despatch (45 to 51% Fe): Rs. 1640 / tonne	Some of the invoices were checked during inspection and	

		Production Cost: Rs. 1549.87 /tonne	sale values given were found correct.
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	Excavator: 1 no. Tippers: 2 nos. Crusher: 1 no. Water tanker: 1 no.	No change.

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<b>Details of violations observed during current inspection and compliance position of violation pointed out</b>					
<u>Violation observed</u>			<u>Show cause position</u>		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on

**(KRISHNENDU CHATTERJEE)**  
**Indian Bureau of Mines**