

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/JHN-1/CU- 1

Mine code : 14RAJ17002

- (i) Name of the Inspecting : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sh. S K Purohit, Mine Manager, Mining Engineer: NS Ja
Official with
Designation
- (iv) Date of Inspection : 24-JUN-22
- (v) Prev.inspection date : 14-MAR-22

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KHETRI**
- (b) **Registration NO.** : **IBM/6381/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Underground
- (e) Postal address
- State : RAJASTHAN
- District : JHUNJHUNU
- Village : BANWAS
- Taluka : KHETRI
- Post office : KHETRINAGAR
- Pin Code : 333504
- FAX No. : 01593-20002/20038
- E-mail : hcl_kcc@hindustancopper.com
- Phone : 01593-20065/20006
- (f) Police Station : Khetrinagar
- (g) First opening date : 15-OCT-63
- (h) Weekly day of rest : SUN
2. Address for : M/S HINDUSTAN COPPER LTD
correspondance : POST KHETRINAGAR 333504
DIST. JHUNJHUNU
3. (a) Lease Number : RAJ0449
- (b) Lease area : 395.07
- (c) Period of lease : 20
- (d) Date of Expiry : 23-FEB-13
4. Mineral worked : COPPER ORE Main

5. Name and Address of the

Lessee : HINDUSTAN COPPER LIMITED
 KHETRI COPPER COMPLEX
 KHETRI NAGAR JHUNJHUNU
 RAJASTHAN
 Phone:01593-20065-20006
 FAX :01593-20002

Owner : Shri Sanjay Panjiyar,
 1-Ashutosh Chowdhury Avenue
 M/s Hindustan Copper
 Limited. KOLKATA WEST
 BENGAL
 Phone: 033 22817138
 FAX : 033 22832478

Agent : Shri Sree Kumar
 Khetri Copper Complex, M/s
 Hindustan Copper Limited
 Khetri Nagar, Jhunjhunu
 JHUNJHUNU RAJASTHAN
 Phone: 08279211779
 FAX : 01593 220002

Mining Engineer

Name : N.S. Jangde, Full Time
 Qualification : BE Mining
 Appointment/ : 04-AUG-20
 Termination date

Mining Engineer

Name : Shri S K Purohit, Full Time
 Qualification : BE (Mining)
 Appointment/ : 07-NOV-12 04-AUG-20
 Termination date

Geologist

Name : Shri Nagesh Kumar Rajpurohit, Full Time
 Qualification : MSc (Geology)
 Appointment/ : 08-APR-14
 Termination date

Manager

Name : Shri S. K. Purohit
 Qualification : BE Mining & FCC (U/R)
 Appointment/ : 02-JUL-20
 Termination date

Manager

Name : Ghanshyam Das Gupta
 Qualification : B. Tech (Mining)
 Appointment/ : 06-APR-18 02-JUL-20
 Termination date

6. Date of approval of Mining : Existing rule 11 MCDR1988 19-JAN-95
 Plan/Scheme of Mining Existing rule 11 MCDR1988 30-JUL-04
 Mining Scheme rule 12 MCDR1988 22-OCT-08

Modif.approved Mining Scheme	17-AUG-12
Renewal under rule 24 MCR1960	20-NOV-12
MP review under 17(1) MCR 2016	28-NOV-17
MP review under 17(1) MCR 2016	22-JAN-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	56 BHs with 4800 mts of drilling (2020-21).	31 BHs with 3429.50 mts of drilling (2020-21).	Violation of MCDR, 2017 was issued vide letter dated 07/04/2022 for shortfall in exploration during previous inspection dated 14/03/2022.
1b	Exploration over lease area for geological axis 1 or 2	56 BHs with 4800 mts of drilling (2021-22)	37 BHs with 3640.50 mts of drilling (2021-22).	Violation of rule 11(1) of MCDR issued vide letter dated 13/07/2022 for shortfall in exploratory drilling.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Agency: SMS Limited Asha Engineering Works. No proposal about expenditure.	Agency: SMS Limited Asha Engineering Works. Total expenditure: 91.46 lacs.	SMS Limited 65.25 lacs & Asha Engineering Works Rs. 26.21 Lacs (Excluding Taxes).
1d	Balance area to be explored to bring Geological axis in 1 or 2	No specific proposal on G3 level of exploration during RY (reporting year).	No area in surface as it is U/G mine.	No surface area under G3 category.
1e	Balance reserve as on 01/04/20	As per approved RMP dated 23/01/2020: Reserve- 25.18 million Tons and Resource- 23.49 million Tons (as on 01/04/2019)	Reserve: 23.28 million tons and Resource: 23.49 million tons as on 01/04/2022.	Depletion of 1.90 million tons from 2019-20 to 2021-22.
1f	General remarks of inspecting officers on geology, exploration etc	56 BHs with 4800 mts of drilling (2021-22)	37 BHs with 3640.50 mts of drilling (2021-22).	Geological the area is complex with number of ore loads and grade variation. Violation of MCDR issued vide letter dated 13/07/2022 for shortfall in exploration.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	180mRL- 120 m 120mRL- 1300 m 60mRL-3020 m 0mRL-1710 m (-) 60mRL-600 m Others- 430 m Total-7180 m	180mRL-24.2m 120mRL-367.27m 60mRL-1660.2m 0mRL-1539.76m (-) 60mRL-0 m Others- 0 m Total-3591.43m	Violation of rule 11(1) issued for shortfall in development meters.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal being an underground mine.	Not applicable.	NIL.
2c	Stripping ratio or ore to OB ratio	No proposal being an underground mine.	Not applicable.	NIL.
2d	Quantity of topsoil generation in m3	No proposal of top soil generation.	No top soil has been generated.	NIL.
2e	Quantity of overburden generation in m3	49245 m3 or 137886 tons.	23813 m3 66677 tons.	Less generation due to less development.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Development has been proposed through UG mining method.	The UG mechanised method has been adopted for development.	The method of development proposed is suitable for the type of deposit. Shortfall in UG development has been observed and violation of MCDR issued.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	No proposal as it is U/G mine.	Not applicable.	NIL.
3b	Quantity of ROM mineral production proposed	1080000 Tons.	687873 Tons	Less ore production due to less development in account of Manpower Shortage, Trackline Repairing, Loading & Hauling Equipment breakdown etc.

3c	Recovery of sailable/usable mineral from ROM production	1080000 Tons.	687873 Tons	Less ore production due to less development in account of Manpower Shortage, Trackline Repairing, Loading & Hauling Equipment breakdown etc.
3d	Quantity of mineral reject generation	No proposal of Mineral Reject generation.	No Mineral Reject Generation.	NIL.
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable as no proposal.	Not applicable.	NIL.
3f	Quantity of sub grade mineral generation.	No proposal of Sub-grade mineral generation.	No Sub-grade generation.	NIL.
3g	Grade of sub grade mineral generation	No proposal.	Not applicable.	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal of segregation.	Crushing and screening through Mechanical means.	ROM is being beneficiated at Khetri beneficiation plant.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal for any fresh beneficiation studies.	No beneficiation studies has been carried out during the RY.	ROM is being beneficiated at existing Khetri beneficiation plant.
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting given for u/g mine development & for stoping operations.	Drilling & blasting as per proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Not applicable being an underground mine.	Not applicable.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not applicable being an underground mine.	Not applicable.	NIL.

3m	Total area covered under excavation/pits	0.0323 Hect.	0.0323 Hect.	Opening of Service Shaft, Decline, Ventilation raises etc.
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable	Not applicable. being an underground mine.	NIL.
3o	Total area put in use under different heads at the end of year	56.23 Hect.	56.23 Hect.	NIL.
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 1000000 2018-19: 908000 2019-20: 908000 2020-21: 1080000 2021-22: 1080000	2017-18: 580107 2018-19: 778321 2019-20: 680005 2020-21: 538463 2021-22: 687873	All figures in tons.
3q	General remarks of inspecting officers on method of mining etc.	Underground method of mining has been proposed.	The Method of mining is suitable to the type of deposit.	No issue related mining method.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil and Mineral reject generation. OB/waste of UG proposed to dump separately.	No top soil and MR generation. Separate dumping of the UG waste at designated place.	NIL.
4b	Location of topsoil, OB and mineral reject dumps	No proposal of top soil and Mineral reject generation. OB/waste proposed to dump over existing waste dump 5, 6, and 7.	No top soil and MR generation. Dumping of waste has been observed as per proposal.	NIL.

4c	Number of dumps within lease area and outside of lease area	Within Lease area: 08 and outside lease area: NIL	Within Lease area: 08 and outside lease area: NIL	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable being an underground mine.	Not applicable.	NIL.
4e	Number of active and alive dumps.	3 Nos.	3 Nos.	NIL.
4f	Number of dead dumps.	5 Nos.	5 Nos.	NIL.
4g	Number of dumps established.	No proposal.	Not applicable.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal of retaining wall and garland drain.	Retaining wall and garland drain observed at necessary places.	Cumulatively 1364 mts of retaining wall exists.
4i	Length of Retaining wall or garland drain all along dumps	No specific proposal given during the year.	Retaining wall and garland drain observed at necessary places.	Cumulatively 1364 mts of retaining wall exists.
4j	Number of settling ponds	No proposal.	Not applicable.	NIL.
4k	Specific comments of inspecting officer on waste dump management	No proposal of top soil and Mineral reject generation. OB/waste proposed to dump separately.	No top soil and MR generation. Separate dumping of the waste.	No issue related to waste dumping.

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.	Backfilling or dumping proposed after full extraction of mineral from Stopes.	Waste dumping/backfilling observed in stope out area.	NIL.
5b	Area under backfilling of mined out area	No specific proposal on area of backfilling.	Stoped out area has been backfilled by 59618 tons of waste.	NIL.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of top soil generation.	No top soil generation.	No fresh area has been excavated being an UG mine.
5d	Total area fully reclaimed and rehabilitated	No proposal of full reclamation and rehabilitation	Not applicable as no proposal.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Backfilling or dumping proposed after full extraction of mineral from Stopes.	Waste dumping/backfilling observed in stope out area.	UG stoped out area utilized for waste dumping/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).	As per rule 26(2) of MCDR, 2017, PMCP report to be submitted for previous year by	Report submitted for the year 2021-22.	NIL.
6b	Area available for rehabilitation (ha) .	No proposal of rehabilitation	Not applicable.	NIL.
6c	afforestation done (ha).	0.2 hect. within lease area.	0.2 hect. within lease area.	NIL.
6d	No. of saplings planted during the year	200 nos. within lease area.	500 nos. within lease area including gap filling plantation.	NIL.
6e	Cumulative no .of plants	No specific proposal given in this reagrd.	10560 nos. as on 31/03/2022.	NIL.
6f	Any other method of rehabilitation	No proposal other than plantation.	Not applicable as no proposal.	NIL.
6g	Cost incurred on watch and care during the year	No proposal.	Rs. 2.50 lacs.	As repored during mine inspection.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No such specific proposal given.	Not applicable.	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	75837 Tons.	59618 tons.	Less backfilling due to less development.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No Proposal.	Not applicable.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal.	Not applicable.	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal.	Not applicable.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Total 200 numbers of saplings within lease area.	Total of 500 numbers of saplings within lease area.	NIL.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.2 Hect.	0.2 Hect.	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation.	Plantation.	NIL.

6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular monitoring of Air, water, Noise & Vibrations.	Being done.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	A total of 200 number saplings have been proposed to plant within lease area.	A total of 500 numbers of saplings has been planted within lease area.	No issue observed related to PMCP compliances.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No grade wise sorting. ROM after crushing and screening proposed to process in existing beneficiation plant of the company.	ROM is being beneficiated in beneficiation plant of the company.	Beneficiation plant located in Khetri lease area of the company.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposal, all ROM mineral dispatch to captive beneficiation plant.	No grade wise sorting. ROM is being processed at captive beneficiation plant of the company.	NIL.
7c	Different grade of mineral sorted out at mines.	No proposal.	Not applicable.	NIL.
7d	Any beneficiation process at mines .	Beneficiation plant having milling capacity of 200000 tons per month is existing in lease area.	ROM from both the lease namely Khetri and Kolhin is being treated at existing beneficiation plant of the company.	Beneficiation plant located in Khetri lease area of the company.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	ROM proposed to treat at existing beneficiation plant.	ROM is being treated at Khetri beneficiation plant of the company.	No issue observed related mineral conservation and beneficiation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation.	No top soil has been generated.	NIL.
8b	Concurrent use or storage of topsoil	Not applicable as no proposal of top soil generation	Not applicable as no top soil generation.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of UG waste/OB has been proposed. No proposal for reject and fines generation.	UG Waste/OB has been dumped separately. No reject and fines generation.	NIL.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal of use of waste/OB for restoring the land to its original use.	Not applicable.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	Not applicable.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Total 600 numbers of saplings within and outside lease area.	Total 600 numbers of saplings within and outside lease area.	NIL.
8g	Survival rate	No specific proposal on survival %.	45% within lease area and 50% outside lease area.	As per AR 2021-22.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling to control airborne dust.	Water sprinkling observed.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Total 600 nos of saplings proposed to plant.	Total 600 nos of sapling planted.	The general aesthetic beauty is satisfactory in and around mine area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, 2017 monthly and annual returns to be submitted.	Monthly and annual returns for RY have been submitted.	NIL.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining Engineer and Geologist has been furnished.	Mining Engineer and Geologist has been appointed.	Scrutiny of AR 2021-22.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C): 0.032, Used for waste disposal =14.690, Infrastructure : 38.308, Other purpose=3.20.	The information furnished on land use appears in order.	All figures in hectare.
9d	Scrutiny of Annual return on afforestation	500 no in Lease area & 100 no outside lease area.	Found in Order.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject Generation: NIL	No mineral reject generation during RY.	NIL.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing Stock- 3433.00 tons.	The information furnished appears in order.	NIL.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price and Cost of production: Rs 2777.23 per ton.	Information on cost of production and Ex-mine price has been furnished.	NIL.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs. 178147720/-	Information on fixed asset has been furnished and appears in order.	NIL.

9k	Scrutiny of Annual return on mining machineries	Air compressors, Blast Hole Drilling, Conveyor, Crane, Crusher, Dumper, Elec. Motor, Explosive Van, LHD, Locomotive, Mine Cars, Pumps, Shovel, Ventilation Fan, Trucks, Rock Drill etc.	Information of major mining machinery has been furnished in the annual return and found in order.	NIL.
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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
MCDR17	Rule 11(1)	13-JUL-22			

Date :**(DILIP JAIN)**

Indian Bureau of Mines