

**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 : **B014**) **CHANDRESH BOHRA**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : P. D. Bohra, DGM (Mines) & Shri N.K. Rajpurohit, Ch. M
Official with
Designation
- (iv) Date of Inspection : 11-JUL-23
- (v) Prev.inspection date : 08-JUN-23

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** :
- (d) **Date of Expiry** : **31-MAR-40**
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	4800 m with 56 Bore Holes	3640.50 m with 37 Bore Holes	Based on previous inspection violation of MCDR issued vide letter dated 13/07/2022 for shortfall in exploration.
1b	Exploration over lease area for geological axis 1 or 2	4800 m with 62 Bore Holes	4436.10m with 40 Bore Holes	Underground exploration has not been carried out as per approved proposal and there is shortfall in the total exploration also for which violation of Rule 11(1) of MCDR,2017 has already been pointed out in previous inspection.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	SMS Limited & Asha Engineering Works & Expenditure is not in proposal	SMS Limited 77.20 Lakh & Asha Engineering Works Rs. 69.32 Lacs (Including Taxes)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Balance area to be explore for Geological axis G1 5950 to 6050 Lat. 120 to 60 mRL, 5850 to 5950 Lat. 60 to 0 mRL, 2770 to 2710 Lat. 120 to 60 mRL, 3430 to 3370 Lat. 0 to (-) 60mRL Meterage: 4800 No. of BH: 56	Balance area are going to explore in current F.Y.2023-24 for Geological G-1 axis.	As the mining in underground, the exploratory drilling from surface is done previously within the lease area, Presently there is definition drilling is going on different levels at 30m interval for Geological axis G-1 exploration.

1e	Balance reserve as on 01/04/20	44.52 Million Tons	47.46 Million Tons	Balance ore reserve estimated on 01.04.2023 is 47.46 million tones , after depleted production for 2022-23
1f	General remarks of inspecting officers on geology, exploration etc	4800meter with 62 Bore Holes	4436.10 meter with 40 Bore Holes. There is shortfall in exploration for which violation of Rule 11(1) of MCDR, 2017 has already been pointed out by preevious IO.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	180mRL-0 m 120mRL- 900m 60mRL-2760m 0mRL-2420 m (-)60mRL-760 m Others- 374 m Total-7214 m	180mRL-14.5m 120mRL- 922.27m 60mRL-1344.75m 0mRL-970.71m (-)60mRL-0 m Others- 0 m Total-3252.23m	Less development due to shortage of contractor's Hopper Loader, Spare part and supervisory staff.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	NA	Not applicable	
2c	Stripping ratio or ore to OB ratio	NA	Not applicable	
2d	Quantity of topsoil generation in m3	NA	Not applicable	
2e	Quantity of overburden generation in m3	NA	Not applicable	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	The overall status of development of mine may be considered as satisfactory	

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	Total no.of Proposed Stopes 20 Nos. In the F.Y. 2022-23	Total no. of running Stopes 20 Nos. In the F.Y. 2022-23	
3b	Quantity of ROM mineral production proposed	1090000Tonnes	707787Tonnes	Less ore production due to contractor's production & development ore shortage due to Manpower Shortage, Track line Repairing, Loading & Hauling Equipment breakdown etc.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	The ROM material from UG mine is treated in the Concentrator Plant for milling capacity of 2,00,000 tonnes of copper ore per month.
3d	Quantity of mineral reject generation	1725200 t	1064084 t	There is no proposal of mineral reject, however milling of ROM from both the Khetri and Kolihan Mines generate the tailing.
3e	Grade of mineral rejects generation and threshold value declared.	0.10	0.11	The metal recovery is 90% in the concentrate. The mineral rejects from the concentrator plant is disposed at tailing dam.
3f	Quantity of sub grade mineral generation.	NA	No sub grade generation	
3g	Grade of sub grade mineral generation	NA	NA	
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	None at present	
3j	Provision of drilling and blasting in mineral benches	Production Drilling: Dia :57mm, 115 mm, 165 mm drilling Development Drilling: Dia: 33mm, 54mm Blasting: PowderFactor: in ore development: 3.57 kg/m3, in Stope: 1.25 kg/m3	Production Drilling: Dia :57mm, 115 mm, 165 mm drilling Development Drilling: Dia: 33mm, 54mm Blasting: PowderFactor: in ore development: 3.57 kg/m3, in Stope: 1.25 kg/m3	
3k	Provision of mining machineries in mineral benches	Jackhammer, Drifters, Large Dia drilling machine, Jumbo drill, LHD, LPDT, Locomotive Rocker Shovel etc.	Jackhammer, Drifters, Large Dia drilling machine, Jumbo drill, LHD, LPDT, Locomotive Rocker Shovel etc.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	NA	NA	U/g Mines
3m	Total area covered under excavation/pits	0.0323 Hect.	0.0323 Hect.	Total 0.0323 Hect. area is put to use under opening of service & production shafts and decline.
3n	Ore to OB ratio for the pit/mine during the year.	NA	NA	U/g Mines
3o	Total area put in use under different heads at the end of year	56.23Hect.	56.23Hect.	

3p	Production of ROM mineral during the last five year period as applicable	2018-19 :908000 t 2019-20 : 908000 t 2020-21 :1080000 t 2021-22: 1080000 t 2022-23: 1090000 t	2018-19 :778321 t 2019-20 :680005 t 2020-21 :538463 t 2021-22 : 687873 t 2022-23: 707787 t
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3q	General remarks of inspecting officers on method of mining etc.	NA	The method of mining may be considered as 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)	NA	Not applicable	U/g Mines
4b	Location of topsoil, OB and mineral reject dumps	At Surface: Waste Dump No. 5 Lat. 3938-4463 Departure 1128-1270 Waste Dump No. 6 Lat. 4458-4924 Departure 1170-1409 Waste Dump No. 7 Lat. 4008-4316 Departure 1200-1270 In Underground: Old Stope No. P V B 09-13, S VII 02-11	Waste material from the underground mine is dumped as proposed locations on the surface as well as in the underground mines.	
4c	Number of dumps within lease area and outside of lease area	8 Nos.	8 Nos.	Total 08 Numbers of Waste Dumps. No. 1 to 8 on surface within Mining lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	Not applicable	U/g Mine

4e	Number of active and alive dumps.	03 Nos.	03 Nos.	Total 03 Numbers of Waste Dumps no. 5 to 7 on surface are active dumps.
4f	Number of dead dumps.	05 Nos.	05 Nos.	Total 05 Numbers of Waste Dumps no. 1 to 4 and 8 on surface are inactive/dead dumps.
4g	Number of dumps established.	NA	01	Stabilization work is under progress
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	1364m retaining wall & 800m garland drain already exist
4i	Length of Retaining wall or garland drain all along dumps	NA	1364m retaining wall & 800m garland drain already exist	
4j	Number of settling ponds	01	01	
4k	Specific comments of inspecting officer on waste dump management	NA	The overall waste dump management may be considered as 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.	Backfilling is not done;method is open stopping	Backfilling is not done;method is open stopping	Due to Underground Mine
5b	Area under backfilling of mined out area	Backfilling is not done; method is open stopping	Backfilling is not done; method is open stopping	U/g Mines
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	NA	U/g Mine, No top soil generation
5d	Total area fully reclaimed and rehabilitated	NA	Nil	U/g Mines

5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	No scope of backfilling and reclamation as it is a u/g mine. Therefore it may be considered as satisfactory at this stage.
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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	Annual report on PMCP is submitted via mail on 10/06/2022	
6b	Area available for rehabilitation (ha) .	NA	NA	
6c	afforestation done (ha).	0.20 H	0.20 H	
6d	No. of saplings planted during the year	600 Nos.	600 Nos.	
6e	Cumulative no .of plants	NA	10550 Nos.	
6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	NA	No separate record available	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	34726 m3	16123 m3	

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Yes , as per schedule.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	Yes, the compliance of PMCP and progressive closure operations may be considered as satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	All ROM mineral is processed in our concentrator plant (1090000 Tonnes)	All ROM mineral is processed in our concentrator plant(707787 Tonnes)
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical
7c	Different grade of mineral sorted out at mines.	NA	NA
7d	Any beneficiation process at mines .	NA	Ore material is treated in the Concentrator Plant for milling and plant capacity of 2,00,000tonnes of copper ore per month.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	The overall status of Mineral conservation and beneficiation may be considered as satisfactory.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NA	NA, as U/g mines.	
8b	Concurrent use or storage of topsoil	NA	NA	Due to Underground Mine
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	NA	NA	Due to Underground Mine

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	600 Nos.	600 Nos in and around mining lease area.
8g	Survival rate	NA	50% reported.
8h	Water sprinkling on roads to control airborne dust	Yes, 50KLD	40 KLD
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	The overall status of aesthetic beauty in and around mines area may be considered as satisfactory.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. submitted up to month of June-23 dated 09.07.2023 A.R. Submitted for F.Y. 2022-23 dated 30.06.2023	M.R. submitted up to month of June-23 dated 09.07.2023 A.R. Submitted for F.Y. 2022-23 dated 30.06.2023	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Shri N.S. Jangde AGM (Mines) Shri Nagesh Kumar Rajpurohit- Geologist	Shri N.S. Jangde AGM (Mines) Shri Nagesh Kumar Rajpurohit- Geologist
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes,	Yes, required information furnished in the AR.
9d	Scrutiny of Annual return on afforestation	Yes	Yes, information furnished in the AR.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Yes	Yes, required information furnished in the AR.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes	Yes, required information furnished in the AR.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Yes	Yes, information furnished in the AR.
9h	Scrutiny of Annual return on fixed assets	Yes	Yes, information furnished in the AR.
9k	Scrutiny of Annual return on mining machineries	Yes	Yes, information furnished in the AR.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(CHANDRESH BOHRA)

Indian Bureau of Mines