

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/JHN-4/CU- 2

Mine code : 14RAJ17003

- (i) Name of the Inspecting : **K018**) **Dr A Z Khan**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Sh. U.B. Bhatt ,D.G.M.(Mines), Sh. A.K. Sharma ,A.G.M
Official with
Designation
- (iv) Date of Inspection : 07-JUN-23
- (v) Prev.inspection date : 16-DEC-22

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KOLIHAN**
- (b) **Registration NO.** : **IBM/6381/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Underground
- (e) Postal address
- State : RAJASTHAN
- District : JHUNJHUNU
- Village : KOLIHAN NAGAR/KHETRI
- Taluka : KHETRI
- Post office : KHETRI
- Pin Code :
- FAX No. : 01593 220002
- E-mail : sree_k@hindustancopper.com
- Phone : 01593-220001
- (f) Police Station : Khetri
- (g) First opening date : 24-NOV-66
- (h) Weekly day of rest : SUN
2. Address for : HINDUSTAN COPPER LIMITED,
correspondance KOLIHAN NAGAR, PO KHETRI
DISTRICT-JHUNJHUNU (RAJASTHAN)
3. (a) Lease Number : RAJ0451
- (b) Lease area : 163.23
- (c) Period of lease : 50
- (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 : Sanjiv Kumar Singh
 Hindustan Copper Limited 1-
 Ashutosh Chowdhury Avenue
 Kolkata 700019 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 : Shri A K Sharma, Full Time
 Qualification : BE Mining
 Appointment/ : 08-FEB-19
 Termination date

Mining Engineer
 Name : Mr. U.B. Bhatt, Full Time
 Qualification : BE Mining
 Appointment/ : 13-MAY-13
 Termination date

Geologist
 Name : Dr. Gopal Rathi, Full Time
 Qualification : M.Sc. & Ph.D.(Geology)
 Appointment/ : 19-JUN-15
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	06-JUN-95
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	29-NOV-02
		Mining Scheme rule 12 MCDR1988	15-JUN-07
		Modif.approved Mining Scheme	04-JAN-12
		Mining Scheme rule 12 MCDR1988	25-JUL-13
		Renewal under rule 24 MCR1960	01-APR-14
		MP modif under 17(3) MCR 2016	22-MAY-18
		MP review under 17(1) MCR 2016	23-JAN-20
		MP modif under 17(3) MCR 2016	04-MAY-23

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	124 ML & 64 ML Total 1490 mts with 23 BH	124ML & 64 ML Total- 2210.3mts with 25 BH	No backlog.
1b	Exploration over lease area for geological axis 1 or 2	124 ML & 64 ML Total 1535 mts with 19 BH	124ML, 64 ML & Surface Total- 5035.90mts with 25 BH	None
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Agency Not proposed Expenditure- 38.37 Lakhs+Taxes	Agency- M/s Asha Engg. Works & MECL Expenditure-463.83 Lakhs+ Taxes	None
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).	27.14 Ha	None
1e	Balance reserve as on 01/04/20	Reserve- 9.50 million T Resource- 4.53million T Total - 14.03million T	Reserve- 9.62 million T Resource- 5.59million T Total - 15.21million T	The reserve & resources are updated considering mine depletion and addition of reserve & resources due to re-interpretation of ore lenses after recent exploratory drilling.
1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Exploration is being carried out as per approved proposal

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
--------	------	-----------	-------------	---------

2a	Location of development w.r.t. lease area	306mRL- 0 m 246mRL- 0 m 169 mRL- 0 m 124 mRL- 75 m 109mRL-776 m 64mRL- 1705 m 0mRL- 444 m Total- 3000 m	306 mRL-202.10 m 246 mRL- 373.40 m 169 mRL-81.64 m 124 mRL- 122.46 m 109mRL- 520.88 m 64mRL- 636.62 m 0mRL- 24.60 m Total- 1961.70 m	Underground development has not been carried out as per approved proposal and there is shortfall in the total development also for which violation of Rule 11(1) of MCDR,2017 has been pointed out
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No Proposal	Being Under Ground mine, Not Applicable	None
2c	Stripping ratio or ore to OB ratio	No Proposal	Being Under Ground mine, Not Applicable	None
2d	Quantity of topsoil generation in m3	No Proposal	Being Under Ground mine, Not Applicable	None
2e	Quantity of overburden generation in m3	20734 M3	26704 M3	Development in waste was more than ore.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Underground development has not been carried out as per approved proposal and there is shortfall in the total development also for which violation of Rule 11(1) of MCDR, 2017 has been pointed out

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
--------	------	-----------	-------------	---------

3a	Number of pit proposed for production	<p>Proposed production from U/G stopes was:</p> <p>124 ML-</p> <p>1.RP6089 N+Cr 609 N+SL 5089N</p> <p>2. St 610 N</p> <p>3. RP 6011 + Cr 601 S + SL 5011</p> <p>4. RP 6012 S + RP 6023 S+ Cr 602 S + SL 5012 S +SL 5023 S</p> <p>64ML-</p> <p>1.RP 7034 N + Cr 704 N+SL 6034 N</p> <p>2. St 705 N</p> <p>3. RP 7045 N+Cr 705 N+SL 6045 N</p> <p>4. St 706 N</p> <p>5. RP 7056 N +Cr 706 N+SL 6056 N</p>	<p>Actual production from U/G stopes are:</p> <p>124 ML</p> <p>1.St 610 N</p> <p>2.RP 6089 N +Cr 609 N+</p> <p>Sl 5089 N</p> <p>3.St 601 S</p> <p>4.St 602S</p> <p>5.RP 6011+Cr 601S+SL 5011</p>	<p>Underground production has not been carried out as per approved proposal and there is shortfall of about 44% in the total production also for which violation of Rule 11(1) of MCDR, 2017 has been pointed out</p>
3b	Quantity of ROM mineral production proposed	720000 Tonnes	400134 Tonnes	<p>underground production has not been carried out as per approved proposal and there is shortfall of about 44% in the total production also for which violation of Rule 11(1) of MCDR, 2017 has been pointed out</p>
3c	Recovery of sailable/usable mineral from ROM production	100% ROM	100% ROM	None
3d	Quantity of mineral reject generation	No Proposal	Whole ROM sent to Khetri Beneficiation plant after crushing	None
3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	No Mineral reject generation hence NA	None
3f	Quantity of sub grade mineral generation.	No Proposal	No sub grade generation	None

3g	Grade of sub grade mineral generation	No proposal	Not applicable as there is no sub grade generation	None
3h	Manual / Mechanised method adopted for segregating from ROM	Crushing	Crushing	None
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	ROM sent to Khetri Beneficiation plant	None
3j	Provision of drilling and blasting in mineral benches	Levels -Drill & Extraction level. Sequence of Drilling & Blasting- Raising, Sloting and Trough& Stope rings.	Levels -Drill & Extraction level. Sequence of Drilling & Blasting- Raising, Sloting and Trough& Stope rings.	None
3k	Provision of mining machineries in mineral benches	Large Dia Drilling- 115 mm dia& 165 mm dia- Stope & Rib Pillar Drilling. Long Hole 57 mm- Crown Pillar, Sill Pillar &Trough Drilling	Large Dia Drilling- 115 mm dia& 165 mm dia- Stope & Rib Pillar Drilling. Long Hole 57 mm- Crown Pillar, Sill Pillar &Trough Drilling	None
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not proposed	Being U/G mine, not applicable	None
3m	Total area covered under excavation/pits	Total area of stopes proposed for production is 0.675Hect	Total area of stopes from where production was done 0.45Hect	None
3n	Ore to OB ratio for the pit/mine during the year.	Not proposed	Being U/G mine not applicable	None

3o	Total area put in use under different heads at the end of year	21.56 Ha	21.56 Ha	None
3p	Production of ROM mineral during the last five year period as applicable	2018-19 : 650000 2019-20: 650000 2020-21: 720000 2021-22: 720000 2022-23: 720000	2018-19 : 571245 2019-20: 439518 2020-21: 453528 2021-22: 413466 2022-23: 400134	Production during the year is less for which violation of Rule 11(1) has been pointed out
3q	General remarks of inspecting officers on method of mining etc.			Production during the year is less for which violation of Rule 11(1) has been pointed out

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not proposed	Being U/G mine not applicable.	None
4b	Location of topsoil, OB and mineral reject dumps	Not proposed	Being U/G mine not applicable	The waste generated U/G is being dumped on the peoposed dump.
4c	Number of dumps within lease area and outside of lease area	03 No of dump with in lease area	03 No of dump with in lease area	All the 03 dumps are within lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No such proposal	Being U/G mine not applicable	None
4e	Number of active and alive dumps.	03 Nos	03 Nos	None
4f	Number of dead dumps.	None	There is no daed dump	All 03 dumps are active
4g	Number of dumps established.	No Proposal	There is no dead dump	All three dumps are active

4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposal	Not applicable	350mts of retaining wall and 400mts garland drain constructed in 2015-16.
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Not Applicable as there is no proposal	350mts of retaining wall and 400mts garland drain constructed in 2015-16
4j	Number of settling ponds	No proposal	Not applicable as there is no proposal	None
4k	Specific comments of inspecting officer on waste dump management			The waste in the form of waste rock generated in U/G during development & production are being used for partial filling of mined out stopes and rest of quantity is being dumped as per proposal.

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.	Proposed to partial filling of mined out stopes with U/G waste rock	Mined out stopes partial filled with U/G waste rock	None
5b	Area under backfilling of mined out area	15239 m3 of mined out stopes	15090 m3 of mined out stopes	None
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Being U/G mine not applicable	None
5d	Total area fully reclaimed and rehabilitated	No proposal	The mined out stopes are partially backfilled with waste rock generated in U/G during development & stoping activity	None

5e	General remarks of inspecting officers on backfilling and reclamation etc.	The mined out stopes are partially backfilled with waste rock generated in U/G during development & stoping activity
----	--	--

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Proposal to submit by 30th June	Report submitted for FY 2021-22. At the time of inspection report for year 2022-23 was not submitted as the last date for submission was 30th June	None
6b	Area available for rehabilitation (ha) .	No proposal	Being U/G mine no such proposal was there.	None
6c	afforestation done (ha).	No proposal	Not applicable as there was no proposal	None
6d	No. of saplings planted during the year	200 nos. Inside Lease area 200 nos. Outside Lease area	200 nos. Inside Lease area 200 nos. Outside Lease area	None
6e	Cumulative no .of plants	No specific proposal	13055 nos. Inside Lease area 13055 nos. Outside Lease area	None
6f	Any other method of rehabilitation	No proposal	Not applicable as there was no proposal	None
6g	Cost incurred on watch and care during the year	Rs. 500000/-	Rs. 4625000/-	None
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	Stope 510 N- 1784 m3 ST-1N- 13455 m3	Stope 510 N- 15090 m3	Due to less production

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Stope 510 N& ST-1N	Stope 510 N	Due to less production
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal	Being U/G mine not applicable	None
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Being U/G mine not applicable	None
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No Proposal	None	None
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	200 nos. Inside Lease area 200 nos. Outside Lease area	200 nos. Inside Lease area 200 nos. Outside Lease area	Afforestation done as per proposal
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	None	None
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No Proposal	None	None
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proped to Environmental Monitoring (Core & Buffer Zone)	26 location within core zone and 05 locations buffer zone	None

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP proposal implemented as per approval. Environment Monitoring is being carried out at 26 location within core zone and 05 locations buffer zone
----	---	---

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	proped for ROM mineral dispatched	The ROM is being dispatched to beneficiationPlant located at Khetri Copper Complex.	Whole ROM is beneficiated
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal	Whole ROM is beneficiated at KCC Plant	None
7c	Different grade of mineral sorted out at mines.	No Proposal	Whole ROM is being dispatched to KCC Plant for beneficiation	None
7d	Any beneficiation process at mines .	No Proposal	Whole ROM dispatched to KCC Plant for beneficiation	None
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			There is no grade wise sorting at mine head. Whole ROM dispatched to KCC Plant for beneficiation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	Being U/G mine not applicable	None
8b	Concurrent use or storage of topsoil	No Proposal	Being U/G mine not applicable	None

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed	The few quantity of waste rock generated in U/G is being used for partial backfilling of mined out stopes and rest is being dumped in dump as per proposal	None
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposed to use waste rock for partial backfilling of mined out stope & dumping on dump at surface	The few quantity of waste rock generated in U/G is being used for partial backfilling of mined out stopes and rest is being dumped in dump as per proposal	Noe
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Being U/G mine there is no pit & the dumps are active	None
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	200 nos. Inside Lease area 200 nos. Outside Lease area	200 nos. Inside Lease area 200 nos. Outside Lease area	None
8g	Survival rate	40%	30-40% survival rate	None
8h	Water sprinkling on roads to control airborne dust	No proposal	Being U/G mine not applicable	Water sprinkling is being done in the stock pile area and ore transfer points
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Being U/G mine the surface area is much disturbed. The lessee is taking care to maintain aesthetic beauty 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, monthly and annual returns to be submitted	At the time of inspection Monthly return upto May,23 was submitted & the Annula Return for 2021-22 submitted.	Due date for AR of 2022-23 was 30th June
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining Engineer, Manager and geologist was furnished.	Mine Manger, Mining engineer and Geologist are appointed	Scrutiny of AR 2021-22
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under pits- 0.958 Hect., Waste Disposal: 1.64 Hect., Infrastructure : 6.07 Hect., and other purpose: 6.81 Hect.	Found in Order	Scrutiny of AR 2021-22
9d	Scrutiny of Annual return on afforestation	200 no in Lease area & 200 no outside lease area	Found in Order	Scrutiny of AR 2021-22
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject has been reported for reporting year 2021-22	Found in Order	Scrutiny of AR 2021-22
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Closing stock at Mine head- 1819 tonnes. 0.88% graded ore stock	Found in Order	Scrutiny of AR 2021-22
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex. Mine Price: Rs. 3714.73 per tone	Found in Order	Scrutiny of AR 2021-22
9h	Scrutiny of Annual return on fixed assets	Value of fixed asset is furnished as Rs. 6020555	Found in Order	Scrutiny of AR 2021-22
9k	Scrutiny of Annual return on mining machineries	Details of Mining Machineries used at mine is given	Found in Order	Scrutiny of AR 2021-22

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)	06-JUL-23	14-DEC-23			
MCDR17	Rule 31(4)	06-JUL-23	14-DEC-23			

Date :

(Dr A Z Khan)

Indian Bureau of Mines