

**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 : **S012**) **Sharma H.C.**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. G. D. Gupta, Manager & Sh. Gopal Rathi, Geologis
Official with
Designation
- (iv) Date of Inspection : 05-DEC-19
- (v) Prev.inspection date : 09-JUL-19

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 : **ROOT.@HCLKCC.RAJ.NIC.IN**
- 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 S.K. Bhattacharya
 1-Ashutosh Chowdhury Avenue
 Kolkata 700019 JHUNJHUNU
 RAJASTHAN
 Phone: 033 22817138
 FAX : 033 22832478

Agent : S. DEY
 M/S Hindustan Copper Ltd;
 Khetrinagar, Jhunjhunu,
 Rajasthan JHUNJHUNU
 RAJASTHAN
 Phone: 01593-220001
 FAX : 01593-220002

Mining Engineer

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

Geologist

Name : Shri Nagesh Kumar Rajpurohit, Full Time
 Qualification : MSc(Geology)
 Appointment/ : 08-APR-14
 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 Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	19-JAN-95
		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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	4800 m, No. of BH- 60	5279.85 mtrs No. of BH- 52	
1b	Exploration over lease area for geological axis 1 or 2	0 mRL, 60 mRL, 120 mRL & 180 mRL, Total- 4800 mtrs	0 mRL, 60 mRL, 120 mRL & 180 mRL, Total- 5279.85 mts	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	SMS & Asha Engineering Works, Rs. 138 Lacs (Including Taxes)	SMS & Asha Engineering Works,, Rs. 148 Lacs (Including Taxes)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	None from surface	Nil	
1e	Balance reserve as on 01/04/20	48.67 MT x 1.43% Cu	48.67 MT x 1.43% Cu	
1f	General remarks of inspecting officers on geology, exploration etc	Not applicable	The deviation in less number of B/H were pointed out as VL after previous mine inspection & it was replied by the party that due to less development only 52 B/H could be drilled however the meterage drilled was more due to more width of ore body. The reply has been considered & VL recorded compliance.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	120mRL- 600 m, 60mRL-2825m, 0mRL-920 m, Others- 435 m, Total-4780 m	180mRL-214.90 m, 120mRL- 2858.00 m, 60mRL- 1043.50m, 0mRL-407.0m, Others- 0 m, Total- 4523.4m	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not applicable as it is U/G mine.	Not applicable as it is U/G mine.	

2c	Stripping ratio or ore to OB ratio	Not applicable as it is U/G mine.	Not applicable as it is U/G mine.	
2d	Quantity of topsoil generation in m3	Not applicable as it is U/G mine.	Not applicable as it is U/G mine.	
2e	Quantity of overburden generation in m3	29968 m3	25013 m3	Less generation of waste on account of less development.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicable	The deposit is subsurface & dipping vertical to semi vertical, hence U/G method is suitable for it.	

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	24 Nos. of stopes.	16 Nos. of stopes.	the permission for more number of stopes was not accorded due to less development in the mine.
3b	Quantity of ROM mineral production proposed	9,08,000 Tonnes	7,78,321 Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	90 %	100 %	
3d	Quantity of mineral reject generation	No reject generation proposed	Not applicable	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Not applicable	
3f	Quantity of sub grade mineral generation.	No subgrade mineral generation in mine	Not applicable	
3g	Grade of sub grade mineral generation	Not applicable	Not applicable	

3h	Manual / Mechanised method adopted for segregating from ROM	Entire ROM beneficiated	Entire ROM beneficiated
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Entire ROM beneficiated	Entire ROM beneficiated in the beneficiaton plant.
3j	Provision of drilling and blasting in mineral benches	Drilling Pattern Burn Cut in development & For stopes Ring / parallel holes	Being done
3k	Provision of mining machineries in mineral benches	Jackhammer, Drifters, Large Dia drilling machine, Jumbo drill etc.	Being done
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not applicable as it is U/G mine	Not applicable as it is U/G mine
3m	Total area covered under excavation/pits	Total Surface area under excavation- 0.323 ha	Total Surface area under excavation- 0.323 ha
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable as it is U/G mine	Not applicable as it is U/G mine
3o	Total area put in use under different heads at the end of year	Total Utilised- 56.23 ha	Total Utilised area- 54.89 ha
3p	Production of ROM mineral during the last five year period as applicable	2014-15 : 718000T, 2015- 16 : 941000T, 2016-17 : 1000000T, 2017-18 : 1000000T, 2018-19 : 908000 T	2014-15 : 409946 T, 2015-16 : 562042 T, 2016-17 : 540582 T, 2017-18 : 580107 T, 2018-19 : 778321 T.

3q	General remarks of inspecting officers on method of mining etc.	Not applicable	The deposit is subsurface & dipping vertical to semi vertical, hence U/G method is suitable for it.
----	---	----------------	---

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil excavation as it is U/G mine, Waste obtained during development proposed to be dumped separately.	No top soil excavation as it is U/G mine, Waste obtained during development dumped separately.	
4b	Location of topsoil, OB and mineral reject dumps	Waste generated during development proposed to be dumped in underground voids & at surface	Waste generated during development dumped in underground voids & at surface	
4c	Number of dumps within lease area and outside of lease area	Eight numbers within lease.	Eight numbers within lease.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable as it is U/G Mine	Not applicable as it is U/G Mine	
4e	Number of active and alive dumps.	2 nos	2 nos	
4f	Number of dead dumps.	6 nos	6 nos	
4g	Number of dumps established.	No proposal	Not applicable	
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal during 2018-19.	The construction work started for retaining wall following Violation issue after previous mine inspection.	
4i	Length of Retaining wall or garland drain all along dumps	No quantified proposal	Not applicable	

4j	Number of settling ponds	one	one
4k	Specific comments of inspecting officer on waste dump management	Not applicable	The construction work started for retaining wall following Violation issue after previous mine inspection.

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 stoping in U/G mine.	Backfilling is not done method is open stoping in U/G mine.	
5b	Area under backfilling of mined out area	Not applicable as it is U/G Mine.	Not applicable as it is U/G Mine.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable as it is U/G Mine.	Not applicable as it is U/G Mine.	
5d	Total area fully reclaimed and rehabilitated	An area of 5.0 ha proposed to be rehabilitated by plantation at surface.	Being done	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not applicable	The backfilling of waste in voids made in U/G, but filling entire void is not feasible.	

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 as per rule	Yes submitted for 2018-19.	
6b	Area available for rehabilitation (ha) .	Rehabilitation of 5.0 ha by plantation proposed.	Being done	

6c	afforestation done (ha).	5 ha afforestation proposed	5 ha afforested
6d	No. of saplings planted during the year	1500 nos within lease & 500 outside ML.	1400 nos within Lease & 400 nos outside lease
6e	Cumulative no .of plants	86390 nos	86390 nos
6f	Any other method of rehabilitation	No proposal	Not applicable
6g	Cost incurred on watch and care during the year	Rs. 2.1 Lakh	Rs. 2.1 Lakh
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	14984 m3 in U/G mine	23468 m3 in U/G
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	23468 m3 voids filled	23468 m3 of voids filled.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable as it is U/G mine	Not applicable as it is U/G mine
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable as it is U/G mine	Not applicable as it is U/G mine
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nil

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 rehabilitation (ha)	No proposal	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	The monitoring of Air, Water, Noise & vibration is proposed regularly.	Being carried out & reports show within permissible limits.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not applicable	The implementation of PMCP was satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	9,08,000 Ton	7,78,321 Ton	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	All ROM mineral is dispatched to beneficiation plant.	All ROM mineral is dispatched to beneficiation plant.	
7c	Different grade of mineral sorted out at mines.	No grading	No grading	
7d	Any beneficiation process at mines .	A 2.4 MTPA beneficiation plant exists in the mine.	A 2.4 MTPA beneficiation plant exists in the mine.	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Not applicable	No issue regarding minera Conservation in the Mine.
----	--	----------------	---

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation as it is U/G mine	No top soil generation as it is U/G mine	
8b	Concurrent use or storage of topsoil	Not applicable as it is U/G mine	Not applicable as it is U/G mine	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste dumped seperately in Voids in U/G & at earmarked place at surface.	Being done	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable as it is U/G mine	Not applicable as it is U/G mine	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable as it is U/G mine	Not applicable as it is U/G mine	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No specified proposal	Not applicable	
8g	Survival rate	No specified proposal	65% within lease area.	

8h	Water sprinkling on roads to control airborne dust	Yes	Yes
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not applicable	The general aesthetic beauty is good in mine & around it.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Not applicable	The M/R of the mine for the month of November 2019 has been submitted. The A/R submitted for the year 2018-19.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Details given	Found in order	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Found in order	
9d	Scrutiny of Annual return on afforestation	Given	Found in order	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Given	Found in Order	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Found in Order	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	The discrepancy in exmine price was pointed out after previous mine inspection which has been rectfied by the lessee.	
9h	Scrutiny of Annual return on fixed assets	Given	Found in Order	

9k	Scrutiny of Annual return on mining machineries	Given	Found in order
----	--	-------	----------------

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 :**(Sharma H.C.)**

Indian Bureau of Mines