

**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. Ghanshyam Gupta, DGM (Mines)
Official with
Designation
- (iv) Date of Inspection : 07-AUG-18
- (v) Prev.inspection date : 10-MAY-18

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** :
- (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 : Shri R.K. Shah
 Khetri Copper Complex M/s
 Hindustan Copper Limited
 Khetri Nagar, Jhunjhunu
 JHUNJHUNU RAJASTHAN
 Phone: 09414082953
 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
 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	4800m	1793m	
1b	Exploration over lease area for geological axis 1 or 2	120mRL- 250, 60mRL- 2150, 0mRL-2400, Total 4800m.	120mRL- 0, 60mRL- 503.65, 0mRL-1289.25, Total- 1792.90m.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	SMS Ltd. & Asha Engineering. Rs 1.14 Crore	Rs. 3754337/- excluding taxes.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No area on surface	Not applicable	
1e	Balance reserve as on 01/04/20	48.00 MT X 1.43%	48.00 MT X 1.43%	
1f	General remarks of inspecting officers on geology, exploration etc	Not applicable	The shortfall in exploration has been pointed out as violation.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	180mRL- 940m, 120mRL- 780m, 60mRL- 2100m, 0mRL- 2000m, Total- 5820m.	180mRL- 90.10m, 120mRL- 335.70m, 60mRL- 297.20m, 0mRL- 130.60m, Total- 853.60m.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal as mine is U/G.	Not applicable	
2c	Stripping ratio or ore to OB ratio	Not applicable	Not applicable	
2d	Quantity of topsoil generation in m3	Not applicable	Not applicable	
2e	Quantity of overburden generation in m3	Not applicable	Not applicable	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicabl	The shortfall in development has been pointed out as violation.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	10 Stopes/ blocks.	18 Stopes/Blocks.	8 Stopesarepart of backlog.
3b	Quantity of ROM mineral production proposed	180mRL- 250000 T, 120mRL- 260000 T, 60mRL- 215000 T, Total- 1000000 T.	180mRL- 93840 T, 120mRL- 236085 T, 60mRL- 205916 T, Total- 580107 T.	
3c	Recovery of sailable/usable mineral from ROM production	90%	90%	
3d	Quantity of mineral reject generation	Not applicable	Not applicable	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Not applicable	
3f	Quantity of sub grade mineral generation.	Not applicable	6923 T	Sub gradegeneration during stopepreperation.
3g	Grade of sub grade mineral generation	No proposal	0.51%	
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.	Through IBM, Nagpur & outside India.	Through IBM, Nagpur & outside India.	

3j	Provision of drilling and blasting in mineral benches	Sub level stoping, Blast hole stoping.	Sub level stoping, Blast hole stoping.
3k	Provision of mining machineries in mineral benches	Not applicable	Not applicable
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not applicable	Not applicable
3m	Total area covered under excavation/pits	198 ha	198 ha
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable	Not applicable
3o	Total area put in use under different heads at the end of year	56.23 ha	56.23 ha
3p	Production of ROM mineral during the last five year period as applicable	2013-14-- 600000 T, 2014-15-- 718000 T, 2015-16-- 941000 T, 2016-17-- 1000000 T, 2017-18-- 1000000 T.	2013-14-- 541096 T, 2014-15-- 409946 T, 2015-16-- 562042 T, 2016-17-- 540582 T, 2017-18-- 580107 T.
3q	General remarks of inspecting officers on method of mining etc.	Not applicable	The mine had been developed by U/G method which is suitable to the type of deposit.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Topsoil - Not applicable, Waste in U/G - 9126 Cu m, At Surface- 9126 Cu m, Reject- Not applicable	Topsoil - Not applicable, Waste in U/G - 5000 Cu m, At Surface- 157 Cu m, Reject- Not applicable	

4b	Location of topsoil, OB and mineral reject dumps	In U/G Stope voids & at surface Dump yard.	In U/G Stope voids & at surface Dump yard.	
4c	Number of dumps within lease area and outside of lease area	8 Nos	8 Nos	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N A	Not applicable as 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.	6 nos	6 nos	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	No	The V/L has been pointed out.
4i	Length of Retaining wall or garland drain all along dumps	All along the dump.	Not made	The V/L has been pointed out.
4j	Number of settling ponds	01 no.	01 no.	
4k	Specific comments of inspecting officer on waste dump management	Not applicable	Dumping has not been carried out as per proposals for which the V/L have been pointed out.	

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.	No proposal	Not applicable	
5b	Area under backfilling of mined out area	Not applicable	Not applicable	

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Not applicable
5d	Total area fully reclaimed and rehabilitated	No proposal	Not applicable
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not applicable	The 50 % of waste generated has been dumped in U/G stope voids.

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	Submitted	
6b	Area available for rehabilitation (ha) .	No proposal	Not applicable	
6c	afforestation done (ha).	1.0 ha	1.0 ha	
6d	No. of saplings planted during the year	2000 nos	2000 nos	
6e	Cumulative no .of plants	84590 nos	84590 nos	
6f	Any other method of rehabilitation	No proposal	Not applicable	
6g	Cost incurred on watch and care during the year	No proposal	Not applicable	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Proposed to fill the stope voids by 9126 Cu M waste.	5000 Cu M filled in stope voids.	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Proposed to fill the stope voids by 9126 Cu M waste.	5000 Cu M filled in stope voids.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal being U/G mine.	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 rehabilitation (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 and buffer zone)	Yes	The regular monitoring of various parameters is being carried out.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not applicable	The lessee's conduct towards implementation of PMCP was satisfactory.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	All the ROM processed at their concentrator plant.	Being done	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized	Mechanized.	
7c	Different grade of mineral sorted out at mines.	None	Not applicable	
7d	Any beneficiation process at mines .	Ore Beneficiation plant & Piolat plant for tailing beneficiation.	Being done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Not applicable	Whole of the ROM processed at their concentrator plant.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Not applicable	
8b	Concurrent use or storage of topsoil	No proposal	Not applicable	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste proposed to dump in U/G Voids & Dump yard at surface.	Being done
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Not applicable
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Not applicable
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2000 nos to be planted each year.	2000 planted.
8g	Survival rate	40%	43%
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 in and around the mine is satisfactory.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Not applicable	M/R received up to Sept 2018. A/R received for 2017-18.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information furnished.	Agent- Sh.R.K. Sah, Manager- Sh.G.D. Gupta, Mining Engineer- S K Purohit, Geologist- Sh. Nagesh Kumar Rajpurohit.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Information Furnished.	Occupied by Pit- None as U/G mine, waste disposal- 14.69ha, occupied by plant building 37.720 ha, others 2.480 ha
9d	Scrutiny of Annual return on afforestation	Number of trees planted within lease 1500 & Outside lease 500.	Found in order
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Information furnished.	1101736 T generated of grade 0.11
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Information furnished	A total of 580107 T produced of copper grade 0.94 & Closing balance of 2267 T with copper grade of 0.98.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Information furnished	Ex Mine Price Rs. 181661.21 & Cost of Production Rs. 2005.83 per T.
9h	Scrutiny of Annual return on fixed assets	Details Furnished	The Value of fixed assets- Rs. 2161682470/- & depreciation of Rs. 82649390/- .
9k	Scrutiny of Annual return on mining machineries	The information Furnished	Found in order.

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)	27-AUG-18	MCDR17	Rule 11(1)	27-AUG-18
MCDR17	Rule 37(2)	27-AUG-18	MCDR17	Rule 37(2)	27-AUG-18

Date :

(Sharma H.C.)

Indian Bureau of Mines