INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

Mining Plan Modification REPORT

Kolkata regional office

Mine file No : CAL/BH/SB/CU-3 **Mine code : 14BHR27001**

(i) Name of the Inspecting Officer and ID No. : **P002) PHILLIP HAPADGARA**

(ii) Designation : Senior Mining Geologist

(iii) Accompaning mine Official with Designation : Mines Manager & Mining Engineer: sri. Sampath Kumar S

(iv) Date of Inspection : 20/04/2023

(v) Prev.inspection date : 14/02/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KENDADIH**

(b) Registration NO. :

(c) Category : A Mechanised

(d) Type of Working : Underground

(e) Postal address

State : JHARKHAND
District : SINGHBHUM (EAST)
Village : TERENGA
Taluka : GHATSILA
Post office : SURDA
Pin Code :
FAX No. :
E-mail :
Phone :

(f) Police Station :

(g) First opening date : 02/05/1957

(h) Weekly day of rest : SUN

2. Address for correspondance : TAMRA BHAVAN .
ASHUTOSH CHOUDHURY AVENUE . KOLKATA--1.
WEST BENGAL

3. (a) Lease Number : BHR0242
(b) Lease area : 1139.6
(c) Period of lease : 50
(d) Date of Expiry : 02/06/2023

4. Mineral worked : COPPER ORE Main

5. Name and Address of the

Lessee	:	HINDUSTHAN COPPER LTD. 1,ASHUTOSH CHOUDHURY AVENUE TAMRA BHAWAN KOLKATA-700019 KOLKATA WEST BENGAL Phone:033-2283-2832/2529 FAX :033-2283-2623
Owner	:	Shri Sanjay Panjiyar Flat No.-1H,402, Avidipata-phase-1 401, Barakhola, Kolkata- 700099 SINGHBHUM (EAST) JHARKHAND Phone: 8878951491 FAX :
Agent	:	SHRI KHUSIRAM HANSDAH INDIAN COPPER COMPLEX GHATSILA EAST SINGHBHUM SINGHBHUM (EAST) JHARKHAND Phone: 9575279259 FAX :
Geologist		
Name	:	Mr. J. PRAKASHAM,Full Time
Qualification	:	M. Sc. (Geology)
Appointment/ Termination date	:	19/07/2019

6. Date of approval of Mining Plan/Scheme of Mining :

Mining Scheme rule 12 MCDR1988	02/05/2013
Renewal under rule 24 MCR1960	27/05/2013
MP review under 17(1) MCR 2016	21/12/2017
MP modif under 17(3) MCR 2016	25/11/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Surface Exploration (Final geological report is under preparation)
1b	Exploration over lease area for geological axis 1 or 2	2200m.	4991 m.	Surface Exploration (Final geological report is under preparation)
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	M/s MECL	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such proposal	Nil	Total 25 BH has been drill with 13892 mt during 2021-22 to 22-23 to enhance geological axis final report is under preparation.
1e	Balance reserve as on 01/04/20	As on 01/04/2023 111-730673 T 122- 159620 T Remaining Resources- 17,830,089.00 T	As on 01/04/2023 111-730673 T 122- 159620 T Remaining Resources- 17,830,089.00 T Production :26629T during the reporting year	Production :26629T during the reporting year

1f	General remarks of inspecting officers on geology, exploration etc	-	-	Copper mineralization is in the form of disseminations in the granular quartz quartzite schist. The ore bodies in the area are primarily copper lodes with dominate chalcopyrite,pyrite and subordinate pyrrhotite and a large number of minor and trace minerals. During reporting year 4BH (4991 m) have been drilled.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Lateral development (drive in ore) in 1L, 2L and 6L (drive in waste) in 5L & 6L Vertical development/ raise in 2L, 3L, 4L, 5L and 6L	Lateral development (drive in ore) in 1L, 2L and 6L (drive in waste) in 5L & 6L Vertical development/ raise in 2L, 3L, 4L, 5L and 6L	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not applicable as the mine is underground.	Nil	Nil
2c	Stripping ratio or ore to OB ratio	Nil	Nil	Nil
2d	Quantity of topsoil generation in m3	Nil as the mine is underground.	Nil	Nil as the mine is underground.
2e	Quantity of overburden generation in m3	No such proposal	Nil	Nil

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Mine is being developed as per approved Modifications in mining plan dated 25/11/2020 and as per stoping permission dated 02/05/2022.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	as the mine is underground and Level proposed (stope) for production are 2L, 3L,4L and 5L	production are from Level 2L, 3L,4L and 5L	Nil
3b	Quantity of ROM mineral production proposed	77383.7 cum (222865 MT)	9246.5 cum (26629 MT)	stoping permission date 02/05/2022.
3c	Recovery of sailable/usable mineral from ROM production	no such proposal	Entire ROM is been used in processing plant located at Musabani	Entire ROM produced is been used in processing plant located at Musabani.
3d	Quantity of mineral reject generation	no such proposal	nil	nil
3e	Grade of mineral rejects generation and threshold value declared.	no such proposal	nil	nil
3f	Quantity of sub grade mineral generation.	no such proposal	nil	nil
3g	Grade of sub grade mineral generation	no such proposal	nil	nil
3h	Manual / Mechanised method adopted for segregating from ROM	no such proposal for segregation of ROM	entire produced ROM is used in processing plant located at Mosabani.	entire produced ROM is used in processing plant located at Mosabani.

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Room and pillar method of U/G mining.	Production from Development of drivages and during Reporting year from Stoping Between 2nd level to 1st level, 3rd level to 2nd level, 3rd level to 4thLevel and 5th level to 4th level by Room and Pillar Method.	Raise between levels along hangwall contact of ore body.Size of sill drive 3mx2.4m.Arrangement of scraper fitted both north and south side of raise at sill drive. cross cut driven from lower level to ore pass of the stope.Raise widened by breasting 6.5m each side from the centre line of raise.Drilling done with jack hammer with air legs. Blasting is done with Emulsion explosive
3k	Provision of mining machineries in mineral benches	Room and pillar method of U/G mining.Double Drum Winder 425KW 1no., 37KW Hoist 2nos,jack hammer with Air Legs 50nos, DTH for drilling pilot holes 6nos, Rocker Shovel 20nos,Scrapper 12nos, Cavo/Hopper loader 4nos, Battery Loco 8nos, Main Ventilation Fan 2nos, Screw Compressor 4nos, U/G pumps 6nos	Room And Pillar Method Of U/G Mining.WINDING ENGINE(ELEC) 20000.000 KG 1no,SCRAPPER 5 HP 5nos Electrical,AIR COMPRESSOR 2000 CUM/MN& 1000cum/Min 2nos Each(Electrical),ROCKER SHOVEL LOADER 0.20 CUM 4nos(Non Electrical),LOCOMOTIVE (NONELEC.)5 TONNE& 4 Tonne 2nos Each,MINE CARS 1.20 TONNE 50nos(Non Electrical),VENTILATION FAN 160 CUM/H 2nos(Electrical),PUMPS (ELEC.) 100 L/MN 3nos,(Electrical),CRANE 10 TONNE 2nos(Electrical),GENERATOR (DIESEL) 1.500 KWH 1no.(Non Electrical)	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	NA	Production from Development of drivages and during Reporting year from Stoping Between 2nd level to 1st level, 3rd level to 2nd level, 3rd level to 4thLevel and 5th level to 4th level by Room and Pillar Method.	Nil
3m	Total area covered under excavation/pits	There is no proposal for opencast working. Surface installation for mining 0.40ha.,waste dump 5.79ha,Storing area for tools & machineries 0.04ha, Buildings 16.6ha, Township 24.86ha, Roads 1ha.	Surface installation for mining 0.40ha.,waste dump 5.79ha,Storing area for tools & machineries 0.04ha, Buildings 16.6ha, Township 24.86ha, Roads 1ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	Nil	Nil	Nil
3o	Total area put in use under different heads at the end of year	Surface installation for Mining: 0.4 ha, Waste dump: 5.79 ha, Storing area for tools &machineries: 0.04 ha, Buildings: 16.6 ha, Township:24.86 ha, Roads: 1ha	Surface installation for Mining: 0.4 ha, Waste dump: 5.79 ha, Storing area for tools &machineries: 0.04 ha, Buildings: 16.6 ha, Township:24.86 ha, Roads: 1ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 83628 T 2019-20: 111077 T 2020-21: 66199 T 2021-22: 189806 T 2022-23: 222865 T	2018-19: 25506 T 2019-20: 43230 T 2020-21: 41772 T 2021-22: 25834 T 2022-23: 26629 T	Nil

3q	General remarks of inspecting officers on method of mining etc.	-	-	Mining method used is Underground Room & Pillar method of mining.Raise driven between levels along hangwall contact of ore body.Size of sill drive 3mx2.4m.Arrangement of scraper fitted both north and south side of raise at sill drive. cross cut is driven from lower level to ore pass of the stope.Raise is widened by breasting 6.5m each side from the centre line of raise.Drilling done with jack hammer with air legs.Blasting is done with Emulsion explosive

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	NA	NA	NA as the mine is underground
4b	Location of topsoil, OB and mineral reject dumps	NA	NA	Nil
4c	Number of dumps within lease area and outside of lease area	NA	NA	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	NA	Nil
4e	Number of active and alive dumps.	NA	NA	Nil
4f	Number of dead dumps.	NA	NA	Nil

4g	Number of dumps established.	NA	NA	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	NA	NA	Nil
4i	Length of Retaining wall or garland drain all along dumps	NA	NA	Nil
4j	Number of settling ponds	NA	Na	Nil
4k	Specific comments of inspecting officer on waste dump management	-	-	No proposal for external dumping as the mine is underground

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.	Hydraulic backfilling of stopes after extraction of mineral ,leaving pillars as per Room and Pillar method of mining	3335 Tonnes of mill tailings (after processing) is been backfilled in exhausted stope.	Stope voids are back filled with mill tailings for K-2 stope block between 4L-3L
5b	Area under backfilling of mined out area	Nil	1038 sq.m.	Two Stopes in stope block K-1 between 2L to 1L are ready for back filling.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	NA	Nil	Nil

5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	Hydraulic backfilling of stopes is process after extraction of mineral ,leaving pillars as per Room and Pillar method of mining

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	Yes	Nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	0.125ha	0.125ha	Nil
6d	No. of saplings planted during the year	200 nos	200 nos	Nil
6e	Cumulative no .of plants	-	not accessed	nil
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	-	no accessed	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	Nil	Nil

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NA	NA	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	200 nos	200 nos	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.125 ha	0.125 ha	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)	Monitoring of Ambient air Quality, Water quality etc.	The Environmenttal Monitoring work is being carried out in core zone and buffer zone of the mine	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	The Environmenttal Monitoring work is being carried out in core zone and buffer zone of the mine quarterly.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks

7a	ROM Mineral dispatch or grade-wise sorting within lease area	222865 T	21545 T been dispatched to concentrator plant	concentrator plant is located at Mosabani.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Nil	Nil	Entire produced ROM is been sent to Concentrator plant located at Mosabani.
7c	Different grade of mineral sorted out at mines.	Nil	Nil	Entire produced ROM is been sent to Concentrator plant located at Mosabani.
7d	Any beneficiation process at mines .	No such proposal kept at mine	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	Entire ROM is been processed in concentrator plant located at Musaboni

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NA	Nil	Nil
8b	Concurrent use or storage of topsoil	No such proposal	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No such proposal	Nil	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Nil	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposal	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	200 nos of plants proposed for reporting year	200 nos plantation have been done	Nil
8g	Survival rate	-	60%	Nil
8h	Water sprinkling on roads to control airborne dust	Proposed	Water sprinkling on road is being done regularly	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	The aesthetic beauty in and around mines area is good

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Yes	Yes	Timely submission of Monthly and annual Report.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager & Mining Engineer: sri. Sampath Kumar Sangi, Geologist: sri. J. Prakashm	Mines Manager & Mining Engineer: sri. Sampath Kumar Sangi, Geologist: sri. J. Prakashm	As per record Mining Engineer and geologist are present during Inspection

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2023; Used for waste disposal: 5.79 ha, Occupied by plant, buildings, residential, welfare buildings and roads: 42.9 ha,	Details on land use pattern as furnished appears to be in order	Nil
9d	Scrutiny of Annual return on afforestation	200 nos within lease area	Details are in order	Survival is 60%
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generated	No mineral reject generated	Mine is underground and there is no provision of generation of mineral reject as entire produced ROM is dispactched to processing/ concentrator plant located at Mosabani.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock: 5762 T 0.93% Cu, production: 26629 T 1.02 % Cu, Closing stock: 10846 T 1.02% Cu	Detail appears to be in order	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 9008/-	Detail appears to be in order	Nil
9h	Scrutiny of Annual return on fixed assets	Value of Fixed asset: Rs. 834583216/-	Detail appears to be in order	Nil

9k	Scrutiny of Annual return on mining machineries	Air Compressor: 4, Crane:2, Generator (Diesel): 1, Locomotive (Non-Elec.): 8, Mine Cars: 117, Rocker Shovel Loader: 11, Ventilation Fan: 2, Pumps (Elec.): 3, Scrapper: 23, Winding Engine (Elec.): 1	Detail appears to be in order	Nil

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

Date :

(**PHILLIP HAPADGARA**)

Indian Bureau of Mines