

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/376/BNG

Mine code : 30KAR03103

- (i) Name of the Inspecting : **S19**) **SANDEEP KUMAR SINGH**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shri H.J. Basavarajappa, Mine Manager, Shri Y.M. Thri
Official with
Designation
- (iv) Date of Inspection : 19-JAN-23
- (v) Prev.inspection date : 14-FEB-22

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **THIMMAPPANAGUDI**
- (b) **Registration NO.** : **IBM/4369/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : KARNATAKA
District : BELLARY
Village : KRISHNA NAGAR
Taluka : SANDUR
Post office : VIDYA NAGAR
Pin Code :
FAX No. : 080-25583172 (F), ningappa
E-mail : info.mml@nic.in, hdrajuchna
Phone : 080-25580373, 9845300022 (1
- (f) Police Station : Sandur
- (g) First opening date : 27-DEC-85
- (h) Weekly day of rest : SUN
2. Address for : Karnataka State Minerals Corp. Ltd
correspondance : TTMC BUILDING A BLOCK 5th FLOOR
BMTc SHANTINAGAR BANGALORE - 560027.
3. (a) Lease Number : KAR0200
- (b) Lease area : 136.27
- (c) Period of lease : 20
- (d) Date of Expiry : 26-DEC-25
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : Karnataka State Minerals Corp. Ltd
 TTMC, A Block, 5th Floor,
 BMTC Building, K.H.Road,
 Shanthinagar Bengaluru
 BANGALORE KARNATAKA
 Phone:080-22278813-14-15-16
 FAX :080-22213172

Owner : Smt. Vinothpriya R, IAS, The Managing Director,
 KSMCL 5th Floor, 'A'
 block, TTMC Bldg BMTC,
 Shanthinagar, BANGALORE
 KARNATAKA
 Phone:
 FAX :

Agent : MALLIKARJUN SARAPUR
 BMTC Shanthinagar, TTMC
 Building, "A" Block, 5th
 Floor, Shanthinagar,
 Bengaluru, Karnataka
 BANGLORE URBAN KARNATAKA
 Phone: 8763673728
 FAX : 08022213172

Mining Engineer

Name : H.J.BASAVARAJAPPA., Full Time
 Qualification :
 Appointment/ : 17-MAR-22
 Termination date

Geologist

Name : YOGANANDA KS, Full Time
 Qualification : M.Sc GEOLOGY
 Appointment/ : 17-MAR-22
 Termination date

Manager

Name : H.J.BASAVARAJAPPA
 Qualification :
 Appointment/ : 12-JUN-20
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	29-FEB-00
		Modif.of approved Mining Plan	27-DEC-01
		Mining Scheme rule 12 MCDR1988	05-FEB-04
		Modif.approved Mining Scheme	12-SEP-05
		Mining Scheme rule 12 MCDR1988	23-MAR-06
		Modif.approved Mining Scheme	02-DEC-08
		Mining Scheme rule 12 MCDR1988	10-AUG-12
		Modif.approved Mining Scheme	06-JAN-15
		Mining Scheme rule 12 MCDR1988	28-MAR-16
		Modif.approved Mining Scheme	16-MAY-19
		MP modif under 17(3) MCR 2016	22-JAN-21
		MP review under 17(1) MCR 2016	01-FEB-21

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	NIL
1b	Exploration over lease area for geological axis 1 or 2	30 No. of Core Bore Holes with total meterage of 2000 m proposed for the year 2021-22.	30 nos. of core boreholes with total meterage of 2000 metres proposed for the year 2021-22 against which only 9 core boreholes with total meterage 308 metres carried out during year 2021-22. Also, it was observed that some drilled boreholes like KTB-50, KTB-51, KTB-47, KTB-35 drilled have ended in mineralized zone & exploration for establishing vertical extent of ore body is not completed.	Violation issued under Rule 11(1) of MCDR 2017.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned	Total 09 Nos Core bore holes drilled & total Meterage is 308.00Mtrs completed at an cost of Rs.18,26,440.00/	As reported by the Lessee during inspection.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-1- 43.93 ha G-2- 2ha Unexplored area-91.01 ha (unapproachable & highly sloped area)	G-1- 43.93 ha G-2- 2ha Unexplored area-91.01 ha (unapproachable & highly sloped -	As per the last approved document dated 05/02/2021.
1e	Balance reserve as on 01/04/20	4,418,939 tonnes of iron ore with Fe grade +45 % as on 1.01.2021.	3,578,809 tonnes of iron ore after depletion as on 1.04.2022.	As reported in AR 2021-22.

1f	General remarks of inspecting officers on geology, exploration etc	i) 30 nos. of core boreholes with total meterage of 2000 metres proposed for the year 2021-22 against which only 9 core boreholes with total meterage 308 metres carried out during year 2021-22. Also, it was observed that some drilled boreholes like KTB-50, KTB-51, KTB-47, KTB-35 drilled have ended in mineralized zone & exploration for establishing vertical extent of ore body is not completed. Violation issued under Rule 11(1) of MCDR 2017.	ii) The holder of a mining lease shall, on or before the 30th day of June every year submit a digital copy along with a print copy of the surface geological plans and sections maintained under rule 32 along with the annual return. The same has not been submitted. Violation issued under Rule 33 of MCDR 2017.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Development was proposed in Sec 7-7' to 31-31'. (Top 956 mRL & bottom 888 mRL).	Development was carried out between Sec 7-7' to 31-31'.	It was observed during inspection that 8 m bench height & 10 m bench width have not been maintained systematically as per proposal between Sec-13-13' to 18-18' & Sec 26-26'. Violation issued under Rule 11(1) of MCDR 2017.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden & mineral proposed	Separate benches in overburden & Mineral maintained.	It was observed during inspection that 8 m bench height & 10 m bench width have not been maintained systematically as per proposal between Sec-13-13' to 18-18' & Sec 26-26'. Violation issued under Rule 11(1) of MCDR 2017.
2c	Stripping ratio or ore to OB ratio	1:2.57(in Tons)	1:2.00(in Tons)	Ore- 636050 tons Waste-1272217 tons (As reported in AR 2021-22)
2d	Quantity of topsoil generation in m3	No proposal	NIL	NIL
2e	Quantity of overburden generation in m3	6,68,649 Cum proposed	5,08,886 Cum achieved	As reported in AR 2021-22.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			It was observed during inspection that 8 m bench height & 10 m bench width have not been maintained systematically as per proposal between Sec-13-13' to 18-18' & Sec 26-26'. Violation issued under Rule 11(1) of MCDR 2017.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit proposed	Actual mining carried out in one pit	NIL

3b	Quantity of ROM mineral production proposed	6,50,000 tons proposed	6,36,050 tons achieved.	As reported in AR 2021-22.
3c	Recovery of sailable/usable mineral from ROM production	100 % proposed	100 % achieved	NIL
3d	Quantity of mineral reject generation	No Proposal	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	NIL	NIL
3f	Quantity of sub grade mineral generation.	No Proposal	NIL	NIL
3g	Grade of sub grade mineral generation	No Proposal	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	Only dry crushing & screening proposed	Crusher-250 TPH-1No. Screen=200TPH-1 No.	NIL
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	Deep hole Drilling & Blasting is proposed.	Drilling & Blasting carried out with slurry explosives in conjunction with detonators	Drill-100 mm-2 nos.

3k	Provision of mining machineries in mineral benches	Mining Machineries proposed:	1.Excavator- 7 nos.- (0.9 Cum & 1.6 Cum). 2.Front End loader-4 nos. (1.7 Cum) 3.Dumper-19 nos.- (16 tons) 4.Drill-2 nos. (100 mm) 5.Water tanker- 6 nos.- (10 KL)	As reported in AR 2021-22.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8m bench height proposed for both OB & mineral.	It was observed during inspection that 8 m bench height & 10 m bench width have not been maintained systematically as per proposal between Sec-13-13' to 18-18' & Sec 26-26'.	Violation issued under Rule 11(1) of MCDR 2017. -
3m	Total area covered under excavation/pits	49.20 ha till end of plan period (31.03.26)	44.31 ha as on 1.04.2022.	As reported in AR 2021-22.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.57 (in Tons)	1:2.00 (in Tons)	Ore- 636050 tons Waste-1272217 tons (As reported in AR 2021-22)
3o	Total area put in use under different heads at the end of year	Area under Mining - 49.20 Ha, Waste Dump- 28.25 Ha Infrastructure & roads - 3.70 Ha till end of plan period (31.03.26)	Covered under current (O/C) workings - 44.31Ha, Used for waste Disposal - 24.40Ha. Occupied by plant, buildings, residential, welfare buildings & Roads - 3.70 Ha	As reported in AR 2021-22.

3p	Production of ROM mineral during the last five year period as applicable	(in tonnes)	(in tonnes)	NIL
		2017-18	2017-18	4,92,845
		4,92,845	2018-19	1,01,778
		2018-19	2019-20	4,21,483
		1,01,778	2020-21	6,50,000
		2019-20	2021-22	6,36,050
		6,49,999		
		2020-21		
		6,50,000		
		2021-22		
		6,50,000		

3q	General remarks of inspecting officers on method of mining etc.	i)It was observed during inspection that 8 m bench height & 10 m bench width have not been maintained systematically as per proposal between Sec-13-13' to 18-18' & Sec 26-26'. Violation issued under Rule 11(1) of MCDR 2017.	ii)The plans and sections required under these rules shall be maintained up to date showing also the respective proposal of AMP for various activities pertaining to that year, within three months in case of category 'A' mines as referred to in clause (a) of sub-rule (2) of rule 55. It was observed during inspection that the plans maintained have not shown the respective proposal of approved mining plan as per the provision of this rule. Violation issued under Rule 31(4) of MCDR 2017.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	OB generated was proposed to be dumped in Backfilling dump-(D-4) & D-2	OB dumping carried out at Backfilling(D-4) as per the proposal.	No mineral reject and top soil generation.
4b	Location of topsoil, OB and mineral reject dumps	Active dump (D3) Northing- 1674180 to 1674370 Easting - 665105 to 665230 Backfilling(D-4) Northing- 167400 to 1674682 Easting - 663368 to 664200	Mineral stacks were found at Sec D12-12' which is the proposed backfill area(D-4) for carrying out waste dumping.	Violation issued under Rule 11(1) of MCDR 2017.
4c	Number of dumps within lease area and outside of lease area	4 dumps within lease (D-1, D-2, D-3 & Backfilling(D-4))	4 dumps within lease (D-1, D-2, D-3 & Backfilling(D-4))	NIL
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	D-3, D-2 & D-4 outside UP. Portion of D-1 within UPL.	D-3, D-2 & D-4 outside UP. Portion of D-1 within UPL	As per the current exploration data and document approved dtd 05/02/2021.
4e	Number of active and alive dumps.	2 Dumps are active (Backfilling(D4) & D3)	2 Dumps are active (Backfilling(D4) & D3)	NIL
4f	Number of dead dumps.	2 Dumps are inactive (D2 & D1)	2 Dumps are inactive (D2 & D1)	NIL
4g	Number of dumps established.	D-2 dump stabilized	D-2 dump stabilized	As per the ongoing approved document. (17.75 ha).

4h	Whether Retaining wall or garland drain all along dumps are there.	300 m retaining wall and 300 m garland drain proposed along Backfilling dump(D-4).	Retaining wall completed as per proposal. 300 metres garland drain proposed along backfilling area, D-4 for the year 2021-22 not carried out as per the proposal	Violation issued under Rule 11(1) of MCDR 2017.
4i	Length of Retaining wall or garland drain all along dumps	300 m retaining wall and 300 m garland drain proposed along Backfilling dump(D-4).	Retaining wall completed as per proposal. 300 metres garland drain proposed along backfilling area, D-4 for the year 2021-22 not carried out as per the proposal -	Violation issued under Rule 11(1) of MCDR 2017.
4j	Number of settling ponds	No proposal	NIL	NIL
4k	Specific comments of inspecting officer on waste dump management			i) Mineral stacks were found at Sec D12-12' which is the proposed backfill area(D-4) for carrying out waste dumping. Violation issued under Rule 11(1) of MCDR 2017. ii) 300 metres garland drain proposed along backfilling area, D-4 for the year 2021-22 not carried out as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	13,37,300tons of waste generated backfilling proposed	12,72,217 tons of waste backfilled at backfilling dump(D-4)	As reported in annual PMCP report 2021-22.
5b	Area under backfilling of mined out area	0.77 Ha. proposed	0.77Ha achieved	As reported in annual PMCP report 2021-22.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	NIL	NIL
5d	Total area fully reclaimed and rehabilitated	No proposal	NIL	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.		i) The processed output [digital elevation model (DEM) and Orthomosaic] have not been submitted in accordance with the Standard Operating Procedures under sub rule (5) of rule 34A of MCDR, 2017 for carrying out drone survey and submission of Digital Aerial Images of Mining areas. Violation issued under Rule 34A. (1) of MCDR 2017.	ii) Mineral stacks were found at Sec D12-12' which is the proposed backfill area (D-4) for carrying out waste dumping. Violation issued under Rule 11(1) of MCDR 2017.

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).	Annual report on PMCP to be submitted before 1st of July every year.	Annual PMCP Report is Submitted on 11.06.2022.	Revised Annual PMCP report submitted on 23.01.2023.
6b	Area available for rehabilitation (ha) .	0.5 ha available	1 ha	Gap plantation on Inactive waste dump-D-2.

6c	afforestation done (ha).	0.5 ha available	1 ha	Gap plantation on Inactive waste dump-D-2.
6d	No. of saplings planted during the year	312 nos. of saplings plantation proposed	2000 nos. of saplings planted at dump-D-2.	As reported in AR 2021-22.
6e	Cumulative no .of plants	Not mentioned	21,000Nos.of plants within lease.	As reported in Annual PMCP report 2021-22. and by the Lessee during inspection.
6f	Any other method of rehabilitation	No Proposal	NIL	NIL
6g	Cost incurred on watch and care during the year	Rs.1,00,000/- proposed for dump management	Rs.1.13 lakhs cost incurred for dump management (D-2).	As reported in Annual PMCP report 2021-22.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	832x282x10 meter proposed	740x270x10 meter achieved	Backfilling(D-4-dump) As reported by the Lessee during inspection.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	13,37,300tons of waste generated backfilling proposed	12,72,217 tons of waste backfilled at backfilling dump(D-4)	As reported in annual PMCP report 2021-22.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal	NIL	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	NIL

6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal	NIL	NIL
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed in core zone & buffer zone	Environmental monitoring carried out in core & buffer zone for Air, water, noise & soil as per the proposal. March-22 report available during inspection. Parameters within limit	NIL
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP proposals implemented inside the mine as per the proposal.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Dry crushing & Screening proposed	Dry crushing & screening carried out. Crusher-250 TPH-1No. Screen=200TPH-1 No.	Product size- - 10mm(fines), 10-40 mm(lumps).

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Dry crushing & screening proposed with grade wise sorting.	Lumps (Fe-grade) : Below 55% 55-58% 58-60% Fines (Fe-grade): Below 55% 55-58% 58-60 % 60-62 % 62-65 %	Grade as reported in AR 2021-22
7c	Different grade of mineral sorted out at mines.	Dry crushing & screening proposed with grade wise sorting.	Lumps : Below 55% 55-58% 58-60% Fines : Below 55% 55-58% 58-60 % 60-62 % 62-65 %	Grade as reported in AR 2021-22
7d	Any beneficiation process at mines .	No Proposal	NIL	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral stacks were found at Sec D12-12' which is the proposed backfill area (D-4) for carrying out waste dumping. Violation issued under Rule 11(1) of MCDR 2017.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	NIL	NIL

8b	Concurrent use or storage of topsoil	No proposal	NIL	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed separate dump for waste /OB (AD-1)	Separate dump for waste /OB maintained at AD-1	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB generated was proposed to be dumped in Backfilling dump-(D-4) & D-2	OB dumping carried out at Backfilling(D-4) as per the proposal.	No mineral reject and top soil generation.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	NIL	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not mentioned	21,000Nos.of plants within lease.	As reported in Annual PMCP report 2021-22. and by the Lessee during inspection.
8g	Survival rate	70 % proposed	80 % achieved	As reported in AR 2021-22.
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling on haul roads proposed to control the air borne dust	Water sprinkling inside the mine carried out by 10 KL water sprinkler- 6 nos.	6 Tankers with capacityof 10 KL utilized for sprinkling of water for dust suppression.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	300 metres garland drain proposed along backfilling area, D-4 for the year 2021-22 not carried out as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.
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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 Dec-2022 on 07.01.2023. Annual Return submitted for the year 2021-22 on 29.06.2022	M.R. submitted up to Dec-2022 on 07.01.2023. Annual Return submitted for the year 2021-22 on 29.06.2022	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: - Sri.H.J.Basava rajappa Geologist: - Sri.Yogananda K.S. MiningEngineer :Sri.H.J. Basavarajappa	Appears to be correct	NIL

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) workings - 44.31Ha, Used for waste Disposal - 24.40Ha. Occupied by plant, buildings, residential, welfare buildings & Roads - 3.70 Ha	Appears to be correct	NIL
9d	Scrutiny of Annual return on afforestation	2000 nos. of saplings with 80 % survival rate	Appears to be correct	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	Appears to be correct	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: O/s -2,37,347 tons, Production - 6,36,050 tons, C/s - 72,970 tons Graded Ore O/s- 3,75,182.2 tons Production- 8,00,427 tons Despatch- 5,82,490.6 tons C/s- 5,93,118.6 tons. (Includes both lumps & fines)	Appears to be correct	NIL

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- Rs.1273.930 per ton Lumps: Ex-mine Price- Rs. 3714/Ton - 0-55% Fe Rs.3847/Ton- 55-58% Fe Rs.5774/Ton- 58-60% Fe Fines Rs. 2695/Ton- 0-55% Fe Rs.2986Ton- 55-58% Fe Rs.4095/Ton- 58-60% Fe Rs.4475/Ton- 60-62% Fe Rs.4541/Ton - 62-65% Fe	Appears to be correct	NIL
9h	Scrutiny of Annual return on fixed assets	8,90,22,777 including Plant and machinery and capitalized expenditure	Appears to be correct	NIL
9k	Scrutiny of Annual return on mining machineries	1.Excavator- 7 nos.-(0.9 Cum & 1.6 Cum). 2.Front End loader-4 nos. (1.7 Cum) 3.Dumper-19 nos.- (16 tons) 4.Drill-2 nos. (100 mm) 5.Water tanker- 6 nos.-(10 KL). 6.Crusher-250 TPH-1 no.	Appears to be correct	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
MCDR17	Rule 11(1)	09-FEB-23			
MCDR17	Rule 31(4)	09-FEB-23			
MCDR17	Rule 33	09-FEB-23			
MCDR17	Rule 34(1)	09-FEB-23			

Date :

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines