

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

**MCDR inspection REPORT  
Ranchi regional office**

**Mine file No :** BIH/GLA/BX/205/RRO

**Mine code :** 07BHR32015

- (i) Name of the Inspecting : **S001** ) **B K SINGH**  
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : Sri B Gangopadhyay GM, Sri V S Singh Mines manager  
Official with  
Designation
- (iv) Date of Inspection : 13/09/2018
- (v) Prev.inspection date : 24/10/2017

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **SHRENGDAG (402.67)**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **GUMLA**
- Village : **SHRENGDAG, TUIMU, ETC**
- Taluka : **BISHUNPUR**
- Post office : **SARANGO**
- Pin Code :
- FAX No. : **06526-224118**
- E-mail :
- Phone : **06526-224016, 224112 & 224**
- (f) **Police Station** :
- (g) **First opening date** : **25/05/1976**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **VILL-SHRENDAG**  
**BISHNUPUR**  
**DIST-GUMLA**
3. (a) **Lease Number** : **BHR0247**
- (b) **Lease area** : **155.8**
- (c) **Period of lease** : **30**
- (d) **Date of Expiry** : **15/10/2004**
4. **Mineral worked** : **BAUXITE** **Main**

## 5. Name and Address of the

Lessee : HINDALCO INDUSTRIES Ltd.  
M/s HINDALCO INDUSTRIES  
Ltd. AT & PO - COURT ROAD,  
LOHARDAGA LOHARDAGA  
JHARKHAND  
Phone:06526-224016 & 224112  
FAX :06526-224118

Owner : S.S.KOTHARI  
M/s HINDALCO INDUSTRIES  
Ltd., CENTURY BHAWAN,Dr.  
ANNIE BESANT Rd. MUMBAI  
(SUBURBAN) MAHARASHTRA  
Phone: 022- 24227586  
FAX : 022- 24308491

Agent : B.K.JHA  
M/s HINDALCO INDUSTRIES  
Ltd. COURT ROAD PO& DIST -  
LOHARDAGA (JHK) LOHARDAGA  
JHARKHAND  
Phone: Mob- 941708929, 06526-224112/224015  
FAX : 06526-224118

## Mining Engineer

Name : VIDYA SAGAR SINGH,Full Time  
Qualification : B.Sc.(MINING)  
Appointment/ : 01/07/2017  
Termination date

## Geologist

Name : ONKAR NATH TIWARI,Full Time  
Qualification : M. Sc. (Geology)  
Appointment/ : 22/05/2018  
Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	26/05/1992
Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	08/11/2004
	:	Mining Scheme rule 12 MCDR1988	08/04/2011
	:	FMCP under 23C(1)	09/05/2013
	:	MP modif under MCR 1960	23/05/2016

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	There was no proposal for BHs to be given during the approved plan period	No exploration was carried out during the period as no exploration was proposed. Hence no backlog of exploration existed as on date of inspection	Entire lease area leaving 7.5m safety barrier, was explored.
1b	Exploration over lease area for geological axis 1 or 2	There was no proposal for BHs to be given for G1 and G2 level during the approved plan period	No exploration was carried out as no proposal was available.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal was there in the present approved Scheme of Mining. In the last approved Mining Plan / SOM.	No exploration was carried out as no proposal was available.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved Modification in Approved MP ,no area was remained unexplored	Entire lease area was explored for G1 and G2 level during last plan period.	
1e	Balance reserve as on 01/04/20	As per approved Modification in Approved MP the Reserve/ Resource as on 01.04.2015 was as given below:- i. Reserve(111): 1625851MT; (122)-62649 =1688500MT ii. Resource(221) : 480000 MT.	After depleting the production of 754104 MT during 2015-16 to 2017-18, the Reserve/Resource position as on 01.04.2018 is as given below:- i. Reserve(111):871747 MT; (122):62649 MT	

1f	General remarks of inspecting officers on geology, exploration etc	NA	Bauxite deposit of the area is mostly associated with laterite, occurs as irregular and discontinuous lenses or tabular bodies within the laterite capping. The thickness of different litho horizons observed in the quarry face was as given below:- i. Laterite: 1-5m; ii. Ore: 5-15m; iii. Lithomargic clay: 1-1.5m.	There is no back log of exploration. Leases area already fully explored.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	During 2017-18 and 2018-19 it was proposed to work in quarry Kechki-2 and Tuimu-3,	During inspection work was in progress in quarry Kechki-2 and Tuimu-3,	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in Soil & Morrum and Laterite and Ore were proposed to be developed. During 2017-18, . There was no proposal for top soil removal during the present plan period.	Separate benches in Soil & Morrum and Laterite and Ore were developed. During 2017-18.	
2c	Stripping ratio or ore to OB ratio	As per Modification in Approved MP, the overall stripping ratio during the period 2017-18 was proposed to be 1: 0.26	Production was 2361504 MT and OB removed 646634 MT ,striping ratio 1:.08.	

2d	Quantity of topsoil generation in m3	As per Modification in approved Mining Plan, dated 31/05/2016, separate removal and spreading of top soil and Morrum over backfilled area was proposed. proposed soil generation during 2017-18 was 2771781 cum.	The top soil removal figure was not available. The top soil generated was used for spreading over backfilled area.	
2e	Quantity of overburden generation in m3	Proposed OB generation during 2017-18 was 306024 cum	OB generated during 2017-18 was 646634 MT.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	Development was as per approved document with benches in soil morrum and ore	Pit was developed as proposed in the Modification in Approved MP.

### Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	02 Pits proposed for production kechki -2 and Tuimu-3 during 2017-18	At the time of inspection 2 pits kechki -2 and Tuimu-3 were in production .	
3b	Quantity of ROM mineral production proposed	Proposed production during 2017-18 was 257604 MT	Production during 2017-18 was 236504 MT	
3c	Recovery of sailable/usable mineral from ROM production	Proposed recovery of ROM during 2017-18 was 80% it was valid for the plan period.	Recover of 80% seems to be correct.	

3d	Quantity of mineral reject generation	No proposal available for mineral rejects generation during the plan period 2015-16 to 2019-20.	No mineral reject generation was reported from the mine.
3e	Grade of mineral rejects generation and threshold value declared.	Since no mineral reject generation was proposed hence its grade is irrelevant. The Threshold value of Bauxite has been kept at 30% Al <sub>2</sub> O <sub>3</sub> (Min) and <5% SiO <sub>2</sub> .	The threshold value of Bauxite was maintained with stringent specification.
3f	Quantity of sub grade mineral generation.	No proposal for sub-grade mineral generation was available	No sub-grade generation was reported from the mine.
3g	Grade of sub grade mineral generation	No proposal available.	Not applicable.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual method was proposed for segregating from ROM.	At the time of inspection segregation from ROM was not in operation
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No analysis or beneficiation study was proposed for sub-grade mineral and reject material since no sub-grade and reject material was proposed to be generated from the mine	No analysis or beneficiation study was carried out for subgrade mineral and reject material as no sub-grade mineral and reject material was reported to be generated from the mine.

3j	Provision of drilling and blasting in mineral benches	There is provision of drilling and blasting in harder formation (Laterite and Bauxite). Using DTH	Drilling and blasting in harder formation (Laterite and Bauxite). using DTH was practiced in the mine.
3k	Provision of mining machineries in mineral benches	Excavators Drills Dumpers Compressor Tippers	The following machines were available at the time of Inspection - Excavators Drills Dumpers Compressor
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench height was 6m and width 6m	Bench height maintained 6m and width 6m.
3m	Total area covered under excavation/pits	Proposed area to be excavated during 2017-18 was 5.96ha for the plan period 23.66ha.	Total excavated area during 2017-18 was 3.65ha.
3n	Ore to OB ratio for the pit/mine during the year.	Proposed production during 2017-18 was 257604MT and OB generation 306024cum Ore to OB ratio- 1:0.26	Production during 2017-18 was 236504MT and OB generated 646634 Mt and Ore to OB ratio-1:0.27.
3o	Total area put in use under different heads at the end of year	Proposed area put under different heads during 2017-18 was Degradation- 5.96Ha Reclamation- 5.29 plantation- 0.56ha	Area utilised under different heads are given below: Degraded: 3.65ha Area reclaimed- 3.2ha Area used for plantation- 1.4ha

3p	Production of ROM mineral during the last five year period as applicable	Proposed production during next five years as proposed in approved document. 2014-15:255035MT 2015-16:259113MT 2016-17:258487MT 2017-18:236504	Production during last five years: 2015-16: 81890 MT 2016-17: 257604 MT 2017-18: 257604 MT 2018-19: 258074 MT 2019-20: 258976 MT	
3q	General remarks of inspecting officers on method of mining etc.	NA	Area utised under different heads are given below: Degraded:3.65ha Area reclaimed-3.2ha Area used for plantation-1.4ha Production during 2017-18 was 236504MT and OB generated 646634 Mt and Ore to OB ratio-1:0.27.	Production was less than as proposed in Modification in Approved MP.

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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	OB & waste Generation as proposed will be concurrently backfilled in the same quarry for reclamation of the area.	OB & waste Generation as proposed was concurrently backfilled in the same quarry for reclamation of the area.	
4b	Location of topsoil, OB and mineral reject dumps	No such proposal as OB & waste Generation as proposed will be concurrently backfilled in the same quarry for reclamation of the area.	There was Top soil and OB(Morrur/Laterite) dump within the lease area. Further, no Mineral reject dump also existed within the lease.	



4c	Number of dumps within lease area and outside of lease area	There was no proposal for Waste dumping within or outside the lease area during the plan period	There was no waste dump within or outside lease area as on date of inspection.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	There was no proposal of dumping.	There was no dump hence it was not applicable. Simultaneous backfilling is in progress.	
4e	Number of active and alive dumps.	There was no proposal of active dump	No active dump was present within the lease area.	
4f	Number of dead dumps.	There was no proposal of dead dump in the approved Scheme of Mining.	No dead dump was present within the lease area.	
4g	Number of dumps established.	There was no proposal of dump within the lease area, hence dump establishment was not relevant.	There was no dump within the lease area hence its establishment was not relevant	
4h	Whether Retaining wall or garland drain all along dumps are there.	There was no proposal of construction of Retaining wall or Garland drain.	Since there was no dump hence construction of Retaining wall and Garland drain were not relevant.	
4i	Length of Retaining wall or garland drain all along dumps	Not applicable.	Not applicable.	
4j	Number of settling ponds	Not applicable.	Not applicable.	
4k	Specific comments of inspecting officer on waste dump management	There is no proposal of dumping and simultaneous backfilling is in the progress.	There is no proposal of dumping and simultaneous backfilling is in the progress.	Since no dump was there within the lease area hence no comment on the aspect can be given.

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Solid Waste Management - Backfilling:

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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.	Concurrent backfilling in the same quarry for reclamation of the area is proposed.	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection.
5b	Area under backfilling of mined out area	Concurrent backfilling in the same quarry for reclamation of the area is proposed. Proposed backfilling in Kechki-2 and Tuimu-3, reclaimed area 4.95+0.34ha	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection. Area Broken-3.65Ha and area reclaimed - 3.2ha.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent backfilling in the same quarry for reclamation of the area is proposed. Proposed backfilling in Kechki-2 and Tuimu-3, reclaimed area 4.95+0.34ha	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection. Area Broken-3.65Ha and area reclaimed - 3.2ha.
5d	Total area fully reclaimed and rehabilitated	Concurrent backfilling in the same quarry for reclamation of the area is proposed. Total proposed area to be reclaimed during the plan period 2015-16 to 2019-20 was 24.63ha and degraded area 23.66ha	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection. Total area reclaimed during 2017-18 was 3.2ha and cumulative reclamation - 234.96ha.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Concurrent backfilling in the same quarry for reclamation of the area is proposed. Total proposed area to be reclaimed during the plan period 2015-16 to 2019-20 was 24.63ha and degraded area 23.66ha	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection. Total area reclaimed during 2017-18 was 3.2ha and cummulative reclamation - 234.96ha.	Simultaneous backfilling and top soil spreading were in practice in the mine after complete extraction of mineral from the active mining part of the lease was in practice at the time of inspection
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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).	Lessee has submitted annual report on PMCP on time.	Lessee has submitted annual report on PMCP on time correctly.	
6b	Area available for rehabilitation (ha) .	Proposed area available for reclamation - 23.66ha and rehabilitation	Total area reclaimed as on date 234.96 and 121.94 ha afforested by planting 340349 trees.	
6c	afforestation done (ha).	Proposed afforestation during 2017-18 was 1400 plantation covering an area of 0.56ha and total plantation during the plan period 2015-16 to 2019-20 was 7325 plants over an area of 2.93ha	Lessee has planted 1300 plants over an area of 0.81ha during 2017-18 and cumulative plantation as on date of inspection was 340349 plants covering an area of 121.94ha with survival rate 60%.	

6d	No. of saplings planted during the year	Proposed afforestation during 2017-18 was 1400plantation covering an area of 0.56ha and total plantation during the plan period 2015-16 to 2019-20 was 7325 plants over an area of 2.93ha	Lessee has planted 1300plants over an area of 0.81ha during 2017-18 and cummulative plantion as on date of inspection was 340349plants covering an area of 121.94ha with survival rate 60%.
6e	Cumulative no .of plants	Proposed afforestation during 2017-18 was 1400plantation covering an area of 0.56ha and total plantation during the plan period 2015-16 to 2019-20 was 7325 plants over an area of 2.93ha	Lessee has planted 1300plants over an area of 0.81ha during 2017-18 and cummulative plantion as on date of inspection was 340349plants covering an area of 121.94ha with survival rate 60%.
6f	Any other method of rehabilitation	Two gurries are proposed to be rehabilitaed as pond reservoir.	one quarry used as pond.
6g	Cost incurred on watch and care during the year	Not proposed	NA
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Proposed area available for reclamation - 23.66ha and rehabilitation .	Total area reclaimed as on date 234.96 and121.94 ha afforested by planting 340349trees.

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Proposed area available for reclamation - 23.66ha and rehabilitation .	Lessee has planted 1300plants over an area of 0.81ha during 2017-18 and cummulative plantation as on date of inspection was 340349plants covering an area of 121.94ha with survival rate 60%.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Proposed afforestation during 2017-18 was 1400plantation covering an area of 0.56ha and total plantation during the plan period 2015-16 to 2019-20 was 7325 plants over an area of 2.93ha	Lessee has planted 1300plants over an area of 0.81ha during 2017-18 and cummulative plantation as on date of inspection was 340349plants covering an area of 121.94ha with survival rate 60%.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Two gurries are proposed to be rehabilitaed as pond reservoir.	one quarry used as pond and reservoir.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Na	No wasteland in the lease area.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	No wasteland in the lease area.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	No wasteland in the lease area.

6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring for all four seasons will be carried.	Quarterly monitoring of Air and water done on regular basis.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Proposal for implementation of PMCP to be carried year wise as per approved document.	Lessee has planted 1300plants over an area of 0.81ha during 2017-18 and cumulative plantation as on date of inspection was 340349plants covering an area of 121.94ha with survival rate 60%. Total area reclaimed as on date 234.96 and 121.94 ha afforested by planting 340349trees.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	There was no proposal for mineral dispatch in the approved Scheme of Mining. There was also no proposal for grade wise sorting within the lease.	There was no proposal for gradewise sorting in the lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting of Bauxite ore from OB/Waste material after blasting was proposed in the approved Scheme of Mining. There was no proposal for grade wise sorting.	Manual sorting of Bauxite ore from OB/Waste material was done at the mine site. No grade-wise sorting of ore was done at the mine site as entire mined out material was of 39.27 % Al <sub>2</sub> O <sub>3</sub> grade	
7c	Different grade of mineral sorted out at mines.	No proposal available	No proposal available	

7d	Any beneficiation process at mines	No proposal available	No proposal available
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Na	No beneficiation was carried out at the mine site. For Mineral Conservation aspect, lessee had deployed suitable nos. of workers for manual sorting of ore from blasted material to avoid mixing of ore with deleterious. There is no any issue for Mineral conservation. Higher grade ore blended with low grade ore and despatched to Alumina plant. No sub grade generation.

## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	As per Modification in approved Mining Plan, dated 23/05/2016, separate removal and spreading of top soil and Morrum over backfilled area was proposed.	The top soil removal figure was not available. The top so generated was used for spreading over backfilled area .	
8b	Concurrent use or storage of topsoil	As per Modification in approved Mining Plan, dated 23/05/2016, separate removal and spreading of top soil and Morrum over backfilled area was proposed.	Simultaneous spreading of top soil was done over backfilled area . The quantum of top soil used for concurrent spreading over backfilled area was not available.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	There was no proposal for separate dumping of OB, Waste rock and Mineral Reject.	There was no dump of OB, Waste, Mineral Reject/Fines within the lease area, as entire OB/Waste material generated was used for simultaneous backfilling followed by spreading of top soil over it.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	There was proposal for simultaneous backfilling for restoration of excavated area by using 271781Cu.m of top soil and OB/Waste material during 2017-18.	A total of 646634 Tons of material has been backfilled in 2017-18 and cumuumulative quantity backfilled - 23907597MT.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal available.	No work done
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	During the plan period 2015-16 to 2019-20 about 7325 plantation were proposed to be done over 2.93ha area.	During 2017-18 1300plantation done over 0.81ha.
8g	Survival rate	Survival rate was proposed to be around 80%	The survival rate varied between 60-65% during the plan period.
8h	Water sprinkling on roads to control airborne dust	No specific proposal was there in the last approved document	It was reported that during dry season, water sprinkling arrangement was made on haul road



8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	As per Modification in approved Mining Plan, dated 23/05/2016, separate removal and spreading of top soil and Morrum over backfilled area was proposed.	A total of 646634 Tons of material has been backfilled in 2017-18 and cumulative quantity backfilled -23907597MT. Lessee has planted about 340349 plants over an area of 121.94ha to improve aesthetic beauty around the mines area.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Lessee has filled up Monthly and Annual return on time,	Monthly & Annual returns of 2017-18 was filled by the lessee.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	In Part-I of the Annual Return, for the year 2017-18, information regarding Mining Engineer and Geologist were to be submitted under item no. 8 & 9. Sri vidya Sagar singh as mining engineer and Sri Tathagat das as Geologist.	It was observed that Sri Vidya Sagar Sing was there as Mining Engineer and Sri O N Tiwari as Geologist.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use pattern as furnished in AR2017-18 is as follows. Area already exploited:240.68ha Area covered under current working- 6.010ha Area reclaimed and Rehabilitated- 234.670ha Area used for PMCP-2.910ha.	Data furnished in AR2017-18 seems to be in order.
9d	Scrutiny of Annual return on afforestation	1400 platation done within Mining Lease area.	Data seems to be correct.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	There is no reject generation.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Production of ROM during 2018-19- 236504,OS- 1499.530 ,CS- 277.450 MT	Production of ROM during 2018-19-236504,OS- 1499.530 ,CS-277.450 MT,seems to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	It is captive mine,cost per tonne- Rs 948.0/-	It is captive mine,cost per tonne- Rs 948.0/-
9h	Scrutiny of Annual return on fixed assets	The value of Fixed Assets of the lessee was shown in Part-IIA of the Annual Return for the year 2017-18 under Capital Structure.	The value of Fixed Assets of the lessee was shown as 00- in the Annual Return of 2017-18 under Part-IIA of the Capital Structure. Depreciation on fixed assets Rs 17258932/-

9k Scrutiny of Annual return on mining machineries In Part-V, Sec 5/6/8/9 of the Annual Return, 2017-18, the machineries used were as given below:-  
 i. Shovel: 3 nos.(0.9 cu,m + 1.50 cu.m + 1.7 cu.m);  
 ii. Crusher : 2 nos. (120.0 T/H + 60 T/H);  
 iii. Dumper: 3 nos (25 MT);  
 iv. Dumper: 1 nos. (32 MT);  
 v. Air Compressor: 01 nos. (365CUM/MN).

The machineries used at the time of inspection are:-  
 i. Shovel: 2 nos.(0.9 cu,m + 1.7 cu.m);  
 ii. Crusher : 2 nos. (120.0 T/H + 60 T/H);  
 iii. Dumper: 3 nos (25 MT);  
 iv. Dumper: 1 nos. (32 MT);  
 v. Air Compressor: 01 nos. (365CUM/MN).

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**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 :**

**(B K SINGH)**

Indian Bureau of Mines