

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

**MCDR INSPECTION REPORT**

**Nagpur regional office**

**Mine file No :** MAH/NAG/MN-321/NGP

**Mine code :** 40MSH14053

- (i) Name of the Inspecting : **M017** ) **ASHISH MISHRA**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Sachin Ramteke, Mining Engineer  
Official with  
Designation
- (iv) Date of Inspection : 20/01/2020
- (v) Prev.inspection date : 20/08/2019

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **PARSODA (53.75 HA)**
- (b) **Registration NO.** : **IBM/5711/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :  
State : MAHARASHTRA  
District : NAGPUR  
Village :  
Taluka :  
Post office :  
Pin Code :  
FAX No. :  
E-mail : mm.ms@moil.nic.in  
Phone : 07114-202127
- (f) Police Station : RAMTEK
- (g) First opening date : 01/03/2019
- (h) Weekly day of rest : THU
2. Address for : PARSODA MANGANESE MINE  
correspondance AT & PO- KHAIRI BIJEWADA, TAH- RAMTEK  
DISTT.- NAGPUR (MAHARASHTRA)
3. (a) Lease Number :  
(b) Lease area :  
(c) Period of lease :  
(d) Date of Expiry :
4. Mineral worked : MANGANESE ORE Main

## 5. Name and Address of the

Lessee : M/S MOIL LIMITED  
MOIL BHAWAN, 1-A, KATOL  
ROAD CHHAONI NAGPUR NAGPUR  
MAHARASHTRA  
Phone:  
FAX :

Owner : DEEPANKAR SHOME  
1-A, MOIL BHAVAN KATOL ROAD  
NAGPUR NAGPUR MAHARASHTRA  
Phone:  
FAX :

Agent : A. V. MASADE  
MUNSAR MINE RAMTEK NAGPUR  
NAGPUR MAHARASHTRA  
Phone:  
FAX :

6. Date of approval of Mining : Fresh under rule 22 MCR1960 06/07/2009  
Plan/Scheme of Mining

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Borehole proposals for 1st, 2nd and 3rd year as per the approved mining plan were 3, 4, 3 boreholes respectively with meterage of 225 m, 300 m, 225 m.	In 2018-19, lessee has submitted Form I for commencement of drilling operations for 7 boreholes with total meterage of 800 m drilling out of which 2 boreholes at 50 m X 50 m grid were completed with 250 m drilling. Alongwith this, 4 trenches of 20 m were made to prove the strike and thickness of the orezone.	Lease deed was executed on 22.04.2016 and lease period is 22.04.2016 to 21.04.2066 as per the executed lease deed. Notice of opening was submitted in this office vide lessee's letter dated 20.02.2019 with proposed date of opening as 01.03.2019. Thus, the mine has operated for only 01.03.2019 to 31.03.2019 during the year under reference for the report (2018-19).
1b	Exploration over lease area for geological axis 1 or 2	G-1, G-2 and G-3	Mining Plan was approved for the area on 06/07/2009 and as per approved mining plan reserves/resources were considered under G-1, G-2 and G-3 axis of UNFC. Presently, detailed exploration of potentially mineralized area in underway after which the area shall be re-classified.	GSI has explored the area earlier through 17 boreholes with 2060.95 m drilling and has proved 2 Manganese Bands in the Area: Western Band: Strike Length-75 m upto 248 mRL with average thickness of 2.34 m & Eastern Band: Strike Length- 150 m upto 192 mRL with average thickness of 3.24 m
1c	Exploration Agencies and Expenditure in lakh rupees during the year	MOIL Ltd.	MOIL Ltd. with approximate expenditure of Rs 6 Lakhs	

1d	Balance area to be explored to bring Geological axis in 1 or 2	Out of 53.75 ha lease area, 12 ha area has been proved for mineralization. For rest of the area, exploration is proposed to cover entire area under G-1 and G-2	Detailed Exploration of the area in compliance to rule 12 of MCDR'17 is underway for proving entire area upto G-1 level.	
1e	Balance reserve as on 01/04/20	Balance reserves/resources as on 01.04.2019 is given under actual work details.	111-180065 T 122-140569 T 333-201262 T	
1f	General remarks of inspecting officers on geology, exploration etc			Geologically, the area has been proved by GSI for having two Manganese bands located in Western and Eastern part in between grids E16800 to E17300 and N12600 to N13400. Average grade of these bands are 45% Mn and 38.39% Mn respectively. Apart from this, pits have exposures of float ore also which is under exploitation. Detailed Exploration is going on in the area and lessee has submitted Form I for drilling of 7 boreholes in the period January'19 to March'19 out of which 2 are completed.

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Development :

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Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed development is in form of extension of existing old pit in the area at grid interval E16800 to E17100 & N13100 to N13400	Development has been done as per the proposals and existing pit was extended to exploit float ore occurring in that area.	As actual exploitation started in 3rd year of the Mining Plan proposal period and actual number of days mine has worked remained only 11 for the year, development is lagging from the proposals.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, Benches in Soil, overburden and minerals are proposed to be kept separate.	As per the proposals, Overburden was removed keeping one separate bench of approximately 3 m height and float ore was excavated with one bench of 2 m height.	Top soil was not available in the excavation area. Hence, no top soil was removed during the year.
2c	Stripping ratio or ore to OB ratio	For first year of working, proposed Ore to OB ratio is around 1:0.8	Actual ore to OB ratio during 2018-19 was 1:0.14	The ratio was quite low due to exploitation of float ore only during 11 working days in the year.
2d	Quantity of topsoil generation in m3	Proposed for first Working year: 9750 cum	Actual generation during 2018-19: Nil	
2e	Quantity of overburden generation in m3	Proposed for first Working Year: 37267 cum	Actual generation during the year 2018-19: 845 cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Working has just started in the area and is being done as per the proposals. The deposit in the area is having two Manganese Bands- Eastern and Western. Apart from this, float ore is exposed in the old pits available in the area. Presently, only float ore zone has been worked. Further Development of pit may be decided on the basis of outcome of the present exploration schedule.

## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit.	One pit located at E17000 to E17100 and N13000 to N13100	
3b	Quantity of ROM mineral production proposed	ROM proposed for first working year: 46666 T	Actual ROM production during 2018-19: 5817 T	
3c	Recovery of sailable/usable mineral from ROM production	Recovery proposed was 60% of ROM	Recovery remained 100% of ROM	Entire ROM was sorted into two grades - below 25% and 25% to 35% Mn and both the grades were readily saleable.
3d	Quantity of mineral reject generation	In the first year of working: 18666 T	Actual in the year 2018-19: Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Grade of the Mineral rejects & Threshold value not specified in the Mining Plan. As on date threshold value is +10% Mn	Actual generation is Nil, hence, not applicable.	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sorting within the lease area	Manual sorting within the lease area	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals.	Nil	

3j	Provision of drilling and blasting in mineral benches	Yes, drilling is proposed through 3 Nos. of 110 mm dia and 6 Nos. of 32 mm dia drilling machines. Blasting is proposed by using explosived like Indomide and accessories like NONEL and ED.	No drilling and blasting as only float ore working was there and ripper/excavator was used. Also, permission for carrying out blasting in the area is yet to be obtained.	
3k	Provision of mining machineries in mineral benches	Yes, deployment of 1 Hydraulic Excavator with 0.9-3.2 cum capacity and around 5 Nos. of Dumpers alongwith other auxilliary equipments like Water Sprinkler, Dozer etc. is proposed.	1 Excavator (backhoe) with 0.9-1 cum bucket capacity (as and when required) and 1 tipper was deployed in the mine.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed bench height for working is 6 m as per the occurrence of orebody	Bench height is around 3 m.	Presently working is confined in float ore zone only. Hence, bench height is suitable for exploitation of complete thickness of ore zone.
3m	Total area covered under excavation/pits	Total Area covered under Excavation/Pits: Existing Old pits area-1.75 ha Additional Area requirements during the 5 years Mining Plan Period: 3.50 ha Total: 5.25 ha	Additional area utilized: 0.18 ha	

3n	Ore to OB ratio for the pit/mine during the year.	For first year of working, proposed Ore to OB ratio is around 1:0.8	Actual ore to OB ratio during 2018-19 was 1:0.14	
3o	Total area put in use under different heads at the end of year	Total Area put to use under different heads is given in the actual work details.	Area under: Excavation/Pits- 1.93 ha Disposal of waste- 0.072 ha Occupies by Plants/Buildings/Infrastructure and Roads- 0.020 ha Sedimentation Tank- 0.01 ha	
3p	Production of ROM mineral during the last five year period as applicable	Not applicable as it is a fresh mine	Not applicable	
3q	General remarks of inspecting officers on method of mining etc.			Method of mining is semi-mechanised that is suitable for present level of working (float ore exploitation). Average daily number of persons employed in the mine remained 22.6 for the area as working is on small scale only and manual sorting of excavated float ore has been done.

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Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes, separate stacking of top soil and mineral rejects alongwith separate dumping of waste/overburden is proposed in the mining plan.	No top soil was excavated. ROM generated has been graded into saleable grades and hence, no mineral rejects have been generated. Generated Overburden has been dumped as per the proposals.	



4b	Location of topsoil, OB and mineral reject dumps	Top Soil: One stack proposed in between E17200 to E17400 and N13100 to N13200 (NE part of the lease) Overburden: One dump is proposed at E16800 to E17000 and N12600 to N12900 (Southern part of the lease) Mineral rejects: One stack is proposed at E16600 to E16800 and N12800 to N13000 (SW part of the lease)	No top soil or Mineral Rejects generated. Overburden/Waste Dump is located at E16900 to E17000 and N12850 to N12900
4c	Number of dumps within lease area and outside of lease area	One waste dump is proposed within the lease area in the Southern part of the lease area.	One waste dump in southern part within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumping is proposed in the Footwall side of the ore body.	Dumping has been done in the footwall side.
4e	Number of active and alive dumps.	One waste dump	One waste dump
4f	Number of dead dumps.	No such proposals	Nil
4g	Number of dumps established.	No such proposals	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drains with 200 m and retaining wall with 100 m length are proposed to be constructed at the toe of the dump.	Garland drain construction has been started after which retaining wall shall be constructed along the toe of the dump.

4i	Length of Retaining wall or garland drain all along dumps	Garland Drain: 200 m & Retaining Wall: 100 m	Garland Drain: approximately 20 m & Retaining Wall: NIL for 2018-19	As the mine has worked for only 11 days and started its operations in March'2019, construction of protective measures is underway.
4j	Number of settling ponds	No such proposals	Though there were no proposals, One settling tank with 3 compartments having dimensions 10 m L X 4 m W X 2 m D is being constructed to check and arrest siltation in the mine water prior to discharge.	
4k	Specific comments of inspecting officer on waste dump management			Waste generated till date has been dumped as per the proposals. Garland drains are being constructed along the toe of the dump after which retaining wall shall be erected to avoid any washoff. Lessee has also started construction of one settling tank to arrest the siltation in discharged water from the lease area. Hence, overall waste dump management in the lease area is satisfactory.

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Solid Waste Management - Backfilling:

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Sl.No.	Item	Proposals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No such proposals	Nil	12 ha area proved for mineralisation shall be exploited till conceptual stage and shall be converted into water reservoir. No proposals for backfilling has been incorporated till conceptual period.
5b	Area under backfilling of mined out area	No such proposals	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposals	Nil	Soil is proposed to be excavated and stacked temporarily which shall be utilized for plantation work as and when required for green belt or dump plantations. No top soil utilization is proposed or to be carried out for backfilling plantation.
5d	Total area fully reclaimed and rehabilitated	No such proposals	Nil	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	As there are no backfilling proposals, no specific comments to offer. Based on present level of exploration, exploited area is proposed to be converted into water reservoir at conceptual stage. The closure plan may get modified after the results of ongoing exploration program shall be analysed. In future, mining may be done by undergorund methods also, depending upon the outcome of exploration and existence of ore body in the area.
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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).	Annual report on PMCP is required to be submitted before 1st July every year for preceding year as per Rule 26(2) of MCDR' 2017	Annual Report has been submitted by the lessee.	

6b	Area available for rehabilitation (ha) .	Waste land available in the non-mining zone shall be rehabilitated through plantation., however, exact area & its demarcation can be decided only after the completion of proposed exploration program.	Nil working area is available for rehabilitation, as mine is a fresh mine where operation have commenced in the month of March'19. As per the proposals, non-mining zone of 7.5 m is available for green belt development. Further decisions to be made after completion of exploration being carried out in the area to clearly identify the mineralized zone.	
6c	afforestation done (ha).	Proposals for first year of operation: 50 saplings over 0.05 ha area	Nil, as mine has worked for only 11 days and mining operations have commenced in the month of March'19	As on date of inspection, 2000 saplings(2019-20) have been planted in the area in 7.5 m non-mining zone in southern part of the lease area as well as in SW part (nonmineralized) of the lease area covering approximately 0.5 ha area.
6d	No. of saplings planted during the year	50 Saplings were proposed to be planted	Nil	As on date of inspection, 2000 saplings (2019-20) have been planted in the area in 7.5 m non-mining zone in southern part of the lease area as well as in SW part (non-mineralized) of the lease area covering approximately 0.5 ha area.

6e	Cumulative no .of plants	In the first year of operation: 50 saplings Till 2018-19 as per the approved Mining Plan and date of execution of lease deed: 150 saplings	Nil upto 2018-19	As on date of inspection: 2000 saplings (2019-20)
6f	Any other method of rehabilitation	No such proposals	Nil	
6g	Cost incurred on watch and care during the year	Total cost to be incurred in watch and care: Rs 4.45 Lakhs	Actual cost incurred: Nil	Monitoring of environmental parameters, plantation, construction of garland drains and retaining walls etc. is under process which are to be taken into account in the year 2019-20.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No such proposals	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No such proposals	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No such proposals	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposals till conceptual stage. After complete exhaustion of mineral proved in the lease area, 12.0 ha area is proposed to be converted into water reservoir.	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposals	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Afforestation over 7.5 m non-mining zone is proposed for first working year with 50 saplings on 0.05 ha area. As per the approved mining plan and date of execution of the lease deed, 2018-19 is 3rd year of the mining plan and upto 3rd year, proposals are for 150 saplings over 0.15 ha area.	Nil as on 2018-19	As on date of inspection, 2000 saplings (2019-20) have been planted in the area in 7.5 m non-mining zone in southern part of the lease area as well as in SW part (non-mineralized) of the lease area covering approximately 0.5 ha area.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.05 ha for first year of working. As per the approved mining plan and date of execution, upto 2018-19 is 0.15 ha	Nil upto 2018-19	

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Green Belt plantation	Nil achievement till 2018-19	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes, environment monitoring of various environmental parameters is proposed for core zone.	Nil	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Mine has started in the month of March'19 and closure operations are yet to start. Construction of garland drain is in process after which, retaining wall shall be erected along the toe of the dump as a protective measure to check wash-off. Plantation and environment monitoring is yet to start but is in process. One settling tank is being constructed.

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#### Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting of ROM within lease area and dispatch	As per the proposals	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting of ROM	Manual sorting of ROM (float ore)	

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7c	Different grade of mineral sorted out at mines.	Average grade of two Manganese Bands occurring in the lease area are 45% Mn and 38.39% Mn. Apart from this float ore is occurring in the lease area which shall be graded and dispatched as per user demand.	Only Float ore was worked and grades sorted out at mines are: (i) Below 25% Mn (ii) 25% to below 35% Mn
7d	Any beneficiation process at mines	No such proposals	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Presently only float ore has been exploited. In this zone, complete available mineral has been recovered, blended and graded into readily saleable grade. Thus, mineral conservation aspects are satisfactory. Further remarks can be made only when orebody is explored in detail and grade of ore is available; and insitu exploitation of orebody is commenced.

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Environment :

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Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Yes, it is proposed to separately remove Top soil and stack temporarily. Utilization of top soil shall be done from these stacks as and when required.	Nil
8b	Concurrent use or storage of topsoil	It is proposed to separately remove Top soil and stack temporarily. Utilization of top soil shall be done from these stacks as and when required.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes, separate dumps/stacks are proposed for overburden/Waste and rejects.	No mineral rejects were generated, only dump available is waste/overburden dump.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals. Waste land is proposed for green belt plantation.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes, baseline information has been given in the mining plan. Around 3.0 ha area towards west and south is having natural plantation. Additional plantation proposed is 50 saplings per year over an area of 0.05 ha.	Additional Plantation done till 2018-19: Nil	
8g	Survival rate	80% survival rate	Nil as no plantation carried out	
8h	Water sprinkling on roads to control airborne dust	Yes, water tanker of 5 kL is proposed for water sprinkling.	Water sprinkling has been done by using small water tanker over the working area from adjacent mine of the same lessee.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the area is satisfactory as working has commenced over very small scale. 3.0 ha of natural plantation exist in the area in South and West part of the lease area. Additional plantation is being done and as on the date of inspection 2000 saplings were planted in South and SW part of the lease area.

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Compliance of Rule 45:

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Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Annual Returns are required to be submitted online on or before 30th June of every year for preceding year Monthly returns are required to be submitted online on or before 10th of every month for preceding month	AR submitted online upto 2018-19 MR submitted online upto Dec'2019
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: SHRI S BARDHAN Geologist: SHRI D MOHANTA Manager: SHRI SACHIN B RAMTEKE	Complete and correct information furnished.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under - Excavation/Pit s: 0.18 ha Used for waste disposal: 0.072 ha Occupied by plant, buildings, residential, welfare buildings and roads: 0.02 ha Other Purposes (settling tank): 0.01 ha	Area details have been furnished correctly apart from the fact that pit area prior to start of mining operations was not considered. It was advised to get the same corrected by getting the return referred back.
9d	Scrutiny of Annual return on afforestation	Nil	Nil plantation was carried out in the year 2018-19. Hence, correct information furnished.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	As complete ROM was blended and sorted into saleable grades, hence Mineral Rejects generation was nil. Therefore, correct information furnished.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening and closing stocks- Nil, Production- 5817 T Graded Ore: (a) Below 25% Mn: Opening Stock- 0 T, Production- 1310 T, Dispatch- 0 T, Closing Stock- 1310 T (b) 25% to below 35% Mn: Opening Stock- 0 T, Production- 4507 T, Dispatch- 0 T, Closing Stock- 4507 T	Correct information furnished and it is matching with the opening stocks as furnished for the respective grades in the Monthly return filed for Apr'19.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: Nil Ex-mine price: ASP for the respective grades as no sale has occurred Production Cost: Rs 251.96/- per T	Production cost appeared quite low, but it is due to: (i) working was for only float deposit, (ii) no dispatch occurred (hence Royalty, DMF, NMET and taxes- Nil), (iii) being a fresh mine, depreciation was Nil
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets (in Rs) 58459578/-. Apart from this, details for capital structure was given for Land.	Complete and correct information furnished.
9k	Scrutiny of Annual return on mining machineries	1 tipper having 4 cum capacity	Backhoe was used when required and was borrowed from adjacent contiguous mine (Munsar) of the same lessee. One tipper was deployed in the mine.

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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 :**

**(ASHISH MISHRA)**

Indian Bureau of Mines