

**MCDR INSPECTION REPORT**

1) Name of Inspecting officer:	Ibrahim Sharief
2) Designation	DCOM
3) Accompanying mine official with designation	Shri D Pantawane, Mine Manager, Shri S Pani Geologist.
4) Date of Inspection	10.06.2023

**Part-I: General**

S. N.	Particulars	Details
1	Name of the Mine	Tirodi Manganese Mines
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest: Nil Non-Forest: 254.593 Ha
3	Mine code	40MPR01017
4	IBM Registration Number under rule 45 of MCDR,1988	IBM/5711/2011
5	Name of the Lessee, Address, Phone, email and fax number	M/s. Moil Limited. Moil Bhavan,-A, Katol Road,, Nagpur - 440013
6	Village	Tirodi
7	Taluka/Mandal	Katangi
8	District	Balaghat
9	Pin code	481449
10	State	Madhya Pradesh
11	Post Office	Tirodi
12	Nearest Police Station	Tirodi
13	Nearest Railway Station	Balaghat
14	Date of Grant of Mining Lease	01/07/1962
15	Date of Execution	01/07/1962
16	Date of opening of Mine	22-JUL-1962, 20 years, 30.06.1982
17	Date of First Renewal, if applicable and its period & expiry	04/10/1983, 20 years, 30.06.2002
18	Date of Second Renewal, if applicable and its period & expiry	25/03/2011, 20 years, 30.06.2022
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	-
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri MM Abdulla, MOIL LTD,MOIL Bhawan A-I Katol Road Nagpur-13 Date of Appointment: 19.10.2018
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Rajesh.Kumar Singh
22	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Manish Dhoke Date of Appointment: 30.05.2024
23	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri Nishad Nikose
24	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Yes, Mining Engineer and Geologist are appointed under rule 55 of MCDR 2017, Shri Subranshu Pani, geologist

25	Date of Approval of Mine Plan/Modified Mine Plan with five- year period and specific condition in approval letter, if any.	12-NOV-2003 and 23-DEC-2015
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	28-MAR-2008, 08-AUG-2017, 25-MAR-2019.
27	Mineral(s) granted in lease and approved for Mining	Manganese
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanized, Others or Manual)	Mechanized
30	Captive/Non-Captive	Non Captive

### Details about Mining Plan/ Mining Scheme

a) Letter No. and date of approval of mining plan	:	MP/Balaghat/Manganese/RMP-79/2021-22 dated 11.03.2022
b) Letter No. and date of approval of mining scheme.	:	NA
c) Condition while approving the MP/ MS/ modification	:	-
d) Period of mining plan/ mining scheme in force	:	01.04.2022 to 31.03.2026

### PART III-MCDR Report details.

1. **Scientific Mining:** Compliance of proposals of approved mining plan/scheme of mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

#### Exploration

S.N.	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	35	35	
1b	Exploration over lease area for Geological axis 1 or 2.	1500 m drilling	4126 m drilling.	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	lessee	Lessee	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	35.2 Ha	35.2 Ha area explored in G1 scale as per approved proposal	
1e	Balance reserves as on 01.04.2024	-	111- 92756 T 122- 266115 T Total :358871 T	
1f	General remarks of Inspecting officer on geology, exploration etc.	Area belongs to Sauser super group, sitasaongi and Manser formations. Mn ore occurs in Silicate form. Exploration is being carried out as per approved proposals.		

#### 2. Development

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	Yes	Yes	
2b	Separate benches in topsoil overburden and mineral (Rule 13)	Over burden-4, Ore -1	Over burden-4, Ore 1	
2c	Stripping ratio or ore to OB ratio	1:16	1:16	

2d	Quantity of Topsoil generation in m <sup>3</sup>	Nil	Nil	no top soil generated during the RY
2e	Quantity of overburden generation in m <sup>3</sup>	150000	157831	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Development is being carried out as proposed		

### **3. Exploitation**

S. N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	Four pits & 4 Dumps	Four pits & 4 Dumps	
3b	Quantity of ROM mineral production proposed	109000 T	108831 T	
3c	Recovery of Salable/usable mineral from ROM production	100% in insitue and 65% in dumps	100% in insitue and 65% in dumps	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral reject generation and threshold value declared	Threshold value - less than 10 % Mn	Threshold value - less than 10 % Mn	
3f	Quantity of sub-grade mineral generation	No proposal	Nil	
3g	Grade of sub-grade mineral generation	Nil	Nil	
3h	Manual/Mechanized method adopted for segregation from ROM	Manual	Manual	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No such study proposed	NA	
3j	Provision of drilling & blasting in mineral benches	Deep hole drilling and Blasting is proposed	Yes Deep hole drilling and Blasting is being practiced	
3k	Provision of mining machineries in mineral benches	Yes, Shovel-(2.5-0.920 m <sup>3</sup> -3 No., Blast Hole Drill (Elec.)-5 No., DozeR,-1 No., Dumper-35 T- 10 No., Pump-4 no.	Yes said machineries are deployed	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	7.5 mtrs bench height is suitable for the proposed mechanization	Yes, 7.5 mtrs bench height is suitable	
3m	Total area covered under excavation /pits (Ha.)	30.96	30.96 Ha	
3n	Ore to OB ratio for the pit/mine during the year	1: 16	1:16	
3o	Total area put in use under different heads at the end of year	157.92 Ha	157.92 Ha	
3p	Production of ROM mineral during last five-years period, as Applicable in Tonnes	2018-19: 105500 2019-20: 107000 2020-21: 109000 2021-22: 109000 2022-23 109000	2018-19: 106900 2019-20: 108801 2020-21: 106998 2021-22: 100739 2022-23: 108831	
3q	General remarks of inspecting officer on method of mining etc	Mining operations are being carried out with deep hole drilling & Blasting including Dump working is being carried out to recover ore.		

**4. Solid Waste Management-Dumping**

S.N.	Item	Proposals	Actual Work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 14, 36,37)	Yes, separate dumps for OB and mineral reject are to be dumped	Yes separate dumps for OB and Mineral reject are found dumped	
4b	Location of topsoil, OB & mineral reject dumps	OB- 21°41'30.93"N 79°43'21.45"E Mineral Reject- 21°41'34.27"N 79°43'22.18"E	As proposed	
4c	Number of Dumps within lease area and outside lease area	Within lease area- 6	Within lease area- 6	Active dump within the lease
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 14(4))	Out side UPL	Outside UPL	
4e	Number of Active & Alive dumps	6	6	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps established	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Not Proposed	Nil	
4i	Length of Retaining wall or garland drain all along dump	Not Proposed	Nil	
4j	Number of settling ponds	Not Proposed	Nil	
4k	Specific commends of inspecting officer on waste dump management	Waste dump management is done as proposed		

**5. Solid Waste Management-Backfilling:**

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Not Proposed	Nil	All the pits are active
5b	Area under backfilling of mined out area	Not Proposed	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36(2))	Not Proposed	Nil	In barrier zone/mine lease
5d	Total area fully reclaimed & rehabilitated (Ha)	Not Proposed	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	No area is matured for backfilling		

**6. Progressive Mine Closer Plan**

S.N.	Item	Proposals	Actual Work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 26(2).	Yes	Yes submitted with AR on time	
6b	Area available for rehabilitation (Ha)	Not Proposed	Nil	
6c	Afforestation done (ha)	Not Proposed	Nil	
6d	No. of saplings planted during the year	1000	10000	Carried out out

				side lease area
6e	Cumulative no. of plants	Not Proposed	360916	
6f	Any other specific method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch & care during the year	Not Proposed	Rs. 712000/-	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).	Nil	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings.	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	Not Proposed	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	Not Proposed	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Not Proposed	Nil	
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	Not Proposed	Nil	
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	Not Proposed	Nil	
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Not Proposed	Nil	
6p	Compliance of Environment monitoring (core zone & buffer zone)	Environment Monitoring proposed for core and buffer zone	Being done regularly, all the parameters are within the prescribed limit.	
6q	General remarks of inspecting officer on PMCP compliance & progressive closer operations	Plantation is being done to improve aesthetic beauty		

### **7. Mineral Conservation**

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	ROM produced is to be dispatched	ROM produced is being dispatched	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual	Manual method adopted	
7c	Different grade of mineral sort out at mine	Yes different grade above threshold value is being sorted and sized as per customer	Yes being done as proposed	

		requirement		
7d	Any beneficiation process at mines	Not Proposed	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Manual Soring and Sizing is carried out in lease area		

### **8. Environment**

S.N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule36)	Not Proposed	Nil	
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 37)	Yes separate dumps for Waste rock are to be maintained	Yes maintained	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44)	Yes	Yes additional plantation of 10000 done	Out side lease area
8g	Survival rate	Not Proposed	85%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	Plantation is being carried out to improve aesthetic beauty		

### **9. Compliance of Rule 45**

S.N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	Monthly Returns & Annual Returns are submitted in time	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: Shri Deependra Pantawane Geologist: Shri Subhransu Pani M.E: Shri Nishad Nikose	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited and abandoned by opencast (O-C) mining- 19.7 Ha, Covered under current working- 30.96 Ha. Reclaimed-rehabilitated- 0.85 Used for waste disposal- 29.32 Ha. Occupied by plant, buildings, residential, welfare buildings and roads- 32.990 Ha. Used for any other purpose (settling Pond, bund mine, road)- 36.86 Ha.	
9d	Scrutiny of Annual return on afforestation	Actual- 1000Nos Survival rate- 90%	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Nil	

9f	Scrutiny of Annual return on ROM stock and/or grade ore	ROM :Nil < 25% Mn- :7468.22 T 25 to <35% Mn 12530 T 35 to <46% Mn 3981.17	
9g	Scrutiny of Annual return on sale value, Ex.Mine price & production costs	Ex Mine Price (in Rs.) < 25% Mn- :3124.96 25 to <35% Mn 6798.19 35 to <46% Mn 13730.12 Cost of production- 6705,57	
9i	Scrutiny of Annual return on Fixed assets	Fixed assets as per Annual Returns ((₹234168329)	
9k	Scrutiny of Annual return on mining Machineries	Drill Machine- 01 Excavator- 03 Dumper- 20 Water tanker-01 Explosive Van- 01	

Details of violations observed during current inspection and compliance position of violation pointed out

Nil

Date:

Name : Ibrahim Sharief

Designation: Deputy Controller of Mines