

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON-MN/KJR/MCDR-83/BBS

**Mine code :** 30ORI08104

- (i) Name of the Inspecting : **DEY** ) **NARENDRA MOHAN DEY**  
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : SHRI C K RATHA, MINES MANAGER, SHRI D N PATNAIK, REPR  
Official with  
Designation
- (iv) Date of Inspection : 14/07/2014
- (v) Prev.inspection date : 18/12/2012

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **DALPAHAR (4.84H)**
- (b) **Registration NO.** : **IBM / 476 / 2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : DALPAHAR
- Taluka : BARBIL
- Post office : VICHAKUNDI
- Pin Code : 758035
- FAX No. : 06767-273089
- E-mail : rbdas@yahoo.in
- Phone : 0671-2617676
- (f) Police Station :
- (g) First opening date : 07/07/2010
- (h) Weekly day of rest :
2. Address for : PO- DALPAHAR  
correspondance DISTT- KEONJHAR  
ORISSA
3. (a) Lease Number : ORI0886
- (b) Lease area : 4.84
- (c) Period of lease : 30
- (d) Date of Expiry : 06/01/2040
4. Mineral worked : MANGANESE ORE Associated  
IRON ORE Associated

5. Name and Address of the

Lessee : SRI R.B. DAS  
KUNDRUPANI IRON-MN MINE  
DIST: KEONJHAR ORISSA  
KEONJHAR ORISSA  
Phone:  
FAX :

Owner : R.B.DAS  
S.C.NAYAK (COMPLEX) AT/PO:  
JODA KEONJHAR ORISSA  
Phone:  
FAX :

6. Date of approval of Mining : Modif.of approved Mining Plan 23/05/2011  
Plan/Scheme of Mining

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	AS PER MODIFICATION OF MINING PLAN APPROVED ON 23.05.2011 FOR THE PERIOD 2011-12 TO 2014-15 , THE PROPOSAL OF EXPLORATION FOR THE YEAR 2013-14 WAS NIL	NIL	
1b	Exploration over lease area for geological axis 1 or 2	PROPOSAL FOR 2013-14 : NIL	2013-14: NIL HOWEVER 6 BH WERE DRILLED DURING 2014-15 WITH 100 M INTERVAL, METERAGE DRILLED 120 M, AREA COVERED WHOLE LEASE AREA 4.84 HA. EXPLORATION CARRIED OUT IN THE WHOLE LEASE AREA 4.840 HA UNDER UNFC NORMS AS FOLLOWS: G1 LEVEL : NIL, G2 LEVEL: 4.840 HA, G3 LEVEL :NIL	
1c	Exploration Agencies and Expenditure in lakh rupees during the year			EXPENDITURE INCURRED IN VARIOUS PROSPECTING OPERATIONS WAS Rs.467712 /- FOR DRILLING + Rs.118650 /- FOR SAMPLING & CHEMICAL ANALYSIS = Rs.586312 /- IN ALL TOTAL

1d	Balance area to be explored to bring Geological axis in 1 or 2	AS PER MODIFICATION OF MINING PLAN APPROVED ON 23.05.2011 FOR THE PERIOD 2011-12 TO 2014-15 , NO PROPOSAL FOR EXPLORATION	2013-14 : NIL HOWEVER 6 BH WERE DRILLED DURING 2014-15.	AS PER SCHEME OF MINING APPROVED ON 30.07.2015 FOR THE PERIOD 2015-16 TO 2019-20, THERE IS PROPOSAL TO DRILL 18 BH IN THE ENTIRE LEASE TO KNOW THE DEPTH-WARD CONTINUITY OF ORE , CONVERT RESOURCE / RESERVE FROM G2 TO G1.
1e	Balance reserve as on 01/04/20		RESERVES ESTIMATED AS PER SCHEME OF MINING APPROVED ON 30.07.2015 FOR THE PERIOD 2015-16 TO 2019-20 UNDER UNFC NORMS AS 25.12.2014 AS FOLLOWS: IRON : 122 : 68310 MT, 222: 154170 MT MANGANESE: 122: 126204 MT, 222: 106314 MT	
1f	General remarks of inspecting officers on geology, exploration etc			TOTAL LEASE AREA 4.84 HA HAS ALREADY BEEN EXPLORED UNDER G2 LEVEL AS PER UNFC. TO KNOW THE DEPTH-WARD CONTINUITY OF ORE, CONVERT RESOURCE / RESERVE FROM G2 TO G1, EXPLORATION PROPOSAL TO DRILL 18 BH IN THE ENTIRE LEASE AREA DURING 2015-16 (8 BH) AND 2016-17( 10 BH) AT 50 M TO 100 M INTERVAL.

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Development :

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Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	QUARRY-2 AND QUARRY-3 FOR IRON LOCATED END OF LEASE QUARRY -1 FOR MANGANESE LOCATED MIDDLE OF THE LEASE	WORKED AS PER PROPOSAL
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	NO BENCH IN TOP SOIL & OB BENCHES ON ORE : 3	BENCHES IN ORE : 3
2c	Stripping ratio or ore to OB ratio	IRON ORE : 1 : 0.30 MANGANESE: 1 : 2.37	IRON ORE : 1 : 0.30 MANGANESE : 1 : 2.37
2d	Quantity of topsoil generation in m3	NO PROPOSAL	NIL
2e	Quantity of overburden generation in m3	37165 CUM	5000 CUM
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		DEVELOPMENT OF PIT OF IRON & MN WAS IN LOWER SIDE DUE TO NON-AVAILABILITY OF SPACE FOR WASTE DUMPING.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	IRON QUARRRY - 2 & 3 AND MANGANESE QUARRY -1	WORKED AS PROPOSED	
3b	Quantity of ROM mineral production proposed	2013-14: IRON : 120014 MT & MANGANESE: 40026 MT	2013-14: IRON : 26460 MT, & MANGANESE: 10227 MT	
3h	Manual / Mechanised method adopted for segregating from ROM	MANUAL FOR MANGANESE MANUAL & MECHANISED FOR IRON ORE	AS PROPOSED	

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NO BENEFICIATION STUDY PROPOSED, DRY PROCESSING SUCH AS CRUSHING AND SCREENING PROPOSED TO UP-GRADE ROM IRON ORE TO SUIT THE USER REQUIREMENT	SUB-GRADE IRON ORE ( +45% FE TO -55% FE) / MINERAL REJECTS STACKED FOR SALE IN FUTURE BEFORE OR AFTER BLENDING UPON THE MARKET DEMAND. FINES GENERATED DURING CRUSHING AND SCREENING STACKED SEPARATELY AND DESPATCHED ON MARKET DEMAND . MANGANESE ORE LUMPS OF VARIOUS SIZES PREPARED MANUALLY WITH THE HELP OF HAMMER	
3k	Provision of mining machineries in mineral benches	BACK HOE ; 1 NO OF CAPACITY 0.9 CUM, DUMPER 2 NOS OF CAPACITY 10 TONNE, FRONT END LOADER : 1 NO OF CAPACITY 1.2 CUM	ENGAGED AS PROPOSED.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	NO OF OB BENCH : NIL, NO OF BENCHES IN ORE : 3, HEIGHT : 6 M WIDTH : 6 M	NO OF BENCHES IN ORE : 3, HEIGHT: 6 M, WIDTH : 6 M,	SUITABLE FOR METHOD OF MINING AS PROPOSED IN THE S O M.
3o	Total area put in use under different heads at the end of year		AREA PUT IN USE UNDER OPEN CAST WORKING : 3.221 HA, OCCUPIED BY ROAD ETC : 0.128 HA	
3p	Production of ROM mineral during the last five year period as applicable	2010-11 : 60165 MT, 2011-12: 144113 MT, 2012-13: 142380 MT, 2013-14: 120014 MT, 2014-15: 99068 MT	2010-11: 58355 MT, 2011-12: 49570 MT, 2012-13: 72965 MT, 2013-14: 26460 MT, 2014-15: 7455 MT	

3q	General remarks of inspecting officers on method of mining etc.	OTHER THAN FULLY MECHANISED METHOD AND INVOLVEMENT OF MANUAL OPERATION	OTHER THAN FULLY MECHANISED METHOD ON EIGHT HOURLY SHOFT BASIS DEPLOYING BACK-HOE, DUMPER, FRONT-END LOADER AND ALSO MANUALLY SIZING OF MANGANESE ORE LUMPS WITH THE HELP OF HAMMER.
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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)	NO TOP SOIL DUMPING, SEPARATE DUMPING OF OB & MINERAL REJECTS	SEPARATE DUMPING OF OB & MINERAL REJECTS	
4b	Location of topsoil, OB and mineral reject dumps	NO YOP SOIL DUMP OB DUMP IN SIDE LEASE AREA AT ITS NORTHERN END	OB / WASTE DUMP IN SIDE LEASE AREA AT ITS NORTHERN END , PROVED BARREN, OUT SIDE ULTIMATE PIT LIMIT.	
4c	Number of dumps within lease area and outside of lease area	3 DUMPS WITH IN LEASE AREA AND NO DUMP OUTSIDE LEASE AREA	NO DUMP OUT SIDE LEASE AREA WORKED AS PROPOSED.	
4g	Number of dumps established.	EXISTING DUMP : 3 PROPOSED DUMP : 2	WORKED AS PROPOSED	
4h	Whether Retaining wall or garland drain all along dumps are there.	YES	WORKED AS PROPOSED	
4j	Number of settling ponds	ONE	ONE	

4k	Specific comments of inspecting officer on waste dump management	RETAINING WALL, GARLAND DRAIN & SETTLING TANK HAVE BEEN MADE.
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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.	NO PROPOSAL	NO PART OR FULL EXTRACTION OF MINERAL	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NO PROPOSAL	NIL	MINERAL HAS NOT BEEN EXHAUSTED FROM THE MINE, SO NO BACK FILLING

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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).	YES	RECEIVED	
6d	No. of saplings planted during the year	180 SAPLINGS	200 SAPLINGS PLANTED	
6e	Cumulative no .of plants		1669 NO OF TREES OVER 0.281 HA AREA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	ENVIRONMENTAL MONITORING PROPOSED	ENVIRONMENTAL MONITORING ON WATER, AIR & NOISE ARE BEING CARRIED OUT	

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6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	1500 NO OF TREES HAVE BEEN PLANTED , RETAINING WALL, GARLAND DRAIN & SETTLING TANK CONSTRUCTED.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	2013-14: IRON : 120014 MT, MANGANESE: 40026 MT (ROM)	2013-14: IRON : 26460 MT, MANGANESE : 10227 MT (ROM) GRADE-WISE SORTING : IRON : LUMPS: BELOW 55% FE: 7402.950 MT, 55% TO - 58% FE: 2552.290 MT, 60% TO - 62% FE: 3973.290 MT, IRON : FINES: BELOW 55% FE: 8551.270 MT, MANGANESE: - 25% MN : 9849 MT, 25% TO -35% MN: 238 MT, 35% TO - 46% MN: 85 MT, DIOXIDE ORE: 51.230 MT.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	IRON ; MECHANICAL MANGANESE : MANUAL	IRON : MECHANICAL MANGANESE: MANUAL	
7c	Different grade of mineral sorted out at mines.	ALL GRADES	IRON ORE : -55% FE, 55 TO M-58% FE, 58 TO -60 % FE, 60 TO -62% FE, 62 TO -65% FE AND 65% FE & ABOVE MANGANESE : -25% MN, 25 TO -35% MN, 35 TO -46% MN, 46% MN & ABOVE AND DIOXIDE ORE.	

7d	Any beneficiation process at mines .	ONLY MOBILE SCREEN 150 TPH FOR SEPARATION OF IRON ORES INTO VARIOUS SIZES	RUN-OFF IRON ORE RAISED FROM THE MINE SCREEN ( 150 TPH) FOR SEPARATION OF IRON ORES INTO VARIOUS SIZES. MANGANESE ORE LUMPS OF VARIOUS SIZES PREPARED MANUALLY WITH THE HELP OF HAMMER.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			SUB-GRADE ORE (+45% FE TO -55% FE) / MINERAL REJECT STACKED SEPARATELY FOR SALE IN FUTURE BEFORE OR AFTER BLENDING DEPENDING UPON THE MARKET DEMAND .

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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NO PROPOSAL	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	2013-14: 37165 CUM OB / WASTE	2013-14: 5000 CUM OB / WASTE GENERATED	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)		THE ENTIRE ML AREA 4.84 HA IS IN RESERVE FOREST. ADDITIONAL PLANTATION DONE 1500 INSIDE MINING LEASE.	
8g	Survival rate		80%	
8h	Water sprinkling on roads to control airborne dust		WATER IS BEING SPRINKLED ON ROADS TO CONTROL AIRBORNE DUST.	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	THE ENTIRE ML AREA 4.84 HA IS IN RESERVE FOREST. THE AESTHETIC BEAUTY IN AND AROUND THE MINES AREA HAS BEEN MAINTAINED BY ADDITIONAL PLANTATION INSIDE LEASE.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	SUBMITTED	I HAVE INSPECTED THE MINE ON 14.07.2014. ANNUAL RETURN FOR THE YEAR 2013-14 HAS BEEN RECEIVED.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager		SHRI A P MOHANTY, MINING ENGINEER, SHRI C K RATH, MANAGER HAVE BEEN APPOINTED	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		AREA COVERED UNDER OPENCAST WORKING : 3.221 HA, OCCUPIED BY ROAD ETC : 0.128 HA.	
9d	Scrutiny of Annual return on afforestation		144 NOS	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM STOCK : IRON ORE : 1450MT, GRADE-WISE STOCK : IRONORE : -65% FE: 6401.280 MT, 55% TO -58% FE: 1613.760 MT, 58% TO -60% FE: 1705.350 MT, 60% TO -62% FE: 92.580 MT, 62% TO -65% FE: 322 MT, (LUMP) BELOW 55% FE: 50098.500 MT, 62% TO -65% FE: 80.520 MT, (FINES) ROM STOCK : MANGANESE ORE : NIL, GRADE-WISE STOCK : MANGANESE: BELOW 25% MN: 18645.210 MT, 25% TO -35% MN: 78.770 MT, 35% TO -46% MN: 482.600MT, DIOXIDE ORE : 35.540 MT.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	PRODUCTION COST Rs.1652.58 /-SALE IN DETAIL MENTIONED IN THE ANNUAL RETURN.
9h	Scrutiny of Annual return on fixed assets	FIXED ASSETS: Rs.782930 /-
9k	Scrutiny of Annual return on mining machineries	MSP FINTEC OF CAPACITY 100 TPH ONE NO. PC-210 OF CAPACITY 0.9 CUM ONE NO. TIPPER OF CAPACITY 10 MT ONE NO. LOADER OF CAPACITY 1.2 CUM ONE NO HYVA OF CAPACITY 20 MT ONE NO. WATER TANKER OF CAPACITY 8 KL ONE NO.

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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
Rule 13(1)	05/11/2014	14/07/2016	Rule 13(1)	05/11/2014	14/07/2016
Rule 27(4)	05/11/2014	14/07/2016	Rule 27(4)	05/11/2014	14/07/2016
Rule 29	05/11/2014	14/07/2016	Rule 29	05/11/2014	14/07/2016

**Date :**

**(NARENDRA MOHAN DEY)**

Indian Bureau of Mines