

INDIAN BUREAU OF MINES  
MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR inspection REPORT

Hyderabad regional office

Mine file No : AP/VZNR/Mn-127/Hyd

Mine code : 40APR20077

- (i) Name of the Inspecting : KQ07 ) SHAIVAL KARTIKEYA  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri Dharendra Kumar Sahu, Manager (Mines)  
Official with  
Designation
- (iv) Date of Inspection : 13-APR-22
- (v) Prev.inspection date : 26-SEP-20

PART-I : GENERAL INFORMATION

1. (a) Mine Name : RAJA RAJESWARI (4.477 HA)
- (b) Registration NO. :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address  
State : ANDHRA PRADESH  
District : VIZIANAGARAM  
Village : ITLAMAMIDIPALLI  
Taluka : RAMABHADRAPURAM  
Post office : RAMABHADRAPURAM  
Pin Code : 535579  
FAX No. :  
E-mail :  
Phone : 08944-202049
- (f) Police Station :
- (g) First opening date : 12-FEB-09
- (h) Weekly day of rest : SUN
2. Address for : R.G.P.KRISHNA RANGA RAO  
correspondance : RAJ MAHAL, 4-6/2, BOBBILI-535 558  
VIZIANAGARAM DIST.
3. (a) Lease Number : APR3105  
(b) Lease area : 4.48  
(c) Period of lease : 20  
(d) Date of Expiry : 07-JAN-29
4. Mineral worked : MANGANESE ORE Main

## 5. Name and Address of the

Lessee : M/S BARBIL MINING AND INDS. PVT.LTD  
BOBBILI VIZIANAGARAM  
DISTRICT VIZIANAGARAM  
ANDHRA PRADESH  
Phone:  
FAX :

Owner : R.G.P.KRISHNA RANGA RAO  
RAJ MAHAL, D.NO: 4-6/2  
BOBBILI (PO) & (M)  
VIZIANAGARAM VIZIANAGARAM  
ANDHRA PRADESH  
Phone:  
FAX :

Agent : N.K.SAHU  
VIZIANAGARAM VIZIANAGARAM  
ANDHRA PRADESH  
Phone: 08964-204111, 9494330870  
FAX :

## Mining Engineer

Name : D.K.SAHU, Full Time  
Qualification : B.TECH (Min. Engg)  
Appointment/ : 18-NOV-09  
Termination date

## Geologist

Name : N.VITTAL BABU, Full Time  
Qualification : M.Sc (GEOLOGY)  
Appointment/ : 29-JAN-11  
Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	23-MAY-06
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	20-JAN-12
	:	Mining Scheme rule 12 MCDR1988	01-AUG-14
	:	MP review under 17(1) MCR 2016	17-JAN-19

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	F.Y. 2019-20 to F.Y. 2020-21: 19 nos. of DTH boreholes with cumulate depth of 380 meters have been proposed.	F.Y. 2020-21: 19 nos. of DTH boreholes with cumulative depth of 223.0 meters have been drilled.	The entire mineralized zone has been explored under G1 level with 19 nos. of DTH boreholes.
1b	Exploration over lease area for geological axis 1 or 2	4.476 Ha. area proposed to be converted into G1 level.	4.476 Ha. area has been converted into G1 level.	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	MAPP Drilling & Exploration Private Limited. Expenditure: Rs. 4,04,000/-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	4.476 Ha. area proposed to be converted into G1 level.	4.476 Ha. area has been converted into G1 level.	-
1e	Balance reserve as on 01/04/20	Balance reserves as on 01.04.2022 Under (122): 48008.00 Metric Tonnes	Balance reserves as on 01.04.2022 Under (122): 43670.00 Metric Tonnes	Grade 24% to 30% Mn

1f	General remarks of inspecting officers on geology, exploration etc	The host rock of manganese in Vizianagram-Visakhapatnam belt are Khondalites and Charnokites belongs to Dharwar Supergroup of Precambrian age which forms a part of the Eastern Ghat Complex. The region forms a part of the plains that border the Eastern Ghat hill ranges and is occupied by the Khondalite group of rocks, namely garnet-sillimanite-graphite schists/gneisses, garnetiferous quartzites, calc gneisses/granulites, migmatites and pegmatites/quartz veins.	Garner occurs as intergranular grains and thin layers in these quartzites and they are black in colour, due to the disseminated manganese -oxide formed from the oxidation of garnets. Pockets of lithomarge and clay and locally chert nodules occurs between the manganese ore bodies and the enclosing quartzites.
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#### Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	F.Y. 2020-21: In between local co-ordinates N090 to N195 and E070 to E180	F.Y. 2020-21: In between local co-ordinates N090 to N195 and E070 to E180	No major deviation has been found.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Topsoil: NIL OB/Waste: NIL Mineral/Ore: 04 nos.	Topsoil: NIL OB/Waste: NIL Mineral/Ore: 04 nos.	-
2c	Stripping ratio or ore to OB ratio	1 : 2.0	1 : 0.41	-
2d	Quantity of topsoil generation in m3	No proposal.	NIL	-
2e	Quantity of overburden generation in m3	3383.80 CuM	5558.80 CuM	Excess OB/Waste generated due to systematic development.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development and production is being done through fully mechanized means.
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## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	01 no.	01 no.	-
3b	Quantity of ROM mineral production proposed	F.Y. 2020-21: Mn Ore: 14212.00 Metric Tonne F.Y. 2021-22: Mn Ore: 15212.00 Metric Tonne	F.Y. 2020-21: Mn Ore: 13432.00 Metric Tonne F.Y. 2021-22: Mn Ore: 6290.00 Metric Tonne	-
3c	Recovery of sailable/usable mineral from ROM production	60%	Approx 60%	-
3d	Quantity of mineral reject generation	No proposal.	NIL	-
3e	Grade of mineral rejects generation and threshold value declared.	No proposal.	NIL	-
3f	Quantity of sub grade mineral generation.	No proposal.	NIL	-
3g	Grade of sub grade mineral generation	No proposal.	NIL	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised screening for +10 mm size ore/mineral has been proposed.	Mechanised screening for +10 mm ore/mineral is being done.	-

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|----|---|---|--|---|
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Dry screening of ROM for recovery of salable ore has been proposed in the approved document.  | Dry screening of ROM for recovery of salable ore is being done.  | - |
| 3j | Provision of drilling and blasting in mineral benches   | Dia.: 100 mm<br>Spacing: 2.50 m<br>Burden: 2.0 m<br>Depth: 3.0 m<br>Explosive: Slurry and ANFO  | Dia.: 100 mm<br>Spacing: 2.50 m<br>Burden: 2.0 m<br>Depth: 3.0 m<br>Explosive: Slurry and ANFO   | - |
| 3k | Provision of mining machineries in mineral benches  | 1. 01 no. Drilling Machine with 100 mm bit dia.<br>2. 01 no. Loader with 1.5 CuM bucket size.<br>3. 04 nos. Tippers with 16 Tonnes capacity.<br>4. 02 nos. Excavators with 0.9 CuM bucket capacity.<br>5. 01 no. Rock Breaker with 200/300 HP capacity.<br>6. 01 no. Water Tanker with 5000 liters capacity.<br>7. 02 nos. Dewatering Pumps with 20/65 HP capacity. | 1. 01 no. Hydraulic Shovel with 0.802 CuM bucket capacity.<br>2. 01 no. Other HEM Machinery with 129.0 capacity.<br>3. 01 no. Front End Loader with 2.0 CuM bucket capacity.<br>4. 01 no. Drilling Machine with 100 mm bit dia.<br>5. 04 nos. Dumpers with 16.0 Tonnes capacity.<br>6. 01 no. Electrical Pump with 150L/MN capacity. | - |

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height: 3.0 m Bench Width: 3.0 m	Bench height: 3.0 m Bench Width: 3.0 m	-
3m	Total area covered under excavation/pits	Pit- 2.0915 Ha. upto end of F.Y. 2023-24	Pit- 2.098 Ha. upto end of F.Y. 2020-21	-
3n	Ore to OB ratio for the pit/mine during the year.	1 : 2.0	1 : 0.41	-
3o	Total area put in use under different heads at the end of year	Pit- 2.0915 Ha. Waste/reject- 0.7282 Ha. Others- 1.4431 Ha. Up to end of F.Y. 2023-24)	Pit- 2.0915 Ha. Waste/reject- 0.572 Ha. Others- 0.589 Ha. Up to end of F.Y. 2020-21	-
3p	Production of ROM mineral during the last five year period as applicable	Manganese Production during last five years: Yr.- 2017-18: 28056.000 Metric Tonne Yr.- 2018-19: 39144.000 Metric Tonne Yr.- 2019-20: 13212.000 Metric Tonne Yr.- 2020-21: 14212.000 Metric Tonne Yr.- 2021-22: 15212.000 Metric Tonne	Manganese Production during last five years: Yr.- 2017-18: 12881.000 Metric Tonne Yr.- 2018-19: 13127.610 Metric Tonne Yr.- 2019-20: 12040.000 Metric Tonne Yr.- 2020-21: 13432.000 Metric Tonne Yr.- 2021-22: 6290.000 Metric Tonne	-

3q General remarks of inspecting officers on method of mining etc.

Mining is being carried out through the opencast method with fully mechanized means using conventional method of drilling and blasting.

#### Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposal has been given in the approved document for separate dumping of Mineral/Ore and OB/Waste.	Separate dumping of mineral/ore and OB/Waste have been done.	-
4b	Location of topsoil, OB and mineral reject dumps	Ob/Waste: 1. In between UTM co-ordinates N2046547 to N2046601 and E743064 to E743173 2. In between local co-ordinates N038 to N048 and E087 to E097  Mineral/Ore Stock Yard: In between local co-ordinates N013 to N055 and E125 to E185	Ob/Waste: 1. In between UTM co-ordinates N2046547 to N2046601 and E743064 to E743173 2. In between local co-ordinates N038 to N048 and E087 to E097  Mineral/Ore Stock Yard: In between local co-ordinates N013 to N055 and E125 to E185	-
4c	Number of dumps within lease area and outside of lease area	Within lease area: 01 no. Outside lease area: 01 no.	Within lease area: 01 no. Outside lease area: 01 no.	-



4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed beyond ultimate pit limit	Present beyond ultimate pit limit.	-
4e	Number of active and alive dumps.	01 no.	01 no.	-
4f	Number of dead dumps.	01 no.	01 no.	-
4g	Number of dumps established.	No proposal.	NIL	-
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal during F.Y. 2020-21	Retaining wall and garland drain have been constructed during F.Y. 2019-20	-
4i	Length of Retaining wall or garland drain all along dumps	No proposal during F.Y. 2020-21	Retaining Wall/Parapet Wall: 370.0 m Garland Drain: 170.0 m Constructed during F.Y. 2019-20	-
4j	Number of settling ponds	No proposal during F.Y. 2020-21	01 no. of settling pond with 5.0 m deep has been Constructed during F.Y. 2019-20	-
4k	Specific comments of inspecting officer on waste dump management			NIL

#### 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.	NIL	-
5b	Area under backfilling of mined out area	No proposal.	NIL	-

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	NIL	-
5d	Total area fully reclaimed and rehabilitated	No proposal.	NIL	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			For systematic development, certain area in between local co-ordinates N185 to N225 and E063 to E095 has been backfilled earlier.

#### 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).	Not submitted.	Violation has been pointed out.	-
6b	Area available for rehabilitation (ha) .	No Proposal.	NIL	-
6c	afforestation done (ha).	No Proposal.	NIL	-
6d	No. of saplings planted during the year	No Proposal.	NIL	-
6e	Cumulative no .of plants	No Proposal.	NIL	-
6f	Any other method of rehabilitation	No Proposal.	NIL	-
6g	Cost incurred on watch and care during the year	No Proposal.	NIL	-

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No Proposal.	NIL	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal.	NIL	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No Proposal.	NIL	-
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal.	NIL	-
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No Proposal.	NIL	-
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	100 nos.	80 nos.	-
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.088 Ha.	0.088 Ha.	-

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By Plantation along 7.5 m barrier zone.	By infilling plantation in the exiting green belt along 7.5 m barrier zone.	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given in the approved document for regular monitoring of the environmental parameters in the core and buffer zone.	Being done as per proposal.	All the parameters are within the permissible limits.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			NIL

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mechanised screening has been proposed for segregation of (+)30 mm, (-) 30 mm to (+) 10.0 mm and (-) 10 mm size ore.	Mechanised screening is being done for segregation of (+)30 mm, (-) 30 mm to (+) 10.0 mm and (-) 10 mm size ore.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	-do-	-do-	-
7c	Different grade of mineral sorted out at mines.	Sorting proposed for less than 25% Mn and above 25% Mn	Being done as per proposal.	-

7d	Any beneficiation process at mines .	Dry screening has been proposed for segregation of different size ore.	Being done as per proposal.	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			NIL

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal.	NIL	-
8b	Concurrent use or storage of topsoil	No proposal.	NIL	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of Ob/Waste: 1. In between UTM co-ordinates N2046547 to N2046601 and E743064 to E743173 2. In between local co-ordinates N038 to N048 and E087 to E097  Mineral/Ore Stock Yard: In between local co-ordinates N013 to N055 and E125 to E185 have been proposed	Separate dumping of Ob/Waste: 1. In between UTM co-ordinates N2046547 to N2046601 and E743064 to E743173 2. In between local co-ordinates N038 to N048 and E087 to E097  Mineral/Ore Stock Yard: In between local co-ordinates N013 to N055 and E125 to E185 is being done.	-

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal.	For systematic development, certain area in between local co-ordinates N185 to N225 and E063 to E095 has been backfilled earlier through the waste rock.	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	-do-	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	100 nos. of sampling over an area of 0.088 Ha. has been proposed for plantation along 7.5 m barrier zone.	80 nos. of saplings have been planted in between existing plantation.	-
8g	Survival rate	No proposal.	Approx 60%	-
8h	Water sprinkling on roads to control airborne dust	Proposal has been given in the approved document for water sprinkling on roads to control airborne dust through the water tanker.	Being done as per proposal.	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			NIL

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Compliance of Rule 45:

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Sl.No.	Item	Proposals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to March 2022 A.R. Submitted up to F.Y. 2020-21	M.R. Submitted up to March 2022 A.R. Submitted up to F.Y. 2020-21	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager: Dhirendra Kumar Sahu Mining Engineer: Dhirendra Kumar Sahu Geologist: Durga Prasad Tedda	Manager: Dhirendra Kumar Sahu Mining Engineer: Dhirendra Kumar Sahu Geologist: Durga Prasad Tedda	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 2.0915 Ha. Waste/reject- 0.572 Ha. Others- 0.589 Ha.	Pit- 2.0915 Ha. Waste/reject- 0.572 Ha. Others- 0.589 Ha.	NIL
9d	Scrutiny of Annual return on afforestation	Within lease area: 80 nos. of saplings with 67% Survival rate. Outside lease area: 160 nos. of saplings with 65% Survival rate.	Within lease area: 80 nos. of saplings with 67% Survival rate. Outside lease area: 160 nos. of saplings with 65% Survival rate.	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral Reject: NIL Grade: NIL	Mineral Reject: NIL Grade: NIL	NIL

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM and Graded Ore closing stock: (i) Below 25% Mn: 120.070 Metric Tonnes. (ii) 25% to below 35% Mn: 120.00 Metric Tonnes	ROM and Graded Ore closing stock: (i) Below 25% Mn: 120.070 Metric Tonnes. (ii) 25% to below 35% Mn: 120.00 Metric Tonnes	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-Mine Price: (i) Below 25% Mn: Rs. 3017.00 Per Metric Tonne (ii) 25% to below 35% Mn: Rs. 5732.00 Per Metric Tonne  Sale value: (i) Below 25% Mn: Rs. 22929124.00 (ii) 25% to below 35% Mn: Rs. 33816627.00  Cost of Production: Rs. 3420.00 Per Metric Tonne.	Ex-Mine Price: (i) Below 25% Mn: Rs. 3017.00 Per Metric Tonne (ii) 25% to below 35% Mn: Rs. 5732.00 Per Metric Tonne  Sale value: (i) Below 25% Mn: Rs. 22929124.00 (ii) 25% to below 35% Mn: Rs. 33816627.00  Cost of Production: Rs. 3420.00 Per Metric Tonne.	NIL
9h	Scrutiny of Annual return on fixed assets	Rs. 44799391.00	Rs. 44799391.00	NIL



9k	Scrutiny of Annual return on mining machineries	Given in the annual returns.	Cross verified from the field logbooks.	NIL
		1. 01 no. Hydraulic Shovel with 0.802 CuM bucket capacity.		
		2. 01 no. Other HEM Machinery with 129.0 capacity.		
		3. 01 no. Front End Loader with 2.0 CuM bucket capacity.		
		4. 01 no. Drilling Machine with 100 mm bit dia.		
		5. 04 nos. Dumpers with 16.0 Tonnes capacity.		
		6. 01 no. Electrical Pump with 150L/MN capacity.		

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

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on
			शावाल कार्तिकेय (SHAIVAL KARTIKEYA) 13/05/2022

Date : 13/05/2022

Indian Bureau of Mines