

**INDIAN BUREAU OF MINES
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION**

MCDR INSPECTION REPORT

Goa regional office

Mine file No : MAH/SDG/FE-44/GOA

Mine code : 30MSH28025

- (i) Name of the Inspecting : **J003**) **JANGID G K**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sh Suresh Kulal, G.M. (Mines) and Shri N.K. Joshi, Ge
Official with
Designation
- (iv) Date of Inspection : 19/02/2015
- (v) Prev.inspection date : 14/09/2005

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SATELI (20.24.0H)**
- (b) Category : A Fully Mechanised
- (c) Type of Working : Opencast
- (d) Postal address
- State : MAHARASHTRA
- District : SINDHUDURG
- Village : SATELI
- Taluka : SAWANTWADI
- Post office : SATARDA
- Pin Code : 416516
- FAX No. : 022-22854417
- E-mail : srivastva@bom5.vsnl.net.in
- Phone : 022-22025893
- (e) Police Station : Sawantwadi
- (f) First opening date : 15/09/2013
2. Address for : DECCAN MINERALS PVT LTD
correspondance Nirmal, Central Wing,18th floor,
Nariman Point Mumbai-400021
3. (a) Lease Number : MSH0053
- (b) Lease area : 58.68
- (c) Period of lease : 20
- (d) Date of Expiry : 28/06/2001
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : DECCAN MINERALS PRIVATE LIMITED
32, ASHUTOSH, NEPEAN SEA
ROAD, MUMBAI MUMBAI
(SUBURBAN) MAHARASHTRA
Phone:68259,68203.cable:DECCANMINE
FAX :91-22-2854417

Owner : SANDEEP SRIVASTAVA
NIRMAL, 16th Floor NARIMAN
POINT GREATER BOMBAY
MAHARASHTRA
Phone: 022-22025893, 2
FAX : 022-22854417

Agent : MANOJ THAKUR
WSH 4,W BLOCK,SUNSET
BOULVARD, ALTO DHULER,
MAPUSA-GOA SINDHUDURG
MAHARASHTRA
Phone: 0832-2253864, 9769111533
FAX : 832-2253863

Mining Engineer

Name : Gopi Kumar Sinha,Full Time
Qualification : BE Mining
Appointment/ : 31/01/2015
Termination date

Geologist

Name : AJIT PATIL,Full Time
Qualification : M.Sc. Geology
Appointment/ : 28/10/2013
Termination date

Manager

Name : SANTOSH KUMAR SINGH
Qualification : B.E.MINING & SECAND CLASS M.M.Ce.
Appointment/ : 02/09/2013 31/01/2015
Termination date

6. Date of approval of Mining : 21/03/2014
Plan/Scheme of Mining

PART - II : TECHNICAL DETAILS/COMMENTS

1. Details about Average employment :

Maximum number of persons employed on any day during the year

Employment category	No.of employment	Av. yearly working days
DIRECT		
Managerial	1	130
Supervisory	4	130
CONTRACT		
Workers	35	130
Ministrial	4	130

2. Community Development Plan (in and around the mines) : Proposed action and expenditure towards socio-economic development.

Action during the year	Expenditure in Rs. Lakhs for				Remarks
	previous year		current year		
	Proposed	Incurred	Proposed	Incurred	
General					
Medical facility	0.00	0.00	0.00	0.00	
Sanitation	0.00	0.10	0.00	0.10	
Safety	0.00	0.50	0.00	0.50	
Housing	0.00	0.00	0.00	0.00	
Health	0.00	0.20	0.00	0.20	
Water supply	0.00	0.20	0.00	0.20	
Sub total	0.00	1.00	0.00	1.00	
Infrastructure					
Roads	0.00	0.00	0.40	0.40	
Electricity	0.00	0.00	0.00	0.00	
Communication	0.00	0.00	0.00	0.00	
Public transport	0.00	0.00	0.20	0.20	
Sub total	0.00	0.00	1.00	0.60	
Others	0.00	0.00	0.00	0.00	
Recreation	0.00	0.00	0.20	0.20	
Environment management	0.00	0.00	15.00	15.00	
Employment	0.00	0.00	35.00	35.00	
Sports activities	0.00	0.00	0.00	0.00	
Training	0.00	0.00	0.00	0.00	
Total	0.00	0.00	51.80	51.80	

3. Status of compliance of MCDR, 1988, including therewith the rectification of the outstanding violation of rules.

Mine was last inspected on 15.12.2013 and no violation was issued. No violation letter was issued after current inspection, as again mining operations were found temporary closed due to marketing problem.

4. A note on the justification in case of suspension of mining operation under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988, if recommended.

Suspension of mining operations under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988 is not recommended.

5. Scientific Mining

Items	Proposal	Actual work done	Remarks
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A. Exploration (Rule 13)

- a.Type of prospecting and exploration i.e. pitting, drilling : It was proposed to drill four boreholes with 190m drilling during 2013-14. Six boreholes are drilled with 372m drilling during 2013-14.
- b.Total area covered : Exploration was proposed over 100m X 100m grid interval. Exploration was carried out on 100m X 100m grid interval in part of lease area.

B. Working (Rule 13)

- a.Number and size of each pit (LxWxH) : Proposal of development was from E-367770 to E-368000, N-1743000 to N-1743150 over 250m×150m X 42m. There is one working pit and its dimension is 250m X 110m X 30m. Working in lease was started on 15th Sept 2013 and discontinued in Jan 2015 due to grade of mineral, which is lying at mines.
- b.Bench size(LxWxH)length can be defined as regular/irregular : Proposal to maintain bench height of 6m with 9m width. Bench size is regular and No of benches in OB are five of 6m Height & 9m width. Mineral thickness is 15-20m & almost vertical dipping; therefore one bench in mineral.
- c.Ore to waste ratio pit wise if possible otherwise for mine : Planned ore to OB ratio Ore was 1:1.18. Actual ore to OB ratio Ore was 1:2 due to soft strata in OB and less width of mineral.
- d.Total area covered under excavation/pits : Total area proposed under excavation/pits was 3.75ha. The area covered under pit is 2.75ha.

C. Waste disposal (Rule 13)

- a.Location of dumps : It was proposed to dump waste towards South side the lease area over narrow strip. Waste generated during 2013-14 was dumped in adjoining lease 36.91ha. It is in NW direction from pit.
- e.Yearly generation of waste quantity. : Proposal was for 1099008t waste generation. Actual waste generation was 867452t during 13-14. Waste of 185280t was handled during 2014-15.
- b.Method of dumping whether advancing/retreat : Dumping with advanced method was proposed. Waste was dumped in adjoining lease 36.91ha, which is in NW direction from pit. Dump was developed with advancing method.
- c.Total area covered : Dump over 3.0ha Existing dump in

under waste dump. area i.e. 300m X adjoining lease 36.91ha
100m was proposed. is over 3.375ha area.

d.No.and size of each : One dump of 300m X Dump is of 175m X 200m
waste dump with No of 100m size with 10m size on slope of
steps/lift/bench height was hillock; thereby height
proposed. is more towards slope.

D. Production

b.Year wise : Mining operation Actual production during
production of last were started in the year was 38650t.
five year. 2013-14 and Production during 2014-
proposal was 15 was 87727t.
132262t. Target of
227892t was made
during 2014-15.

D. Reserve

a.Reserve position as : Reserves estimated Balance reserves at the
per latest MP/MS and as per latest time of inspection were
at the time of MP/MS is 1980720t 1892993t (111), 900200t
inspection. (111), 900200t (121) and 17360t (122).
(121) and 17360t
(122).

RESERVE POSITION AS ON 01/04/2014

IRON ORE			
Category	Quantity in Tonnes	Grade	
Proved	2880920	Average Fe 53.07%, SiO ₂ -7.29%, Al ₂ O ₃ -5.64%	
Probable	17360	Average Fe 53.07%, SiO ₂ -7.29%, Al ₂ O ₃ -5.64%	
Possible			
Total	2898280	Average Fe 53.07%, SiO ₂ -7.29%, Al ₂ O ₃ -5.64%	

PRODUCTION FOR THE PREVIOUS YEAR 2013 - 2014

Mineral	Production	Unit
IRON ORE	59960	TON

6. Conservation of Mineral - both quantitative and qualitative

Beneficiation (Rule 20 and 26)

- Efforts for improving low grade and sub grade mineral. : Lessee is taking services of RODL, IBM, Bangalore for upgradation of ROM ore in other working leases and instant lease has been kept temp. closed. -55% Fe is @38-40 dollar per tonne at port is not profitable from this lease having less than 55% Fe content. Process suggested scrubbing, screening followed by magnetic and gravity separation to achieve +62% Fe. However, scrubbing/screening/classification could recover +58% Fe.
- Efforts for improving percentage of recovery of ore. : Recovery of mineral is almost 100% without any reject generation. All the production achieved during 2013-14 and 2014-15 is lying at stock yard as closing stock.

Mineral Rule 15

- Percentage of recovery of ore pitwise w.r.t. ROM and total material : Recovery percentage is almost 100%.
- Number of benches in ore and waste. : No of benches in top soil : nil, No of benches in OB /Waste : 5 of 6m ht & 9m width. One bottom bench in mineral 6m & 9m width.

Sub/grd mineral/fines (Rule16)

- Qty of yearly generation and total qty available during inspection with grade : Rom-227892t, fines-133521t and lumps-14166t (Grade of mineral is below 55%Fe)
- Number and size of each stack : Mobile screen plants are there for iron ore separation as per grade and stacks are made above dump area. There is one stack yard.
- Location of stacking. : Mineral stacks are located outside lease area over platform on dump.
- Separate stacking from waste : Yes, mineral is separately stacked over the platform made at dump before final despatch.
- Total area covered for stacking : Not applicable, as it is common for two leases.

Exploration data as on 31/03/ 2014

No. of Boreholes	No. of Pits	No. of Trenches
6	0	0

OVERBURDEN HANDLED DURING PREVIOUS YEAR 2013 - 2014

Overburden/waste removed (in m3) :	455000
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Utilisation of Sub Grade Mineral and Mineral Rejects

	Generated	Utilised	Stacked	(In Ton.)
<u>IRON ORE</u>				
Sub Grade Mineral ->	0	0	0	
Mineral Rejects ->	0	0	0	

7. Environment Management - both quantitative and qualitativ

A. Land environment

- a. Landscape. : The area is located on the slope of hilly terrain with gentle to moderate slope and dissected by number of small valleys with max RL-69M and min-RL-18M.
- b. Aesthetic environment : Area is surrounded by hillocks and agriculture fields in valley/plain land. Plantation is carried out all along road. Pit is nearer to new approach road developed from main road.
- c. Soil and land use pattern : Topsoil is negligible on the slope of hillock. Land use pattern is as follows:
Area under pit-3.75ha, Under dump outside ML-3.84ha, Plant/building - 0.0ha.
- d. Agriculture : Agriculture is seasonal during monsoon period and Cashew is the main cultivation.
- e. Forest(flora and fauna) : There is no forest land.
- f. Vegetation : Paddy Fields are there in the surrounding plain area.
- h. Public building, places and monuments (protected, historical), placec of worship and places of tourist : Nil

B Water environment.

- a. Surface water : The surface water is monitored; pH found in the range of 7.1 and other parameters are also within limits.
- b. Ground water : General ground water level is around 10m.The area receives copious amount of rainfall, hence the ground levels show rise in their levels during monsoon.
- c. Quality of water : The ground water in the bore wells and dug wells, nearby ponds or lakes, were found to be good. pH values were around 7.1 & within limits.

C. Air environment

- a. Noise : Workzone day noise levels was found to be 64.1 dB(A) and night noise level was found to be 62.8 dB(A).
- b. Air : Air quality is monitored by HVAS twice a week & found within limits.
- c. Climatic condition : Since the lease area is located very near to the west coast, warm humid climate is experienced throughout the year. Rainfall of 3500 to 4000mm between June to September.

D. Socio economic environment

- a. Social and demographic profile. : The nature of work is mainly minng & agricultural The literacy rate is 70%.
- b. Recommending health and safety. : The noise and dust fall is within range. The quality of the water is within permissible limit. Ripper dozer is used instead of drilling and blasting. Effective dust suppression by water sprinkling arrangement on trucks is there.
- c. Human settlement : The lease area is surrounded by four villages. The house types found are both concrete and huts. The population of sateli 784, satarda 2737, Talwane 1683,

Kondura 360 respectively.

- d. Recreational facility. : There is no recreational facility available at mines. Nearby towns Sawantwadi, Vengurla, Mapusa etc are having all facilities. Cable & satellite TV is available in villages.

7.1 Comments on the steps taken by the lessee towards maintaining environment and monitoring of environmental parameters to ensure the qualitative improvement in the environment and ecology.

<u>Water Management</u>					
Season	Station type	Station name	Parameter	Value	
				Actual	Excess

<u>Air data for excess parameters</u>					
Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

<u>PLANTATION DURING THE PREVIOUS YEAR</u>		<u>2013 - 2014</u>	Area in Hect.
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<u>TOP SOIL MANAGEMENT</u>		
<u>Quantity as on 31/03/2014</u>		
Cumulative quantity in tonne		
Generated	Utilised	Balance
.1	.1	0

8. Scrutiny of annual returns on cost of production, reserve, production, pit mouth value, stock, land use pattern and fixed assets.

a) Land use pattern: 1. Exploited & abandoned by O/C mines-0 Ha, 2) Covered under O/C working - 6.00ha is incorrect, it should be 3.75ha, 3) Reclaimed & Rehabilitated-0Ha, 4) Waste Disposal - 3.75ha is incorrect, it should be nil, as dumping is in other ML 36.91ha. 5) Plants, blds, roads-0.97ha is also incorrect, where no plant is there.

b) Reserves: It is as per latest approved SOM.

c) Quantity of overburden / waste rock generation: 910000t and dumped outside ML in adjoining lease.

Cost of production was Rs. 850/-

PART - III : PERFORMANCE OF MINE OWNER
(In case of lease expiring within 2 years - as per guidelines)

a. Compliance of terms and conditions of lease deed.

Initial grant vide letter No. MMN-1386/130943/(4303)IND-09 DT-9.7.1987 over 20.24 ha for 20 years
1st renewal applied on 08.10.2008 is pending. The date of expiry was 23.10.2009.
All the boundary pillars for the lease area were found intact during inspection of mine.

b. Compliance of the provisions of MCDR, 88 and advise given.

First Mining Plan was approved on 04.10.1987 for the period from 1992-93 to 1996-97. Mining Plan for renewal was approved vide letter MS/SIND/GOA (MAH)Fe-248-SZ/14.06.12 for the period from 2009-10 to 2013-14. First Mining operations commenced on 15th Sept 2013 due to local land issues and approach road.
Scheme of mining for next five-year period was approved vide letter No. MSH/Mech-50(MAH)/Goa/2013-14 dated 21.03.2014 for the period from 2014-15 to 2018-19.

PART - IV : PROPOSALS FOR FURTHER ACTION FOR :

Indian Bureau of Mines (any issue related to CGPB, SGPB, Assistance, Consultancy, Annual Programme and studies, etc.)

None at present.

State Government (Illegal mining, mining dispute, infrastructure, Mineral based industry, Mineral policy, etc.)

None at present.

The Central Government (Infrastructure, Development, Mineral policy and Legislation, Mineral based industry, etc.)

None at present.

Date :

(JANGID G K)

Indian Bureau of Mines