

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/JSL-14/LST-2

Mine code : 38RAJ14001

- (i) Name of the Inspecting : **K010**) **Kotriwal B.L.**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : Sh. D D Sripat, General Manager(Mines)
Official with
Designation
- (iv) Date of Inspection : 10-OCT-19
- (v) Prev.inspection date : 27-FEB-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SANU (998.40 HA)**
- (b) **Registration NO.** : **IBM/5158/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : RAJASTHAN
- District : JAISALMER
- Village : JOGA
- Taluka : JAISALMER
- Post office : SANU
- Pin Code : 345001
- FAX No. : 02992-52135
- E-mail : menaria
- Phone : 02992-51607
- (f) Police Station : Sanu
- (g) First opening date : 18-OCT-93
- (h) Weekly day of rest : MON
2. Address for : P.BOX NO.56
correspondance KHANIJ BHAWAN
JAISALMER
3. (a) Lease Number : RAJ1485
- (b) Lease area : 998.4
- (c) Period of lease : 30
- (d) Date of Expiry : 30-MAR-47
4. Mineral worked : LIMESHELL Associated
LIMESTONE Main

5. Name and Address of the

Lessee : RAJASTHAN STATE MINES & MINERALS LTD.
 RSMM LTD., GYPSUM DIVN.
 SADUL CLUB BUILDING,
 BIKANER BIKANER RAJASTHAN
 Phone:0151-2523295, 2544178, 2542291, 2542133
 FAX :0151-2523519

Owner : Vikas Sitaramji Bhale
 Rajasthan State Mines &
 Mineral Ltd 4 Meera Marg,
 Udaipur, Rajasthan UDAIPUR
 RAJASTHAN
 Phone: 9414320130
 FAX :

Agent : Rajendra Manaria
 Khaniz Bhawan, Near B P
 Tank Jaiselmer JAISALMER
 RAJASTHAN
 Phone: 02992251607
 FAX :

Geologist

Name : K K Mathur, Full Time
 Qualification : M Sc (Sedimentology & Petroleum Geology
 Appointment/ : 18-FEB-19
 Termination date

Manager

Name : Rajendra Menaria
 Qualification : BE(Mining)
 Appointment/ : 10-APR-18
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	27-JAN-93
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	17-JUL-98
		Mining Scheme rule 12 MCDR1988	25-JUL-13
		MP review under 17(1) MCR 2016	01-DEC-17

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for geological axis 1 or 2	No proposal	Nil	Entire area explored under G-1 level at 200X200 Grid.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposals	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposals	Nil	Total Lease Area: 998.4Hect. Initial exploration on 800m to 400 interval & thereafter 200m to 100m pattern.
1e	Balance reserve as on 01/04/20	-	13.88 million MT	
1f	General remarks of inspecting officers on geology, exploration etc	-		Entire area explored under G-1 level at 200X200 Grid

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	3297-3892N, 1007-2050E North Block 2990-3400N,2760-3552E South Block	3200-3850N,1000-2000E North Block 2950-3450N,2700-3500E South Block	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Only single bench mining. SMS grade limestone found at maximum depth of 6 mtrs from surface.	Only single bench mining. SMS grade limestone mining carried out in range 3.5 mtrs to 5.5mtrs from surface.	

2c	Stripping ratio or ore to OB ratio	No overburden, Nil deposit is outcrop on surface.		Surface Deposit
2d	Quantity of topsoil generation in m3	No top soil, Nil deposit is outcrop on surface.		Overlain by Alluvium at few places.
2e	Quantity of overburden generation in m3	No overburden, Nil deposit is outcrop on surface.		
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			It is a surface deposit

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	
3b	Quantity of ROM mineral production proposed	2726000 MT	2633643 MT	
3c	Recovery of sailable/usable mineral from ROM production	Recovery of Finished product i.e. 30mm to 80mm size is 47% Chemical Composition CaO = 54.26 % SiO2 = 1.15 %	Actual Recovery of Finished product i.e. (30-80mm size is 45% Chemical Composition CaO = 54.05 % SiO2 = 1.19 %	
3d	Quantity of mineral reject generation	1031000 MT	1122175 MT	Low grade fines having size less than 10mm.

3e	Grade of mineral rejects generation and threshold value declared.	CaO = 41.25 % SiO2 = 14.30 %	CaO = 44.25 % SiO2 = 12.49 %	Threshold value of SMS Gr Limestone is CaO-39% SiO2-14.8%
3f	Quantity of sub grade mineral generation.	423000 MT	295985.20 MT	
3g	Grade of sub grade mineral generation	CaO = 53.65 % SiO2 = 1.58 %	CaO = 51.38 % SiO2 = 1.62 %	Subgrade mineral is generated as by-product and having size between 10 mm to 30mm size gitty.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	
3j	Provision of drilling and blasting in mineral benches	Drilling is done with help of 4" dia drill machine and Blasting is done with primed explosive (Class-2) with ANFO & by using controlled blasting techniques DTH & TLD.	Drilling is done with help of 4" dia drill machine and Blasting is done with primed explosive (Class-2) with ANFO & by using controlled blasting techniques DTH & TLD.	(4"dia large DTH drills are used for drilling)
3k	Provision of mining machineries in mineral benches	HEMM	HEMM	With Excavator with dumper combination
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	It shall vary from 3.5 to 5.5 meter.
3m	Total area covered under excavation/pits	46.40 Hect	26.78 Hect	

3n	Ore to OB ratio for the pit/mine during the year.	Nil	Nil	
3o	Total area put in use under different heads at the end of year	Area for Mining=46.40 Backfilling=30.96 Plantation=20.00 Road, building=2.10 CS plant, storage=37.63	Area for Mining=26.78 Backfilling= 21.31 Plantation= 10.90 Road, building=2.10 C&S plant, storage=37.63	Total Land Area Status as on 01.04.2019 Area for Mining = 438.02 Backfilling = 296.68 Plantation = 131.88 Road, building= 2.10 C&S plant, storage= 37.63
3p	Production of ROM mineral during the last five year period as applicable	(in MT)	(in MT)	
		2013-14:2775111 2014-15:2779778 2015-16:2777778 2016-17:2777778 2017-18:2777778 2018-19:2726000	2013-14:1924525 2014-15:2497062 2015-16:2098433 2016-17:1366821 2017-18:2717463 2018-19:2633643	
3q	General remarks of inspecting officers on method of mining etc.			Only single bench mining. SMS grade limestone found at maximum depth of 6 mtrs from surface. It is Surface Deposit

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Nil	Nil	Surface Deposit in outcrop form
4b	Location of topsoil, OB and mineral reject dumps	Nil	Nil	Surface Deposit

4c	Number of dumps within lease area and outside of lease area	Nil	Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Nil	Nil	
4e	Number of active and alive dumps.	Nil	Nil	
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.	Nil	Nil	
4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil	
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer on waste dump management			Surface Deposit in outcrop form

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.	Yes, Full extraction of SMS Grade Mineral from mined out area before starting backfilling.	Yes, Full extraction of SMS Grade Mineral from mined out area before starting backfilling.	
5b	Area under backfilling of mined out area	30.96	21.31	Mined out area is concurrently backfilled with low grade reject in the pit.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	Nil	

5d	Total area fully reclaimed and rehabilitated	Proposed during FY 2018-19 Backfilling= 30.96 Plantation= 20.00	Actual carried out during FY 2018-19 Backfilling= 21.31 Plantation= 10.90	As on 31.03.19 296.68 Hectare is reclaimed & 131.88 Hect with plantation in mined out backfilled area.
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Mined out area is concurrently backfilled with low grade reject in the pit.

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).	-	Submitted in time	
6b	Area available for rehabilitation (ha) .	46.40Hect	26.78Hect	This area proposed & Actual used in mining activities.
6c	afforestation done (ha).	NIL	NIL	All the Afforestation was done on backfilled area in mined out pit.
6d	No. of saplings planted during the year	5000	5000	Survived plants is 3295 @ 65.90% survival rate during the year
6e	Cumulative no .of plants	-	45907	Total number of plantation on mined out, backfilled and virgin area as on 31.03.2019
6f	Any other method of rehabilitation	-	-	-
6g	Cost incurred on watch and care during the year	4.00 lacs	9.80lacs	Cost incurred in deploying water tanker &labour in care, watch & ward though contractors.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	26.78 Ha	21.31 Ha	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	No waste/ tailings generated
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	20.00 Ha	10.90 Ha	
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	No proposal	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	

6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed in Review of Mining Plan	As per proposal	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Violation issued under rule 26(2) & 11(1) of MCDR, 2017

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Production Proposal:- 1216000 (30-80mm) 423000 (10-30 mm) Likely to Despatch:- 1215000 (30-80mm) 300000 (10-30 mm)	Actual Production:- 1215482.05 (30-80 mm) 295985.20 (10-30 mm) Actual Despatch:- 1216022.05 (30-80 mm) 344976.18 (10-30 mm)	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	NO PROPOSAL	NIL	
7c	Different grade of mineral sorted out at mines.	Yes, different size grade separated by screening at plant was as under:- 40-80 mm sizegitty 30-60mm sizegitty 30-50mm sizegitty 10-30mm sizegitty.	Yes, different size grade separated by screening at plant was as under:- 40-80 mm sizegitty 30-60mm sizegitty 30-50mm sizegitty 10-30mm sizegitty.	Only size wise grading & sorting of mineral done with dry processing
7d	Any beneficiation process at mines	No Proposal	Nil	Mineral processing is carried out by dry processing only.

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Mineral processing is carried out by dry processing only.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	Nil	No top soil, surface deposit.
8b	Concurrent use or storage of topsoil	No Proposal	Nil	No top soil, surface deposit.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Low grade rejects generated during the crushing & screening process and backfilled in mined out pits.	Low grade rejects generated during the crushing & screening process and backfilled in mined out pits.	These low grade reject may be used in future for cement mining plants.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Mineral rejects & fine is dumped in mined out area & for backfilling.	Mineral rejects & fine is dumped in mined out area & for backfilling.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Area used for Plantation (fire-wood plant), for natural water reservoirs & backfilled by clayey soil of low grade fines.	Area used for Plantation (fire-wood plant), for natural water reservoirs & backfilled by clayey soil of low grade fines.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5000 Nos.	5000 Nos.	

8g	Survival rate	-	70%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	By 10 KLD Water tanker with sprinkler

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted	Submitted & Details given	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer = 4 Diploma Mining Engineer = 1 Geologist Employed=1 Surveyor =2 Other Technical & Supervisory staff = 16	Yes, provided	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes, provided. Total Land Area Status as on 01.04.2019 Area for Mining = 438.02 Backfilling = 296.68 Plantation = 131.88 Road, building= 2.10 C&S plant ,storage= 37.63	Yes, provided.	
9d	Scrutiny of Annual return on afforestation		Details given	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		Details given	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Details given in the Annual Return 2018-19
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details given
9h	Scrutiny of Annual return on fixed assets	Details given
9k	Scrutiny of Annual return on mining machineries	Yes, provided in the Annual Return

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
MCDR17	Rule 11(1)	06-DEC-19			
MCDR17	Rule 26(2)	06-DEC-19			

Date :

(Kotriwal B.L.)

Indian Bureau of Mines