

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/SATNA/LST.355

Mine code : 38MPR35328

- (i) Name of the Inspecting : **NQ06**) **P.NAHAR**
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : Shri Akhllesh Jaisingh, HOD, Sh.S. Kumar, Manager-, Shri
Official with
Designation
- (iv) Date of Inspection : 12-MAR-19
- (v) Prev.inspection date : 26-FEB-18

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SALAIYA 495.566HA.**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : SATNA
Village : SALAIYA
Taluka : MAIHAR
Post office : AJWAIN
Pin Code : 485772
FAX No. : NA
E-mail : NA
Phone : NA
- (f) Police Station : BADERA
- (g) First opening date : 21-NOV-14
- (h) Weekly day of rest :
2. Address for :
correspondance :
3. (a) Lease Number :
(b) Lease area :
(c) Period of lease :
(d) Date of Expiry :
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : RELIANCE ORNATUS ENTERPRISE AND VENTURES
G-BLOCK, 1ST.FLOOR, 3RD.
WING, DHIRUBHAI AMBANI
KNOWLEDGE CITY
KOPARKHAIRANE, NAVI MUMBAI
MUMBAI (SUBURBAN)
MAHARASHTRA
Phone:NA
FAX :NA

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 06-APR-16
Plan/Scheme of Mining : MP modif under 17(3) MCR 2016 03-OCT-18

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	18-19- 12BH,120m 19-20- 12BH,120m . 20-21- 11BH,110m.Two BH having total meterage of 110m.	As on date only 2BH having total meterage of 22m were put up a.	For complaince, violation letter under rule 11(1) and 47 is being pointed out.
1b	Exploration over lease area for geological axis 1 or 2	G1	G1	Additional exploration has been proposed to fill up gap of bore holes at 100mx100m grid interval.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Agency-Lessee Himself. Expenditure proposed- 18-19- Rs.5,76,450/- 19-20- Rs.5,76,450/- 20-21- Rs.5,76,450/-	Agency-Lessee himself. Exp.-76,700/-	----
1d	Balance area to be explored to bring Geological axis in 1 or 2	35Ha.	2.0Ha	For short fall a violation under rule 11(1) is being pointed out.
1e	Balance reserve as on 01/04/20	111-41.809 m.t. 222-16.325 m.t.	----	----

1f	General remarks of inspecting officers on geology, exploration etc	-----	-----	Limestone of the area belongs to Rohtas Formation of Lower Vindhyan Age showing , N60oE-S60oW strike dipping with 8o to 10o towrds North direction.Against proposal of 12 BH having total meterage of 120m only 2BH having meterage of 22m have been drilled in the Lease area.For compliance, violation under rule 11(1) and 47 are being pointed out.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	North Block- Between Co- ordinates- 26666500 to 2666900 and 475000 to 475600 Sourth Block- Between Co- ordinates 2665900 to 2666500 and 475400 to 475000	Development has been done at proposed location as mentioned in the Modified Mining Plan.	-----
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	0.5m to 2m in Soil & OB 4.5m in Limestone in North Block and 6m in South Block.	Soil-1m to 2m & OB Limestone-6m in both Blocks.	-----

2c	Stripping ratio or ore to OB ratio	North Block- 1:0.36 South Block- 1:0.051	1:0.06	Combined figures for both blocks.
2d	Quantity of topsoil generation in m3	16-17-19874m3 17-18-13098m3 18-19-7884m3	16-17-10812m3 17-18-3900m3 18-19-5373m3	----
2e	Quantity of overburden generation in m3	16-17-228952m3 17-18-167951m3 18-19-57916m3	16-17-75889m3 17-18-88827m3 18-19-52675m3 (Till end of Feb.2019)	----
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	----	----	Limestone of the area is Sedimentary origin having 80 to 100 dip towards North.It comes under the Category I of Minerals (Evidence of Mineral Contents) rules 2015 i.e. Bedded, Stratiform and Tabular Deposit of Regular Habit. . Development has been done at proposed location by making systematic bench in Limestone.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	Two	----
3b	Quantity of ROM mineral production proposed	16-17- 19,80,000T 17-18- 19,80,000T 18-19- 12,57,878T	16-17-8,35,451T 17-18-10,27,820T 18-19-9,91,883T (Till Feb.2019)	----

3c	Recovery of sailable/usable mineral from ROM production	95% w.r.t. ROM	70% w.r.t. ROM.	-----
3d	Quantity of mineral reject generation	Any Mineral Reject generation is not anticipated.	Any Mineral Reject is not generated.	----
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable.	Not applicable.	----
3f	Quantity of sub grade mineral generation.	One Lakh tonnes per year.	Nil.	Limestone above threshold value and below cut off grade is utilized after blending with Sweater grade Limestone.
3g	Grade of sub grade mineral generation	Not mentioned.	NA	----
3h	Manual / Mechanised method adopted for segregating from ROM	A (FM)	A (FM)	----
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	None.	----
3j	Provision of drilling and blasting in mineral benches	Drilling-100to 115mm Dia. Slurry Explosive/ANFO ,ordinay relay and Nonel Detonater , Detonating Fuse and Nitrate Mixture.	Same process is adopted.	----

3k	Provision of mining machineries in mineral benches	Deployment of HEMM in benches.	Deployment of HEMM in benches.	----
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	Height of benches is suitable for deployment of HEMM.
3m	Total area covered under excavation/pits	61.87Ha (Till end of 20-21)	30.00Ha (approx.) (Till date of inspection)	----
3n	Ore to OB ratio for the pit/mine during the year.	1:0.036-North Block 1:0.051-South Block	1:0.053 (Combined)	----
3o	Total area put in use under different heads at the end of year	73.26Ha (Till end of proposal period)	44.17Ha (approx.) (Till date of inspection).	----
3p	Production of ROM mineral during the last five year period as applicable	14-15-Nil 15-16-Nil 16-17-1.98m.t. 17-18-1.98 m.t. 18-19-1.257878 m.t.	14-15-Nil 15-16-0.474003 m.t. 16-17-0.835451m.t. 17-18-1.027820 m.t. 18-19- 0.991882 m.t. (Till date of inspection)	----
3q	General remarks of inspecting officers on method of mining etc.	----	----	It was proposed to develop pit by deploying HEMM by open cast fully mechanized method. Same process is continued.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Top soil for utilization for reclamtion and afforestation and remaining Qty. for storage at earmarked place. Any mineral reject generation is not anticipated.	Top soil for removal,spreading over afforested area and reclaimed area and remaining qty is stored at proposed location. OB for dumping on old dumps and backfilling of mined out pit. There is no mineral reject.	-----
4b	Location of topsoil, OB and mineral reject dumps	Top Soil-At 2666550:475600 Dump-Western side of Dump No. 1 and 2 upto October-2018 and backfilling after October 2018.	Top soil is stored at proposed location. Interburden and waste are used for backfilling of mined out land. There is no mineral reject dump.	----
4c	Number of dumps within lease area and outside of lease area	Two within the lease area.	Two within the lease area.	----
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Within UPL	Within UPL	----
4e	Number of active and alive dumps.	Two active and alive dumps.	Two active and alive dumps.	Now waste is used for reclamtion of mined out land.
4f	Number of dead dumps.	Not proposed.	None	OB dumps are temporary.It is proposed that all the dumps will be rehandled and utilized for reclama tion and rehabilitation of mined out pit.
4g	Number of dumps established.	Not proposed.	None.	--Do--

4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed .	Retaining wall and Garland drain has been made along the dump.	----
4i	Length of Retaining wall or garland drain all along dumps	Length of Retaining wall and garland drain has not been mentioned in the approved mining plan.	Retaining wall-689m. Garland drain-661m along Top soil and waste dumps and 1102m- along Northern and Southern pits.	----
4j	Number of settling ponds	Numbers not given.	Two.	----
4k	Specific comments of inspecting officer on waste dump management	----	----	It was proposed that Top soil will be removed and utilized for spreading over afforested land and backfilled area and remaining Qty. for storage. Same process is continued. Retaining wall and Garland drain has been made along the waste dumps and top soil stacked. Garland drain is also made along both pits.

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.	Full extraction before backfilling.	Full extraction has been done before backfilling.	----

5b	Area under backfilling of mined out area	1.14Ha	0.8Ha	Reclamtion and Rehabilitation of backfilled area is on progress.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Removal followed by utilization and remaining Qty. for storage.	Same procedure is being followed.	----
5d	Total area fully reclaimed and rehabilitated	1.14Ha	0.8Ha	0.8Ha area has been reclaimed upto the Ground level.Rehabilitati on by afforestation is to be done.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	----	----	In the approved mining plan it was proposed that after October 2018, entire ob/ waste will be utilized for reclmation and rehabilitation of mined out pit.Same process is continued.

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.	----
6b	Area available for rehabilitation (ha) .	1.14Ha	0.85Ha	Reclamtion is continued. Area is yet to be rehabilitation by afforestation .
6c	afforestation done (ha).	Not available.	2.0Ha (During 18-19)	----

6d	No. of saplings planted during the year	2500Nos.	3750Nos.	----
6e	Cumulative no .of plants	Not available.	14,700Nos.	----
6f	Any other method of rehabilitation	Not proposed.	None.	----
6g	Cost incurred on watch and care during the year	Not proposed.	Rs. 1.95Lakhs	----
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	100mx100mx8m	100mx85mx6m (approx.)	----
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not proposed.	Nil.	----
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	0.5464Ha	0.85Ha	The reclaimed area is yet to rehabilitated by afforestation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	None.	----
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 available.	2.0Ha	----
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not proposed.	None.	----
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not proposed.	None.	----
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed.	Done.	----
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	----	----	Proposed measures for PMCP are on progress.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM dispatch.	ROM dispatch after removal of interburden band.	----
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Not proposed.	Any sorting is not done.Only interburden band is seperated at the bench itself.	----
7c	Different grade of mineral sorted out at mines.	Cement.	Cement.	----

7d	Any beneficiation process at mines .	Not proposed.	None.	----
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	----	----	ROM is utilized for captive cement plant of the Lessee .Quality of limestone is just below the feed grade., and it is utilized after blending with high grade limestone. There is no beneficiation issue.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposed seperate removal, utilization for reclamtion and afforestation and remaining Qty. for storage.	Same practice is continued.	----
8b	Concurrent use or storage of topsoil	As metnioned above.	Same as mentioned above.	----

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seperate dumping for OB/waste rock upto October 2018. Thereafter, it will be used for reclamation and rehabilitation of mined out pit. There is no mineral reject.	As on date of inspection entire OB/Waste rock was used for Reclamation and Rehabilitation of mined out land. There is no mineral reject.	----
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposed for restoration of the land to its original use.	Restoration of mined out land to its original use is on progress.	----
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	--Do--	--Do--	----
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	----	About 50Nos of old trees are present in the area. As on date about 14,700Nos. of saplings have been planted which have grown upto 2m height. Survival rate is about 78%.	----
8g	Survival rate	78%	78%	----
8h	Water sprinkling on roads to control airborne dust	Proposed.	Done daily.	----

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	----	----	Around the lease area aesthetic beauty is good but in the lease area is needs to be improved by afforestation.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	AR-Upto-2017-18 MR upto-Feb.2019	----	----
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager-Shri Shalendra Kumar Jain Mining Engineer-Shri Shalendra Kumar Jain, B.E. (Mining) Geologist-Smt. Priyam Jain, M.Tech (Geology)	Manager-Shri Damodar Pd. Sharma, Mining Engineer-Shri Damodar Pd. Sharma, B.E. (Mining) Geologist- Smt. Priyam Jain, M.Tech (Geology)	----
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited-00Ha. Covered under O/c working-22.160Ha Area Reclaimed and Rehabilitated-00Ha Area under waste disposal-3.468Ha Area occupied by building etc.-2.50Ha Other-Silatation pond-0.680Ha	Area already exploited-2.0Ha. Covered under O/c working-30.0Ha (approx.) Area Reclaimed and Rehabilitated-0.85Ha Area under waste disposal-3.5Ha (approx.) Area occupied by building etc.-1.0Ha (approx.) Other-Silatation pond-0.680Ha	Details are as on date of inspection.

9d	Scrutiny of Annual return on afforestation	Saplings planted during the year- 7550Nos. Survival-75%	3750Nos.	Within the Lease area.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	----
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Production- 10,27,820Tonnes ROM	Production- 10,27,820Tonnes ROM	----
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost-199.60/- Ex mine price- 199.60/- Sale value- For captive use.	Agreed.	----
9h	Scrutiny of Annual return on fixed assets	Rs.- 11,79,44,033/-	Agreed.	----
9k	Scrutiny of Annual return on mining machineries	Back Hoe-3m3- 1No. Dozer-180HP- 1No. Air Comperssor -450m3/min- 1No. Tipper- 14.00m3-10No. Blast Hole Drill-115.0mm- 1Nos.	Agreed.	-----

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)	29-MAR-19	30-MAY-19				
MCDR17	Rule 47(b)	29-MAR-19	06-JUN-19				
MCDR17	Rule 11(1)	29-MAR-19	30-MAY-19				
MCDR17	Rule 47(a)	29-MAR-19	06-JUN-19				

Date :

(P.NAHAR)

Indian Bureau of Mines