

1.0 **GENERAL**

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SN	Particulars	Details
1(a)	Name of the Mine	Patan Limestone Mine
1 (b)	Name if inspecting officer	Mohammand Nimar, DCoM
1 (c)	Accompanying Mines Representatives	D K Singh & Subhas Adhikari ( Mine Manager)
1(d)	Type of Inspection	Star Rating & MCDR Inspection
1(e)	Date of Inspection	04/12/2023
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Non forest- 911.4145 Ha Forest- Nil
3	Mine code	38GUJ07092
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/265/2011
5	Name of the lessee, Address, phone, email and fax number	M/s. Nirma Limited, Nirma house, Ashram road, near income tax office, Ahmedabad-3800 009, Ph.-07927546565, Fax-07927546603, email-mines@nirma.co.in
	The Mine Address	Patan Limestone mine
6	Village	Patan
7	Taluka/Mandal	Jamjodhpur
8	District	Jamnagar
9	Pin code	360530
10	State	Gujarat
11	Post office	Patan
12	Nearest police station	Jamjodhpur
13	Nearest Railway station	Jamjodhpur
14	Date of Grant of Mining Lease	31-05-2016, Valid up to 18-10-2066.
15	Date of Execution	19-10-2016
16	Date of opening of Mine	06-12-2016
17	Approved Mining Plan till Date, if applicable and its period & expiry	1) Letter No. 682 (23) (568)/2007 MCCM (N) UDP, dated: 06-03-2008 Period 05 years. Expiry -2020-21.  2) Letter No. 684(4)(1) / MP-323/2020-21-GNR, Dated: 18-03-2021 Period 05 years. Expiry - 2025-26.
18	Date of second Renewal, if applicable and its period & expiry	N.A.
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	N.A.
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sh. Shailesh V. Sonara, Nirma house, Ashram road, near income tax office, Ahmedabad-3800 009.
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Sh. Ashwinbhai Patel, Nirma Limited, Chemical complex, Kalatalav, Bhavnagar—364313.
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Sh. Subhas Chandra Adhikari.

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1/28334/2024	23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Sh. Vejanand Suva (Mining Engineer), Sh. Mitesh Modi (Geologist),
	24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes
	25	Mineral(s) granted in lease and proved for mining	Limestone
	26	Method of Mining (Opencast, Underground)	Opencast
	27	Category (Fully Mechanised, Others or Manual)	Category A – OTFM
	28	Captive/Non-Captive	Captive

## Scientific Mining:

Compliance of proposals of approved mining plan/scheme of mining. –**Exploration**

SN	Item	Proposals (2022-23)	Actual work (2022-23, up to Nov 2023)	Remarks
1a	Backlog of previous year	66 boreholes 990 meterage	63 boreholes 307 meterage	Variation due to rhyolite encountered in the proposed boreholes.
1b	Exploration over lease area for Geological axis 1 or 2.	325 ha	325 ha	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	-	M K Soil Testing Laboratory Pvt. Ltd. Expenditure – 8.00105 lakh Rupees	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	N.A.	
1e	Balance reserves in Ton	24.967 million Tonnes	25.100 million Tonnes	Up to 31.03.2023
1f	General remarks of inspecting officer on geology, exploration etc.	Area of 325 Ha explored at G-1 level. Due to geological disturbance depth of the hole couldn't be achieved.		

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**2.0 Development**

S N	Item	Proposals (2022-23)			Actual work (2022-23)			Remarks
		Pit	E	E	Pit	E	E	
2a	Location of development w.r.t. lease area	Pit 24	E 608283 N 2412451	E 607358 N 2412926	Pit 24	E 608283 N 2412451	E 607358 N 2412926	
		Pit 18	E 607099 N 2412694	E 607268 N 2412850	Pit 18	E 607099 N 2412694	E 607268 N 2412850	
		Pit 01	E 606334 N 2412526	E 606522 N 2412585	Pit 01	E 606334 N 2412526	E 606522 N 2412585	
		Pit 12	E 606252 N 2411659	E 605935 N 2411826	Pit 12	E 606252 N 2411659	E 605935 N 2411826	
		Pit 19	E 607353 N 2412694	E 607405 N 2412794	Pit 19	E 607353 N 2412694	E 607405 N 2412794	
			E 607357 N 2412844	E 607395 N 2412926		E 607357 N 2412844	E 607395 N 2412926	
		Pit 21	E 607357 N 2412844	E 607395 N 2412926	Pit 21	E 607357 N 2412844	E 607395 N 2412926	
E 607673 N 2412817	E 607851 N 2412862		E 607673 N 2412817	E 607851 N 2412862				
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Not proposed			As reported no work carried out			
2c	Stripping ratio or ore to OB ratio	1:0			1:0			
2d	Quantity of topsoil generation in m3	Not proposed			180			
2e	Quantity of overburden generation in m3	Not proposed			As reported no work carried out			

**3.0 Exploitation**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
3a	Number of pits proposed for production	6	6	
3b	Quantity of ROM mineral production proposed (in Ton)	300000	257320.310	As per plant requirement
3c	Recovery of saleable/unsaleable mineral from ROM production	240000	213719.310	
3d	Quantity of mineral reject generation	Not proposed	As reported no work carried out	

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3e	Grade of mineral reject generation and threshold value declared	Not proposed		As reported no work carried out	
3f	Quantity of sub-grade mineral generation	60000		43601	
3g	Grade of sub-grade mineral generation	Undersize Limestone (chemical Grade)		Undersize Limestone (chemical Grade)	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual		Manual	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed		As reported no work carried out	
3j	Provision of drilling & blasting in mineral benches	Yes		Yes	
3k	Provision of mining machineries in mineral benches	Yes		Yes	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No OB, bench height -3 m & width > 5 m		No OB, bench height -3 m & width > 5 m	
3m	Total area covered under excavation/pits	56.713 (up to 2025-26)		53.040	
3n	Ore to OB ratio for the pit/mine during the year	1:0		1:0	
3o	Total area put in use under different heads at the end of year	8.22		8.22	
3p	Production of ROM mineral during last five- year period, as applicable	2018-19	360000	2018-19	189002.823
		2019-20	360000	2019-20	232183.358
		2020-21	360000	2020-21	267255.306
		2021-22	300000	2021-22	217455.877
		2022-23	300000	2022-23	257320.310
3q	General remarks of inspecting officer on	Drilling and blasting is being used for production as per the hardness of the material. Oversized boulders handled by rock breaker and manual sizing and sorting is done. Backhoe of 0.7 Cum is used for loosening of soft deposit &			

method of mining etc.

blasted material and also for loading of finished product into trucks/dumpers

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4.0 **Solid Waste Management-Dumping**

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S N	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	No OB, bench height	As reported no work carried out	
4b	Location of topsoil, OB & mineral reject dumps	Not proposed	As reported no work carried out	
4c	Number of dumps within lease area and outside lease area	Not proposed	As reported no work carried out	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not proposed	As reported no work carried out	
4e	Number of active & alive dumps	Not proposed	As reported no work carried out	
4f	Number of dead dumps	Not proposed	As reported no work carried out	
4g	Number of dumps stabilised	Not proposed	As reported no work carried out	
4h	Whether Retaining wall or garland drain all along dumps are there	Not proposed	As reported no work carried out	
4i	Length of Retaining wall or garland drain all along dump	Not proposed	As reported no work carried out	
4j	Number of settling ponds	Not proposed	As reported no work carried out	
4k	Specific comments of inspecting officer	No proposal of Solid waste Mining and no work carried out.		

5.0 **Solid Waste Management-Backfilling**

S N	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No Backfilling is Envisaged as no waste material is available, Undersize Material shall be stacked temporarily or future used with due permission of state Govt.	NIL	
5b	Area under backfilling of mined out area (yearly and cumulative)	Not proposed	As reported no work Carried out	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Use in plantation	Use in plantation	
5d	Total area fully reclaimed & rehabilitated	Not proposed	As reported no work carriedout	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Small amount of top soil generated and used in plantation purpose		

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6.0 **Progressive Mine Closure Plan**

S N	Item	Proposals (2022-23)	Actual work (2022-23)	Remark
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	Yes	Yes	
6b	Management of worked / mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	No Proposal	NIL	
6c	Compliance on reclamation and rehabilitation by backfilling i) Total cumulative Mined out area already reclaimed by means of backfilling (in hect) at the end of financial year ii) Afforestation on the backfilled area iii) Rehabilitation by making water reservoir iv) Any other specific means	No Proposal	NIL	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i) 1000 Nos. ii) 1.0 Ha. iii) -	i) 1000 Nos. ii) 1.0 Ha. iii) - Survival rate 90%	Same as reported in PMCP report
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Yes	Yes	
6f	Other (specify) : Fencing			
6g	General remarks of inspecting officer on PMCP compliance & progressive	PMCP compliances for the year 2022-23 has been completed as per proposal & submitted on 21.06.2023.		

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Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
7a	300000	ROM Prod.- 257320.310 tonnes	
7b	Manual	Manual	
7c	Only undersize limestone is available as subgrade mineral and stacked at pit floor.	Only undersize limestone is available as subgrade mineral and stacked at pit floor.	
7d	No	No	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues Undersized Lime Stone stacks heaps found scattered in the pit and are not located at the proposed location of Approved Mining Plan. Violation is already issued under Rule 11(1).		

**8.0 Environment**

S N	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Used in plantation	Used in plantation	
8b	Concurrent use or storage of topsoil	Storage and utilisation	Storage and utilisation	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal	NIL	
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	No proposal	NIL	



1/28334/2024	8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Mined out pits will be utilised as rain water storage.	Pits are being used for rain water harvesting	
	8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	8915 & 1000 Nos planted during the year .	8915 & 1000 Nos planted during the year	
	8g	Survival rate	70 %	90 %	
	8h	Water sprinkling on roads to control airborne dust	Yes	---	
	8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	No preventive measures have taken up for suppression of airborne dust at Mine. Violation is already issued under Rule 40 of MCDR.		

### 9.0 Compliance of Rule 45

S.N	Item	COMMENTS	Remarks
1.	Status of submission of Monthly and Annual returns	M.R. for Nov'23 Submitted on 07.12.2023. A.R. for 2022-23 Submitted on 29.06.2023.	All the monthly returns are being submitted within stipulated time. A.R. for 2022-23 Submitted on 29.06.2023.

S.N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Sh. Vejanand Suva (Mining Engineer), Sh. Mitesh Modi (Geologist), Sh. Subhas Chandra Adhikari (Mine manager)	Sh. Vejanand Suva (Mining Engineer), Sh. Mitesh Modi (Geologist), Sh. Subhas Chandra Adhikari (Mine manager)	

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9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current working – 53.040 ha.	Covered under current working – 53.040 ha.	
9d	Scrutiny of Annual return on afforestation	Afforestation/plantation - 1 Ha.	Afforestation/plantation - 1Ha.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Subgrade or undersize chemical grade limestone (43601 MT)	43601 MT	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	257320.310 MT	257320.310 MT	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	1. Ex-mine prise Rs.417.58 per te	1. Ex-mine prise Rs.417.58 per te	
9i	Scrutiny of Annual return on fixed assets	Rs 1518286	Rs 1518286	
9k	Scrutiny of Annual return on mining machineries	Back Hoe – 1, Tractor – 1, Water Tanker -1, Air Compressor -1, Explosive Van 1	Back Hoe – 1( 0.76 cum), Tractor – 1(55HP), Water Tanker -1(5000L), Air Compressor -1(450 Cum/Mn, Explosive Van 1(0.865T)	

**Observation made:-**

10-

- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- For the financial year 2021-22 no violation were found.
- For Financial year 2022-23 Violations of Rules 11(1), 40 and 45(5)(c) read with 45(7) issued on 22.12.2023 & all the violated Rules complied on 28.02.2024.
- Drone data submitted for mine is verified and found in order as per relevant SOP issued in this regard,

The inspection was done for verification of star rating. After verification the mine has awarded with 4 star as self assessed.

Mohammad Nimar  
Deputy Controller of Mines  
Regional Office Gandhinagar

