PRE-FEASIBILITY REPORT

SUVAKHEDA & KHEDA RATHORE LIMESTONE MINE

Near village- Suvakheda and Kheda Rathore, Tehsil- Jawad, District- Neemuch (MP)

Area: – 221.043 Hectare**, Mineral-** Limestone;

Method of Mining: Opencast Mechanized, **Category: "**A Category"

Lease Period: 07.02.2020 to 06.02.2070, **Project Cost:** Rs. 414.0 Lac

Maximum Total Excavation: 500010 (ROM)

"Submission for obtaining Term of Reference under EIA Notification dated 14.9.2006 and its subsequent amendments till date"

PROJECT PROPONENT

M/S. VEER DURGA DAS MINERALS PRIVATE LIMITED

Rathore House, Near FCI Godown, Chanderia- 312021
Chittorgarh, Rajasthan
Mobile No.: +919829241939
Email ID: rajputanagroupindia@gmail.com, veerdurgadas9829@gmail.com

Work Order: No. Nil, Dated 04.08.2021

EIA CONSULTANT

ENVIROGREEN CONSULTANTS (INDIA) PRIVATE LIMITED
1-B, Machhla Magra, Near Patel Circle, Udaipur-313002
Email: info@egcipl.com; Website: www.egcipl.com

Accredited By NABET (NABET/EIA/1922/RA 0185, valid up to 08-06-2022) Under "A " Category For Sector 1(a)(i)

1.0 Executive Summary

Suvakheda, & Kheda Rathore Limestone Mine (Area: 221.043 hectare) is a proposed opencast mining project located near village- Suvakheda and Kheda Rathore, Tehsil-Jawad, District- Neemuch, Madhya Pradesh of M/s. Veer Durga Das Minerals Pvt. Ltd .

M/s. Veer Durga Das Minerals Pvt. Ltd applied for Prospecting License (PL 19/2011) over an area of 2480 hectares in the villages Suvakheda and Kheda Rathore, Tehsil Jawad, District Neemuch, Madhya Pradesh (MP) on 15.09.2011.

Mineral Resource Department, Govt. of Madhya Pradesh granted the Prospecting License over an area of 221.043 hectares in village Suvakheda and Kheda Rathore, Tehsil Jawad, District Neemuch, M.P. vide order no. F2-113/2012/12/1 dated 14.08.2013 for a period of two years. The PL was executed on 17.10.2013 and registered vide deed no. 1881 dated 05.11.2013 for a period of two years.

Letter of intent (LOI) was issued to M/s. Veer Durga Das Minerals Pvt. Ltd for grant of the mining lease over an area of 221.043 hectares in village Suvakheda and Kheda Rathore for a period of 50 years for the mineral limestone (non-captive use) vide the Mineral Resources Department, Govt. of Madhya Pradesh letter no. F 3-58/2018/12/1 dated 03.10.2018 (Copy of the Letter of Intent is attached as **Annexure No.1**).

Lease grant order in favour of M/s. Veer Durga Das Minerals Pvt. Ltd. over an area of 221.043 hectares in village Suvakheda and Kheda Rathore for a period of 50 years for the mineral limestone (non-captive use) was issued vide letter no. F 3-58/2018/12/1 dated 07.02.2020. Copy of the Letter Grant Order along with detail of Khasra number and Khasra map is attached as **Annexure No. 2**. Authenticated Revenue map along with pillar coordinates of the mine lease area is enclosed as **Annexure No. 3.**

The Mining Plan under rule 16(1) of MCR 2016 and Rule 23 of MCDR 2017 for the area was approved by the Regional Controller of Mines, IBM, Jabalpur, M.P. vide letter No. MP/ Neemuch/ Limestone/ MPLN/ G-08/ 19-20 dated 19.12.2019. Modification to the approved Mining Plan was submitted under Rule 17(3) of MCR 2016 and rule 23 of MCDR 2017 for the remaining period of 2021-22 to 2024-25 and

approved vide letter no. MP/Neemuch/Limestone/MPLN/MOD-06/2021-22/5651 dated 30.07.2021 (Copy of Approved Modified Mining Plan is enclosed as **Annexure No. 4)**.

The lessee is applying for prior Environment clearance under EIA notification dated 14.09.2006 & its subsequent amendments of Ministry of Environment, Forest and Climate Change (MoEF&CC).

SALIENT FEATURES:

<table>
<tr><th>Particulars</th><th>Details</th></tr>
<tr><td colspan="2">Project Nature & Size</td></tr>
<tr><td>Name of Project</td><td>Suvakheda, & Kheda Rathore Limestone Mine</td></tr>
<tr><td>Name of Mineral</td><td>Limestone (Non-Captive)</td></tr>
<tr><td>Mining Lease area with Land use detail</td><td>Area 221.043 ha (194.681 Ha of Agricultural land and 26.362 Ha of Govt. Waste Land.) Lease area comprises of 10 different blocks numbering Block 1 to 10. Details blocks are given below:
<table>
<tr><th>Block No.</th><th>Area of Block in Ha</th></tr>
<tr><td>Block1</td><td>2.0888</td></tr>
<tr><td>Block2</td><td>32.8833</td></tr>
<tr><td>Block3</td><td>3.325</td></tr>
<tr><td>Block4</td><td>32.092</td></tr>
<tr><td>Block5</td><td>22.074</td></tr>
<tr><td>Block6</td><td>38.8584</td></tr>
<tr><td>Block7</td><td>8.3687</td></tr>
<tr><td>Block8</td><td>4.5085</td></tr>
<tr><td>Block9</td><td>6.1989</td></tr>
<tr><td>Block10</td><td>70.646</td></tr>
<tr><td>Total area</td><td>221.043</td></tr>
</table></td></tr>
<tr><td>Maximum Excavation</td><td>500010 TPA (ROM)</td></tr>
<tr><td>Mineable Reserves</td><td>23.84 million tonnes</td></tr>
<tr><td>Life of mine</td><td>48 Years</td></tr>
<tr><td>Method of mining</td><td>Opencast Mechanized Mining</td></tr>
<tr><td>Total quantity of generated waste during Plan period</td><td>Solid waste is in the form of mineral reject only. 17,047 m^3 of mineral reject is proposed to be generated during the present five year plan period. Mineral Reject generation is anticipated @ 3% of ROM.</td></tr>
<tr><td colspan="2">Project Location</td></tr>
<tr><td>Villages</td><td>Suvakheda, & Kheda Rathore</td></tr>
<tr><td>Tehsil</td><td>Jawad</td></tr>
<tr><td>District</td><td>Neemuch</td></tr>
</table>

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State	Madhya Pradesh
Latitude	24° 32' 05.47" to 24° 33' 42.56" N
Longitude	74° 49' 24.55" to 74° 51' 51.18" E
Highest and lowest elevation	The highest elevation is 510 mRL and lowest is 480 mRL
Toposheet No.	Topo sheet No. 45 L/14.
Environmental Settings Details (with approx. aerial distance from the mining lease boundary)	
Nearest town	Nearest town is Jawad which is at a distance of 4.79 Km from lease area.
Nearest Highway	NH –156 runs about 3.5 Km from lease area.
Nearest railway station	Neemuch is the nearest major railway stations which is at a distance of 7.80 Km from lease area.
Nearest Airport	Nearest Airport is at Maharana Pratap Airport, Udaipur at a distance of about 95 km.
National Parks, Wild Life Sanctuaries, Biosphere Reserves etc. within 10 Km radius study area	No National Parks, Wild Life Sanctuaries, Biosphere Reserves etc. within 10 Km radius of the study area
Seismic Zone	Seismic Zone II
Cost Details	
Estimated project cost	414.0 Lac
Cost for Environmental Protection Measures	5.00 Lac/Annum
Cost for CER	8.28 Lac/Annum
Cost for Labour Welfare	2.00 Lac/Annum

2.0 Introduction of the Project/Background Information:

2.1 Identification of project and project proponent.

M/s. Veer Durgadas Minerals Private Limited is a company established under Companies Act 1956, (CIN U14108RJ2011PTC036333) on 01.09.2011 and is registered under Rule 45 of MCDR 2017 and registration no. is IBM/17735/2014 (Copy of Certificate of Incorporation of the company enclosed as **Annexure No. 5**). The company is engaged in the business of mineral exploration and mining of limestone.

Directors of the company are listed below:

i. Shri Kan Singh Rathore
ii. Smt. Manju Kunwar Rathore
iii. Shri Durga Singh Rathore

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Shri Kan Singh Rathore is the authorized signatory of the company (Copy of Board Resolution enclosed as **Annexure No. 6).**

Address of correspondence:

M/s. Veer Durga Das Minerals Private Limited,
Rathore House, Near FCI Godown, Chanderia- 312021
Chittorgarh, Rajasthan
Mobile No.: +919829241939
Email ID: rajputanagroupindia@gmail.com, veerdurgadas9829@gmail.com

2.2 Brief description of nature of the project:

Suvakheda, & Kheda Rathore Limestone Mine (Area: 221.043 hectare) is a proposed opencast mining project located near village- Suvakheda and Kheda Rathore, Tehsil- Jawad, District- Neemuch, Madhya Pradesh of M/s. Veer Durga Das Minerals Pvt. Ltd .

This is a mining project for mineral limestone with maximum excavation of ROM 5,00,010 TPA. To upgrade the final output from the mine it is proposed to carry out primary crushing within leasehold area. The proposed capacity of the crusher plant is 225-250 TPH. The total mineable reserves are 23.84 million tonnes; at the present planned rate of production the life of mine works out to be 48 years. Mine life is based on present probable reserves and it may change after detailed exploration of the area.

2.3 Need for the project and its importance to the country and or region:

India accounts for ~8% of the global cement production installed capacity. In FY 2018, India held the second position in the global cement industry. The demand of raw material for cement such as limestone is expected to witness disruptive growth in the next few years. To develop the country's infrastructure, the Indian government has undertaken several projects related to the construction of roads and highways, both in the rural and urban areas, along with the development of industrial hubs in different parts of the country. These schemes and initiatives are together expected to drive the growth of the Indian cement industry, since it is one of the primary materials for the successful execution of such projects.

Rajasthan was the leading producing State accounting for (20%) of the total production of limestone (IMYB 2019). The limestone found in the lease area is of cement grade, which are the prime requirement for cement manufacturing plants.

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2.4 Demand–Supply Gap:

India is a growing economy and holds great potential for future market opportunities. The demand of raw materials for cement, such as, limestone is expected to cause disruptive growth in the next few decades. In 2018-19, the total consumption of limestone, as reported by different industries was 350.88 million tonnes. The second largest Cement Industry in the world, the Indian Cement Industry, is expected to grow to an extent of 550 million tonnes per annum of capacity by FY 2024-2025. The construction sector is expected to register a high growth rate, which is projected to positively influence the demand. This is expected to contribute 10% to the GDP of India. As limestone is used in the production of such construction materials, along with direct application during construction activities, such trends are likely to significantly create demand for limestone over the forecast period.

2.5 Imports:

India is largest importer of limestone, with 48% market share. Imports of limestone increased considerably by 17% to 24.40 million tonnes in 2018-19 from 20.83 million tonnes in the previous year. Limestone was imported mainly from UAE (81%), Oman (11%), Vietnam (4%) and Malaysia (3%).

2.6 Export Possibility:

Exports of limestone increased substantially by 38% to 3.88 million tonnes in 2018-19 from 2.81 million tonnes in the previous year. Limestone in bulk was exported mainly to Bangladesh (96%) and UK (2%).

2.8 Employment Generation (Direct and Indirect) due to the project:

The managerial and supervisory staff will be employed on desired qualification and experience basis and workers will be employed from local village. Total Man power required at the mine will be 40. Detail of the employment is given below in Table 1.

Table No. 1: Managerial and other staff required for the project

S. No.	PARTICULARS	NUMBER
1.	**Managerial and Supervisory personnel**	**9**
	(i) Mines Manager (As per MMR,1961)	1
	(ii) Mining Engineer (As per MCDR, 2017)	1
	(iii) Mining Geologist(As per MCDR, 2017)	1
	(iv) Mining Mate/Supervisor	1

	(v) Blaster	1
	(vi) Mechanical Engineer (Part time)	1
	(vi) Electrician	1
	(vii) Environment Personnel	2
2.	**Skilled**	**13**
	(i) Excavator operator	2
	(ii) Tipper operator	6
	(ii) Drill m/c operator	1
	(v) Driver Water Tanker	1
	(vi) Driver Jeep	1
	(vii) Crusher operator	1
	(viii) Technician	1
3.	**Semi- skilled**	**16**
	(i) Helpers	12
	(ii) Clerk-cum-store keeper	1
	(iii) Security	3
4.	**Un-Skilled:** for Misc. work	**2**
	Total	**40**

3.0 PROJECT DESCRIPTION:

3.1 Type of project including interlinked and interdependent projects, if any.

The project is for limestone mining by opencast mechanised method of mining. It is proposed to produce 500,010 TPA of Limestone ROM during the approved mining plan period.

To upgrade the final output from the mine it is proposed to carry out primary crushing within leasehold area. With improved quality it will have demand in the market. Chemical processing of mineral is not proposed.

3.2 Location (map showing general location, specific location, and project boundary & project site layout) with coordinates.

The area falls north of District Headquarter Neemuch and south of Tehsil Headquarter Jawad. The area lies on low-rise flat plateau. The granted area is bounded between latitude 24° 32' 05.47" to 24° 33' 42.56" and longitude 74° 49' 24.55" to 74° 51' 51.18". The area falls in Topo sheet No. 45 L/14. The highest elevation is 510 mRL and lowest is 480 mRL.

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The mine is located about 7.80 Km from District Headquarter Neemuch via Neemuch-Jawad road. Neemuch is the nearest major railway stations which is at 7.80 Km distance. Nearest Airport is at Maharana Pratap Airport, Udaipur, Rajasthan at a

distance of about 95 km. Nearest town is Jawad which is at a distance of 4.79 Km from lease area. Location map of the project is enclosed as **Annexure No. 7.**

3.3 Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted.

This is a mining project, which is site specific due to availability of mineral hence the site cannot be shifted.

3.4 Size or magnitude of operation

This is a new mining project for maximum excavation of 500,010 TPA (ROM). Maximum Recoverable Mineral after crushing is anticipated to be around 485,010 TPA. Mineral reject after crushing will be 15,000 TPA.

3.4.1 Geology

Regional Geology

Stratigraphically limestone deposit falling in the area belongs to Nimbahera limestone, which is equivalent to Rohtas stage of Semari series of Vindhyans super group. Complete sequence of Vindhyans upper group is exposed in Chittorgarh district of Rajasthan and Neemuch district of Madhya Pradesh. The Regional geological sequence of the area is as follows

Era	:	Formation
Recent	:	Alluvium
Sub recent to Pleistocene	:	Laterite
Upper Cretaceous	:	Deccan trap(Basalt)
Upper Vindhyans	:	Kaimur sand stone.
Lower Vindhyans	:	Suket shale
		Nimbahera limestone
		Nimbahera shale
		Khorimalan conglomeratic sand stone & boulder bed

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Local Geology

Limestone deposit of the area is sedimentary type. The deposit is covered with silt ranging from 1 to 3m. Limestone is exposed in Block No. 3, part of block No. 4 & 6. Strike of limestone as recorded in the area is NNE-SSW. Average dip of limestone strata recorded is 12^0SE. The Nimbahera Limestone, in general, is grey pale and greenish. It is purplish chocolate and brownish in lower and upper part where it is

argillaceous in composition. The Limestone is fine-grained, non-crystalline, compact, even bedded, flaggy and slabby and breaks with smooth surfaces. The beds vary in thickness from 10 cm to more than a meter and are generally separated by a thin (1 mm to 0.5 cm) layer of greenish cherty or shaly material.

Light green/Pale green Limestone : The hand sample of this limestone is fine-grained, white spotted, compact and soft with greasy feel generally yield only good flags but at times carrying good grade limestone (Rich in CaO content). Secondary calcite veinlets are noticed at many places developed in this unit.

Grey and dark grey limestone: The most wide spreading unit of Nimbahera limestone is the grey and dark grey variety. This is well bedded but mostly massive hard and compact. Being more resistant to weathering, it generally form good outcrops and exhibit more of stylolite and cherty material along bedding planes. This limestone is slightly poor in grade compared to light green limestone. The bands are in form of asymmetrical syncline having fold axis roughly NNW-SSE having shallow dips. The lease area is oriented N-S, with flanks of purple, grey limestone on each limb.

Reserves and Grade

Table No. 2: Mineral Reserves & Resources as per UNFC

A. Total Mineral Reserves	**UNFC Code**	**Quantity in million tonnes**	**Grade**
Proved	111	-	
Probable	121	-	
	122	23.84	40.79%CaO
B. Total Remaining Resources			
Feasibility resources	211	-	
Prefeasibility resources	221	-	
	222	20.10 [3.00 (7.5 barrier) +7.18 (UPL) +9.92 (Low grade)]	
Measured Resources	331	-	
Indicated resources	332	-	
Inferred resources	333	113.67	
Reconnaissance resources	334	-	
Reserves (A)		**23.84**	
Resources(B)		**133.77**	
Total (A+B)		**157.61**	

***Source**: Approved Mining Plan*

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Mine life is based on present probable reserves that are 23.84 Million Tonnes and it may change after detailed exploration of the area.

Proposed Rate of Production and Expected Life of Mine:

Proposed Rate of Production of Limestone = 500010 TPA

Mineable reserves = 23840000 T

Life of Mine = 23840000 / 500010 = 47.67 ≈ **48 years**

Thus the expected life of the Suvakheda & Kheda Rathore Limestone Mine will be 48 years. Surface Geological Plan enclosed as **Annexure No. 8.**

3.4.2 Production Parameters:

The development of mines for the five years plan period will progress as per the table given below:-

Table No. 3: Year wise excavation of Mineral & overburden

Year	In tonnes			ROM/ Waste ratio
	ROM	Recoverable Mineral after crushing	Mineral Reject after crushing	
21-22	218,960	212,390	6,570	1:0
22-23	300,140	291,135	9,005	1:0
23-24	401,400	389,358	12,043	1:0
24-25	500,010	485,010	15,000	1:0
Total	**1,420,510**	**1,377,893**	**42,618**	1:0

***Source**: Approved Mining Plan*

3.5 Project description with process details (a schematic diagram/flow chart showing the project layout, components of the project etc. should be given)

3.5.1 Method of Mining

Mining excavation is proposed to be carried out by mechanized opencast method of mining. Bench height of 8 m is proposed. Working benches width will be around 20-25 m. In closing stages bench width will be reduced to 8 m. Haul road at a gradient of 1:16 will be developed and advanced in depth with the progress of mining. Drilling will be carried out using Wagon drill with hole dia. of 102-115 mm. Blasting will be done using ANFO with booster explosive. Loading of mineral will be with Hydraulic Excavator of 2.1 cum bucket capacity. A sump of about 5 x 5 x 3 will be constructed at

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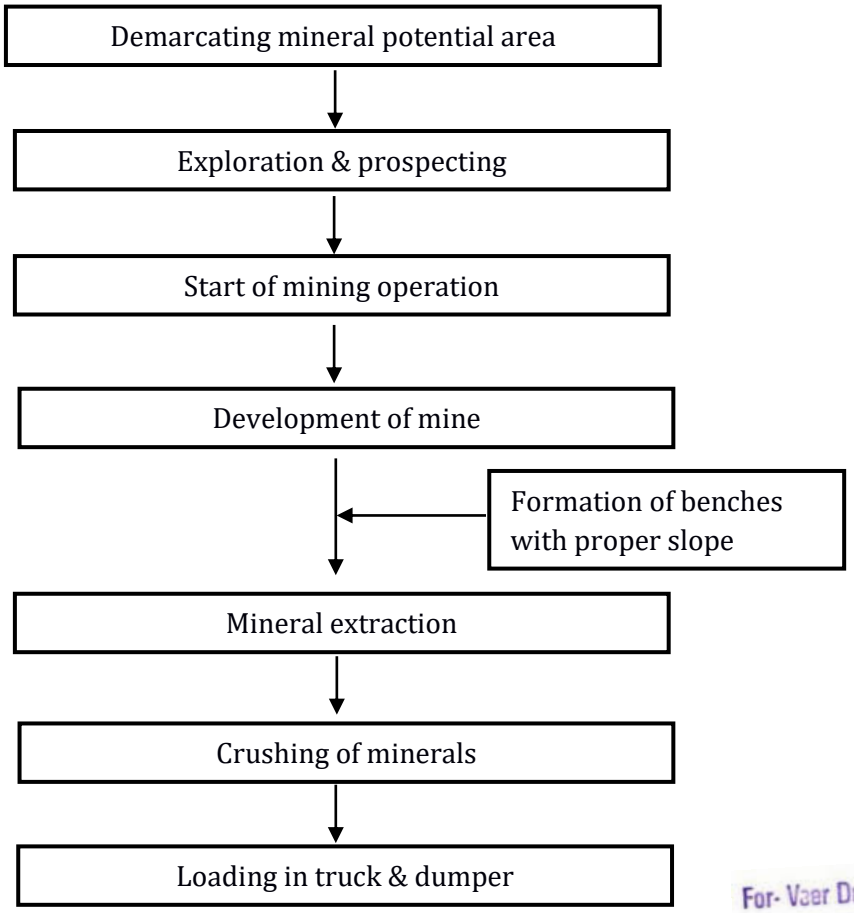
lower most end of the bench. Collected water will be used for mining and dust suppression.

During this plan period mining is proposed in block no. 4 only. At the proposed rate of mining by the end of lease period, mining will cover block no.4, 6,7,8,9. Life of mine is estimated at 48 years at the present rate of mining and during that period other blocks will be covered.

Flow chart showing the project layout:



3.5.2 Conceptual Plan

Conceptual mine planning is based on present reserves and resources. Present conceptual plan is based on reserves under UNFC code 122.

At the end of the five year plan period (2024-25) excavated pit will be of 6.1465 Ha. At the end of lease period excavated pit is proposed to be 46.09 ha. Out of this an area of 7.81 ha will be backfilled in Block No. 4 and Block No. 6. In future with proposed exploration, the conceptual plan may change.

During this plan period mining is proposed in block no. 4 only. At the proposed rate of mining by the end of lease period, mining will cover block no.4, 6, 7, 8 and 9. Life of mine is estimated at 48 years at the present rate of mining and during that period other blocks will be covered. Conceptual Plan enclosed as **Annexure No. 9.**

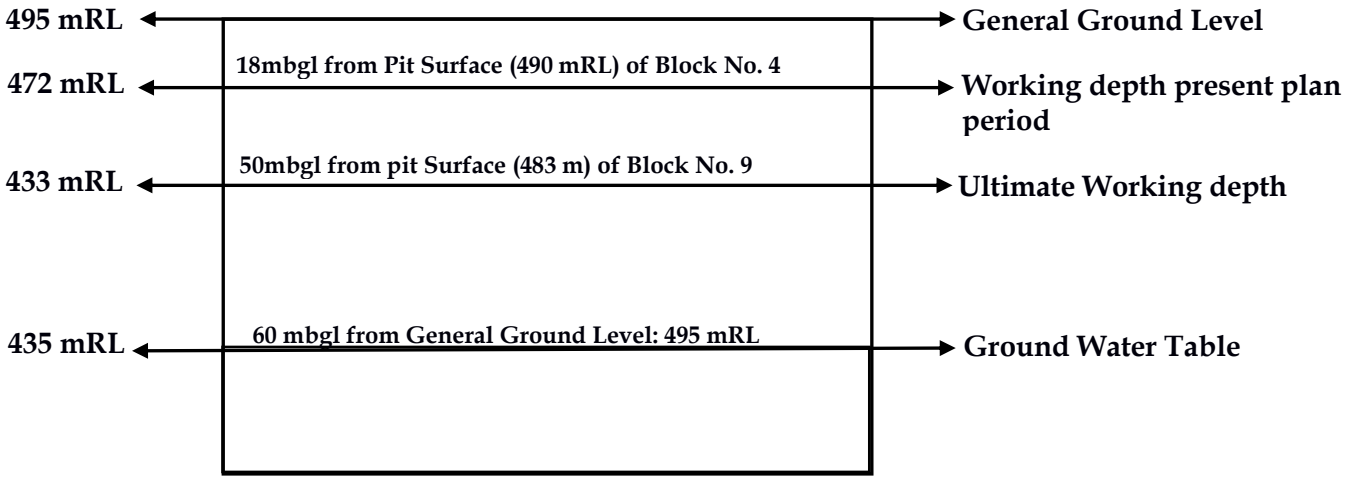


Fig. 1 Schematic plan of depth of the mine and Ground Water Table

Mine working (Block No. 4) will be up to a depth of 472 mRL (18 mbgl) during the present plan period. Proposed conceptual depth (Block No. 9) of mining will be up to 433mRL (50 mbgl). Water table in the area is found to be in the range of 60-70 mbgl. Hence mining activity proposed at this stage will not intersect the ground water table in any block.

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3.5.3 Mechanization

The details of machinery proposed to be used in mining operation are listed below:

Table 4: Proposed deployment of machinery

Equipment	Make	No. of units	Capacity
Excavator	L&TPC 200	02	2.1 cum
Drill Machine	Wagon drill Atlas Copco ICM260	01	102-115 mm dia. hole
Compressor	Atlas Copco XAH210	01	80 HP
Dumper	Tata LPK 2516	05	15 tonne/7.5 cu. m.
Pump	Kirloskar		5 HP Diesel engine operated
Water Tanker		01	9 KL
Crusher		01	
Jeep	Mahindra	01	40 HP

***Source**: Approved Mining Plan*

3.6 Raw material required along with estimated quantity, likely source, marketing area of final product/s, Mode of transport of raw Material and Finished Products.

Raw material is not required for mining project.

3.7 Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined.

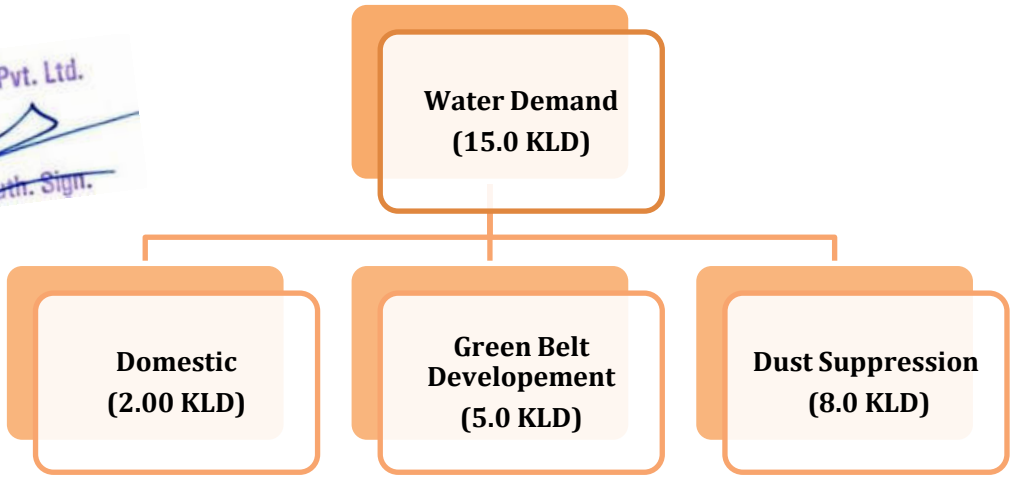
Minerals are depleting asset, once mined they cannot be replenished like agriculture, vegetation, thus, a scientific approach will be taken up in exploration of mineral with systematic method. The mining will be in systematic and scientific manner to conserve the mineral wealth.

3.8 Availability of water its source, Energy/power requirement & source should be given.

Present Water requirement is proposed to be 15 KLD. Drinking water is obtained through purchased tankers for domestic purpose. A sump of about 5x5x3 will be constructed at lower most end of the bench. Rain water collected in the mine sump and rain water collection pond will be utilized for dust suppression and greenbelt development. Also, water may be purchased for the purpose if required.

Water balance Chart:

Water balance chart on per day basis as under:



Energy/power requirement

Electricity connection will be obtained for site office and crushing plant when the mine will be in operation.

3.9 Quantity of wastes to be generated (liquid and solid) and scheme for their Management/disposal.

Waste generation will be only in the form of mineral reject. A total of 17,047 m^3 of mineral reject is proposed to be generated during the present five year plan period. An area of about 0.899 ha will be required for storage of the mineral reject which will be stacked at the designated place in Block No. 2. At the end of life of mine, this mineral reject if not sold will be used to backfill the pit.

There is no overburden generation during the present plan period. Top soil of about 2 m thickness will be removed which will be approximately 122930 m^3 during the present five year plan period. Top Soil removed in the area shall be used for plantation and green belt development. Surplus soil shall be stored at the designated place on east of the Block No. 4.

3.10 Schematic representations of the feasibility drawing which give information of EIA purpose.

As per the Environment Impact Assessment (EIA) notification dated 14th Sept. 2006, prior environmental clearance is required for "*new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule of the notification entailing capacity addition with change in process and or technology.*"

This is a new mining project for mineral Limestone with maximum excavation of 500,010 TPA (ROM). Maximum Recoverable Mineral after crushing is proposed to be 485,010 TPA. Proposed Mineral reject after crushing will be 15,000 TPA.

As per Schedule of the notification the project falls under category 1 (a) A. The EIA report is required to get environmental clearance for the project from the MoEF&CC. The process of Environment Clearance will be undertaken as per the following schematic diagram.

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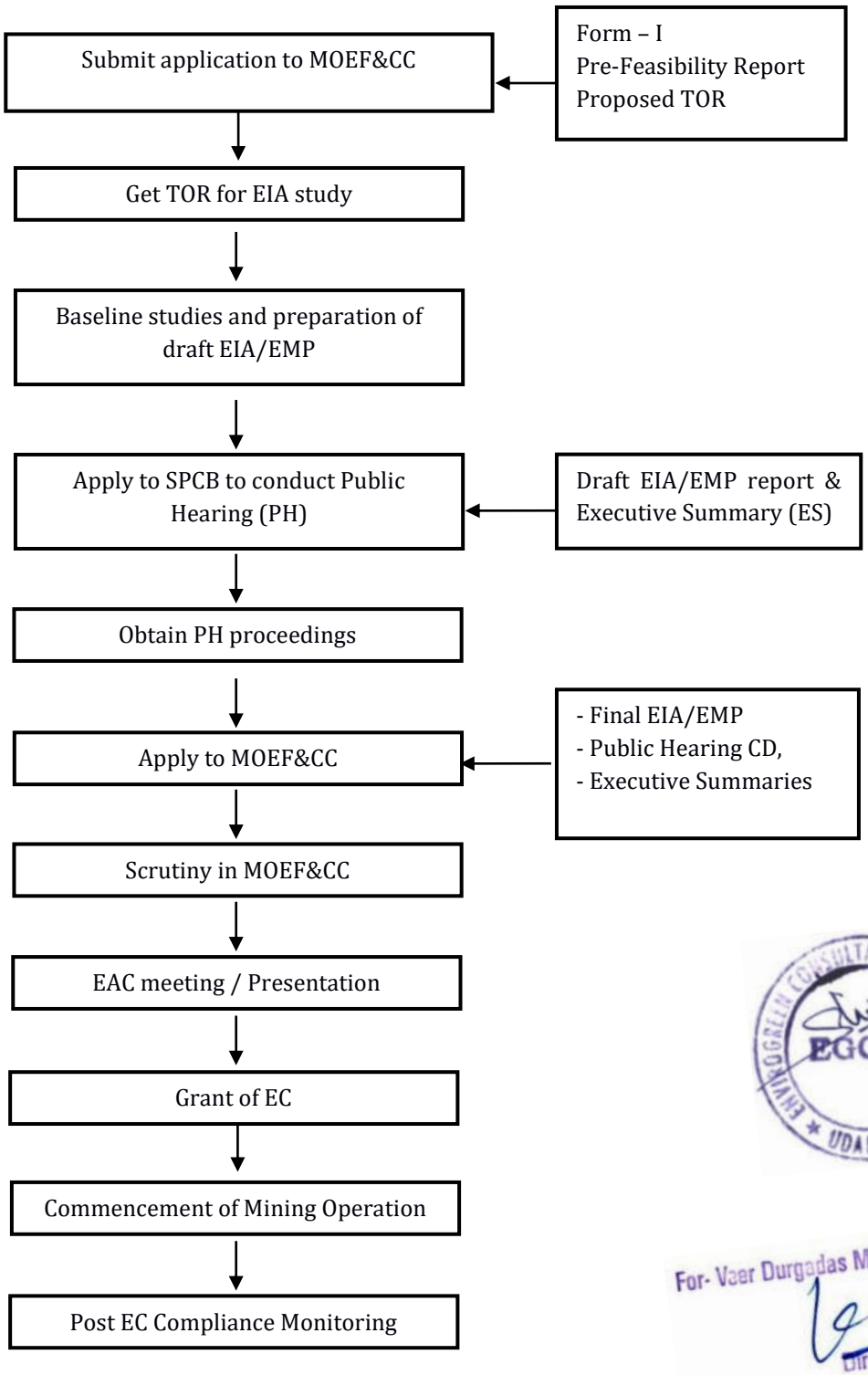
Environmental Clearance (EC) Process as per EIA Notification-2006



4.0 SITE ANALYSIS:

4.1 Connectivity:

The mine is located about 7.80 Km from District Headquarter Neemuch via Neemuch-Jawad road. Neemuch is the nearest major railway stations which is at 7.80

Km distance. Nearest Airport is at Maharana Pratap Airport, Udaipur at a distance of about 95 km. Nearest town is Jawad (Tehsil headquarter) which is at a distance of 4.79 Km from lease area well connected with the tar road.

4.2 Land Form, Land use and Land ownership:

The total lease area is 221.043 Ha. Land Form, Land use of the lease area is given below:

Land Form, Land use	Area in ha	Village	Area in ha
i) Forest Land	0.00	Suvakheda	Nil
		Kheda Rathore	Nil
ii) Govt. Waste Land	26.362	Suvakheda	18.147
		Kheda Rathore	8.215
iii) Grazing Land	0.00	Suvakheda	Nil
		Kheda Rathore	Nil
iv) Pvt. Agriculture Land	194.681	Suvakheda	193.361
		Kheda Rathore	1.320
TOTAL AREA	**221.043**	**Suvakheda**	**211.508**
		Kheda Rathore	**9.535**

4.3 Topography (along with map):

The area lies on low-rise flat plateau. The granted area is bounded between latitude 24° 32' 05.47" to 24° 33' 42.56" and longitude 74° 49' 24.55" to 74° 51' 51.18". The area falls in Topo sheet No. 45 L/14. The highest elevation is 510 mRL and lowest is 482 mRL.

4.4 Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ)), shortest distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, water bodies (distance from the HFL of the river), CRZ. In case of notified industrial area, a copy of the Gazette notification should be given.

Existing Land use is given in point 4.2. The lease area is free from environmentally sensitivity sites. Distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, and water bodies are as follows:

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Table 5: Features within 10 Km Buffer from mine lease periphery

Particulars	Distance/status within 10 km
Forests area	• Reserved Forest: 10.0 Km, North East • Protected Forest: 9.35 Km, North
National park/wild life sanctuary	None
Eco sensitive area	None
Notified industrial area	None
Water bodies	• Pond near Kesharpura Kalan village: 4.35 km, West • Pond near Bharbadiya Village: 1.20 km, South East • Pond near Borkhedi village: 4.80 km, North West • Ghambhiri River: 8.00 km, North • Nallh, near Neemuch-Rawatkheda –Jamuniya Ka Khar : 9.0 km, South

4.5 Existing Infrastructure: Office / store / rest shelter are proposed in the designated site in block no. 4

4.6 Soil classification: Soil in this region is Black Cotton Soil. On higher elevations at places are covered with murram.

4.7 Climatic data from secondary sources: The area has a sub-tropical climate, and the weather is dry almost throughout the year. Summers are during the months of April, May and June. These months experience a maximum temperature of around 45°C) and a minimum temperature of around 35°C. The monsoon season is during the months of July, August and September. These months experience very sparse rainfall. The overall rainfall in the region is around 800 mm. Winters are during the months of October, November, December and January. The month of February experiences pleasant weather. Maximum temperature during winter is 25°C and a minimum of around 2°C. Wind direction is from south-west to north in April to September and in the remaining months of the year it is north-east direction to south-west direction. Average Relative Humidity ranges between 21% (April) to 80% (July – August).

4.8 Social Infrastructure available: Basic social infrastructure facilities like Health centres, school, bus stand, railway station, post office, police station, road etc. are available at Suvakhera Village and well connected with road.

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5.0 PLANNING BRIEF:

5.1 Planning Concept:

This is a new Mining project for mineral Limestone. Mineral Resources Department, Govt. of Madhya Pradesh issued lease grant order over an area of 221.043 hectares in village Suvakheda and Kheda Rathore for a period of 50 years for the mineral limestone (non-captive use) The mining operations will commence after getting EC under EIA Notification , 2006.

5.2 Population Projection

There is no influx of population expected due to the project; the labor is hired from nearby area and/or local village.

Table 6: Population within 10 km Buffer zone (as per Census of India 2011):

Village	No_ HH	TOT_P	TOT_M	TOT_F	P_SC	M_SC	F_SC	P_ST	M_ST	F_ST
Achlawada	16	89	38	51	13	5	8	0	0	0
Akli	42	199	100	99	30	18	12	20	9	11
Amlibhat	305	1294	635	659	146	64	82	34	18	16
Athana	1503	6456	3251	3205	633	323	310	238	107	131
Barkheda Jat	83	331	164	167	0	0	0	156	73	83
Barkheda Mina	83	376	187	189	0	0	0	11	7	4
Barukheda	238	1282	686	596	268	141	127	34	20	14
Bhadbhadiya	854	3905	2018	1887	622	314	308	48	24	24
Bhatkheda	328	1592	850	742	105	73	32	132	72	60
Bholyawas	173	785	394	391	91	47	44	32	15	17
Bisalwaskalan	566	2475	1274	1201	369	187	182	273	142	131
Bisalwaskhurd	239	999	523	476	141	75	66	99	46	53
Bolkheda	125	458	235	223	28	15	13	89	41	48
Borkhedi	289	1262	628	634	165	81	84	138	72	66
Borkhedikalan	222	1060	535	525	207	106	101	26	12	14
Chadoli	179	713	367	346	443	233	210	0	0	0
Chauthkheda	141	788	411	377	102	53	49	2	2	0
Damodarpura	687	2580	1361	1219	207	107	100	229	120	109
Daru	724	3378	1737	1641	436	230	206	183	87	96
Dhaneriyakalan	1214	5960	3058	2902	1380	689	691	242	129	113
Dholpura	134	602	306	296	4	2	2	173	82	91
Dudarsi	342	1514	778	736	271	134	137	267	130	137
Gadola	56	270	121	149	3	2	1	0	0	0
Gopalpura	139	514	257	257	2	1	1	350	178	172
Gothada	231	868	431	437	4	2	2	56	32	24
Hanmantya	210	796	397	399	291	142	149	13	6	7
Hingoriya	182	923	450	473	313	133	180	136	71	65

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Jaisingpura	249	1162	573	589	299	141	158	98	48	50
Jawad	45196	203581	103780	99801	24930	12728	12202	32569	16611	15958
Jawi	934	3801	1932	1869	427	219	208	224	114	110
Kalepur	117	444	227	217	0	0	0	0	0	0
Kanawati	885	4142	2209	1933	709	384	325	156	83	73
Kandka	202	876	410	466	58	24	34	75	36	39
Kesharpura Kalan	352	1558	756	802	282	131	151	260	131	129
Kheda Rathor	85	423	217	206	0	0	0	28	12	16
Khor (CT)	1298	5683	2987	2696	1343	687	656	258	132	126
Kirpurakhurd	146	564	272	292	0	0	0	0	0	0
Lalpura	65	322	154	168	0	0	0	0	0	0
Lewada	136	651	315	336	21	9	12	90	39	51
Maheshpura (Neemuch)	52	258	133	125	37	17	20	12	7	5
Malkheda	430	1904	951	953	492	261	231	80	41	39
Manpura	182	927	463	464	24	11	13	125	59	66
Melankheda	233	898	463	435	170	97	73	203	100	103
Mendki	162	773	407	366	87	45	42	242	127	115
Mohanpura	0	0	0	0	0	0	0	0	0	0
Nagda	109	520	275	245	7	3	4	93	48	45
Nayagaon	1512	6699	3464	3235	1028	513	515	384	201	183
Neemuch	39402	172735	87882	84853	27253	13713	13540	11857	6058	5799
Newad	346	1601	810	791	285	135	150	242	123	119
Nipaniya Abad	87	353	192	161	0	0	0	155	85	70
Paldakheda	278	1266	650	616	58	29	29	116	55	61
Pipalya Premji	71	310	157	153	65	33	32	26	13	13
Pipalyacharan	82	328	171	157	10	6	4	7	6	1
Pipalyahada	80	366	189	177	6	4	2	181	97	84
Piplon	400	1823	923	900	447	229	218	43	18	25
Sarelya	145	644	313	331	26	11	15	0	0	0
Sarwaniya Maharaj	1665	6737	3455	3282	1138	581	557	149	76	73
Sarwaniya Masani	290	1402	703	699	352	176	176	58	25	33
Sarwaniyabor	293	1139	586	553	148	79	69	0	0	0
Semali Chandrawat	301	1380	696	684	98	54	44	14	11	3
Surjana	106	421	233	188	152	86	66	0	0	0
Suwa Kheda	873	4138	2131	2007	641	329	312	332	168	164
Tarapur	244	1234	645	589	25	13	12	18	8	10
Tumba	237	1102	552	550	137	61	76	381	197	184
Upreda	219	895	446	449	245	125	120	66	33	33

Out of total population, 50.98 % are male and 49.02 % are female. The percentage of Schedule Cast is 14.17 % and 10.85 % Scheduled Tribes.

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5.3 Land use planning (break up along with green belt etc.)

Table 8: Land Use Planning

Particulars	Area in Hectare			
	Present Status	During plan period	Conceptual Plan	Post Mining
Pit	0.0	6.1465	46.0945	7.81 ha will be Backfilled & reclaimed with plantation and re-grassing 38.2845 ha for RWCP
Dump	0.0	0.0	0.00	-
Mineral Stack	0.0	1.00	0.00	-
Road	0.0	0.0	0.00	-
Crusher	0.0	1.00	0.00	-
Mineral Reject	0.0	0.899	0.00	-
Infrastructure (office, shelter, Magazine etc.)	0.0	0.02	0.00	-
Plantation	0.0	0.60	21.3397	Plantation in 7.5 m barrier
Top Soil Stack	0.0	2.00	0.00	-
Sub Total	**0.0**	**11.6655**	**67.4342**	-
Unused area available for further development	221.043	209.3775	153.6088	-
Total area	**221.043**	**221.043**	**221.043**	-

***Source**: Approved Mining Plan*
***RWCP:** Rain Water Collection Pond*
***Note:** In future with proposed exploration, the conceptual land use may change.*

5.4 Assessment of Infrastructure Demand (Physical and Social):

Physical

Infrastructure facilities will be developed at mine site.

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Social

- Rest shelters and water huts for drinking water will be provided to the workers.
- Separate toilets will be constructed for male & female mine workers

5.5 Amenities/Facilities:

The mine site office, first aid room and rest shelter will be constructed within the lease area. As the workers are from nearby villages, housing facilities not envisaged. Rest shelters and water huts for drinking water will be constructed and maintained. Separate toilets will be constructed for male & female mine workers

6.0 Proposed Infrastructure:

The development of Infrastructure in the mine will in the form office, store, rest room, toilets. A crushing along with screens is proposed to be installed.

6.1 Industrial Area (Processing area):

To upgrade the final output from the mine it is proposed to carry out primary crushing within leasehold area. With improved quality it will have demand in the market. No chemical processing of mineral is proposed. Proposed crusher site is in NE of the lease area, approximate area required will be about 1.0 ha. Proposed location of the crushing plant is in Block No. 3. The proposed capacity of the crusher plant is 225-250 TPH.

6.2 Residential Area (Non Processing Area):

Not applicable, local personnel will be deployed i.e. from the nearby area.

6.3 Green Belt:

Green belt development program will be made in successive phases depending upon the immediate need, priority and availability of land. The area available for plantation during the present five year plan will be along the lease periphery.

The year wise programme of afforestation along with number of plants and name of species are as given below:

Table 9: Year Wise Greenbelt Development Program

Period	Number of Plants	Area (ha)	Location	Type of Plants
2021-22	2300	2.30	7.5 m Safety barrier: **21.3397 Ha** Backfilled area: **7.81 Ha**	Amla, Semal Anogeissus sp. Gulmohar, Khejri, Neem etc.
2022-23	2300	2.30		
2023-24	2300	2.30		
2024-25	2300	2.30		
Up to conceptual stage	20000	19.9497 (Including 7.81 backfilling)		
Total	**29200**	**29.1497**	**29.1497**	

***Source**: Approved Mining Plan*

6.4 Social Infrastructure:

Socio-economic conditions of area generally improve as mining activities create additional employment opportunity for local habitants. Socio-economic status of local populace also improves as a result of social welfare activities undertaken by mine owners.

Significant contributions will be made towards Rural/village & Community welfare education Literacy awareness, supports to schools medical facilities and cultural

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aspects. In water scarcity regions drinking water will be provided to villagers. Plantation program in and around mine lease will improve environmental conditions in the area and aesthetic beauty of the area.

6.5 Connectivity (Traffic and Transportation Road/Rail/Metro/Water ways etc.):

The mine is located about 7.80 Km from District Headquarter Neemuch via Neemuch-Jawad road. Neemuch is the nearest major railway stations which is at 7.80 Km distance. Nearest Airport is at Maharana Pratap Airport, Udaipur at a distance of about 95 km. National Highway 156 (Old NH-79) is at a distance of 3.50 Km. Nearest town is Jawad which is at a distance of 4.79 Km from lease area.

6.6 Drinking Water management (Source and Supply of water):

Drinking water will be obtained through purchased tankers for domestic purpose. Rain water collected in the mine sump will be utilized for mining activity, dust suppression and greenbelt development. Also, water may be purchased for the purpose as and when required.

6.7 Sewerage System:

Not applicable.

6.8 Industrial Waste Management:

Not applicable.

6.9 Solid Waste Management:

Waste generation will be only in the form of mineral reject. At the end of life of mine, this mineral reject if not sold will be used to backfill the pit. Top Soil removed in the area shall be used for plantation and green belt development. Surplus soil shall be stored at the designated place on east of the Block No. 4.

6.10 Power Requirement & Supply /source

Power requirement: Electricity connection will be obtained for site office and crushing plant when the mine will be in operation. ***Source:*** *State Electricity Board.*

Fuel: Diesel will be used in machinery as fuel. About 770 liter per day is assumed to be consumed. ***Source:*** *Nearby Fuel stations*

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7.0 Rehabilitation and Resettlement (R & R Plan):

7.1 Policy to be adopted (Central/State) in respect of the project affected persons including home oustees, land oustees and landless labourers (a brief outline to be given).

As the mining operations will not disturb or relocate any village or settlement, no adverse impact is anticipated on any human settlement. No displacement of people is envisaged from the ML area.

8.0 Project Schedule & Cost Estimates:

8.1 Likely date of start of construction and likely date of completion (Time schedule for the project to be given).

Mining activity will start after obtaining Environment Clearance from MoEF&CC. CTE & CTO will be obtained from State Pollution Board before commencement of operation.

8.2 Estimated project cost along with analysis in terms of economic viability of the project.

Cost of Project and Budget for EMP/CER/Labour Welfare

The estimated project cost will be 414.00 Lac

1. Project Cost-	**414.00 Lac**
(a) Machinery	393.0 Lac
(b) Infrastructure	5.00 Lac
(c) EMP	15.00 Lac
(d) Mining Plan with Progressive Mine Closure Plan	01.00 Lac
2. CER	**8.28 Lac**
3. Labour Welfare	**2.00 Lac**
4. Environment Management Cost-	**5.00 Lac**
Water Sprinkling	2.00 Lac
Green Belt Development	1.00 Lac
Environmental monitoring	1.00 Lac
Maintenance of environment structures:	1.00 Lac

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Economic Viability of the project:

The mining project for mineral limestone have a proposed excavation of 5,00,010 TPA (ROM). It is estimated that the mining cost will be between Rs. 310 to Rs. 368 per tonne and the selling price is expected to ne at Rs. 440 to Rs. 490 per tonne. Hence the project is economically viable *(Source: approved Mining Plan)*

9. Analysis of Proposal (Final Recommendations):

9.1 Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.

Mining is main industry in this area. It is a labour oriented industry and is having vast scope of direct and indirect employment of local populace. The mine will bring economic benefits to the state by the way of royalty for mineral, dead rent, GST/VAT, income tax etc.

Socio-economic condition of area generally improves through employment as well as social welfare activities under taken by mine owners. Significant contribution will be made towards educational, medical facilities and cultural aspects.

In the region there are number of cement plants operating and the requirement is for cement grade limestone. The project of excavations of mineral limestone, an industrial mineral is viable. Geological study of the Suvakhera & Khera Rathore limestone area shows that the deposit is of cement grade. There are various cement plants near by the Suvakhera & Khera Rathore limestone deposit. Hence, demand of limestone for the cement grade found in the Suvakhera & Khera Rathore limestone area is potential.

For M/s. Veer Durga Das Mineral Pvt. Ltd.

For- Veer Durgadas Minerals Pvt. Ltd.

Director/Auth. Sign.

Date: 23.08.2021
Place: Neemuch

Kan Singh Rathore
(Director)