PRE – FEASIBILITY REPORT

1. EXECUTIVE SUMMARY

This is an proposed mine. Proposal of obtaining Environmental Clearance for masonry stone with production Capacity 1,00,260TPA (ROM), Near Village: Gorir (Modi Pahar), Tehsil: Khetri, District Jhunjhunu (Rajasthan). The total lease area is 1.0 ha which is an Govt. Land.

The mining lease was granted in favor of Shri Kamal Kant Sharma S/o. Shri Ram Kumar Sharma vide order no. ME/Sikar/Minor/ML-477/2005/388 on 03.07.2006. The lease deed was executed on 03.12.2007 and lease deed was registered on dated 13.12.2007 for 20 years.

The Mining Scheme has been approved by Supdt. Mining Engineer Jaipur, by his order no.-SME/JAI/MINING SCHEME/187/2015/1904 onm dated 21.08.2015 with the production capacity of 1,00,260TPA (ROM).

Table-1
Salient features of the Project

S. No.	Particulars	Details
A.	**Mining Lease Details**	
1.	Name of the Project	Masonry Stone Mining project
2.	Mineral	Masonry Stone
3.	Mining Lease Number	M.L. No 477/05
4.	Mining Lease Area	1.0 ha
5.	Applicant	Shri Kamal Kant Sharma
B	**Location**	
6.	Village	Gorir (Modi Pahar)
7.	Tehsil	Khetri
8.	District	Jhunjhunu
9.	State	Rajasthan
10.	Latitude & Longitude	28° ' 0'0.55" N to 28° 00' 28.35172" N 75° 56' 21.27" E to 75° 56'26.43" E
C.	**Other details**	
11.	Cost of the project	Rs. 15 Lacs
12.	Cost for Environmental Protection Measures	Rs. 0.50 lakh per annum

S. No.	Particulars	Details
13.	CSR Cost	Rs. 0.50 lac
14.	Cost for Laboures	Rs. 0.50 lac
15.	Seismic Zone	III

2.0 INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

(i) Identification of Project and Project Proponent

This is an proposed mine. Proposal of obtaining Environmental Clearance for masonry stone with production Capacity 1,00,260TPA (ROM), Near Village: Gorir (Modi Pahar), Tehsil: Khetri, District Jhunjhunu (Rajasthan). The total lease area is 1.0 ha which is an Govt. Land.

(ii) Brief Description of the Nature of Project

The mining lease was granted in favor of Shri Kamal Kant Sharma S/o. Shri Ram Kumar Sharma vide order no. ME/Sikar/Minor/ML-477/2005/388 on 03.07.2006. The lease deed was executed on 03.12.2007 and lease deed was registered on dated 13.12.2007 for 20 years.

Environmental Clearance is required as per MoEF Office Memorandum No. J-13012/12/2013-IA-II (I) dated 24.12.2013 The Interstate Boundary of Haryana-Rajasthan Falls at a distance of 2.03 km from the Lease area & total Area of other operating mines within 500m periphery of the lease area is more than 5.0 hectare, Hence General Condition is applicable. So, The said project is falls under A Category.

(iii) Need for the Project & Its Importance to the Country/ Region

Masonry Stone is used in various construction activities and will be sold to nearby markets to fulfill the requirements of the local people.

(iv) Demand – Supply Gap

Considering the demand of mineral sufficient availability of the mineral in the area, it is essential to have Masonry Stonemine to sustain the supply of mineral for construction purpose.

(v) Imports vs. Indigenous Production

It is a cheap mineral used in construction activities in rural therefore export is not possible.

(vi) Export Possibility

There is no export possibility as these mineral is quite cheap and locally available in abundance and used in rural areas.

(vii) Domestic/Export Markets

Masonry Stone has only domestic market and will fulfill the requirement of local. The stone may also be supplied to stone crusher proposed to be installed outside the lease area.

(viii) Employment Generation (Direct and Indirect) due to the Project

The around 10 skilled, unskilled and semiskilled manpower needed to run the mine.

3.0 Project Description

(i) Type of Project Including Interlinked And Independent Projects, If Any

There is no interlinked or interdependent project based on mineral produced. The mineral will be sold directly.

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

Key Plan is enclosed as annexure:-1

(iii) Details of Alternate Sites Considered

No alternative site has been taken into consideration due to availability of mineral resources in the area in question.

(iv) Size and magnitude of operation

Proposed Production of Masonry Stone (1,00,260TPA (ROM) at Village: Gorir (Modi Pahari), Tehsil: Khetri, District Jhunjhunu (Rajasthan).

(v) Project Description with Process Detail

1. **Salient features along with project vicinity details of the Mining project is given below**:

Table - 2

Salient Features of the Project

S. No.	Particulars	Details
1.	Name of the Project	Masonry Stone Mining Project
2.	Mineral	Masonry Stone
3.	Mining Lease Number	M.L. No.477/05
4.	Mining Lease Area	1.0 ha
5.	Lease Holder (Proposed)	Shri Kamal Kant Sharma
6.	Lease Period	20 years
7.	Elevation Range in the area	363 mRL to 381mRL
8.	Method of mining	Semi-mechanized opencast method
9.	Mineable Reserves	5,48,252T
10.	Life of Mine	6.0 years
11.	Bench Height & Width	Bench Height: 6 m, Bench Width:6 m

3. GEOLOGY OF THE AREA

The area covers part of Jhunjhunu and Sikar district of Rajasthan and a small part in the northeast falls in Mahendragarh District of Haryana State. The area is well connected by roads and Railway Lines. The Phulera –Rewari railway line passes through the area. The area exhibits Semi- arid climate with average annual rainfall of 460 mm. The area is drained by northerly – flowing Chandrawati River with its tributaries. Besides, a number of ephemeral streams Showing dendtritic pattern present in the area, which either join the Chandrawati River or die out in the sandy terrain.

Geomorphologically, the area is characterized by NE-SW trending hills with intervening peneplain area covered with quaternary sediments of both aeolian and fluvial origin. The met sedimentary rocks exposed in the area comprise meta-arenites, meta-argillites with intercalated calcareous rocks are grouped under the Ajabgarh Group. Granite, amphibolites and other intrusive rocks are also found in the area.

The Alwar Group comprises mainly massive quartizite which are exposed in the hills in southeastern part of the area. The quartizite are massive, fine to medium grained

and grey, buff or brown colour and belongs to pratapgarh formation of Alwar Group. The Quartizite are shoeing NE-SW strike with 65 to 75 dip easterly. The Ajabgarh Group represented by khushalgarh. Seriska, thanaghazi and Bharkol Formations.

The Kushalgarh Formation comprises calc –geniss, amphibole – bearing impure marble with inter bands of quartizite and Schist. The metasomatic instrusion of carbonatite, nepheline syenite are also seen within the rocks of this formation and fenitised Zone is marked separately.

Amphibolite intrudes most of rocks. The other type of confined to the arenaceous rocks as thin, cross- cutting dykes trending NNW-SSE or NW-SE. These are fine grained and more closely fractured. The Amphibolites are sleeply dipping to near – vertical and represent metamorphosed basic intrusive. The Bharkol Formation comprises phtllite inter –bedded with Quartizite and occurs east of Babai.

The geological succession of Sikar district is as follows:

Regional Stratigraphic sequence

Recent		Alluvium & windblown sand
Post Delhi intrusive		Quartz vein, pegmatige Granite, gneiss, amphibolite
Delhi Super Group	Ajabgarh Group	Impure limestone, Cal-geiness/Schist Phylite Mica Schist, breciated Ferigenious quartzite
	Alwar Group	Quartzite, massive quartzite, grittee Quartzite

(Source: simplified Mining Scheme)

LOCAL GEOLOGY

In the present area only masonary stone is available

Super Group	Group	Lithology
Delhi Super Group	Alwar Group	Calc Silicate (Masonary Stone)

4 Estimated Reserves

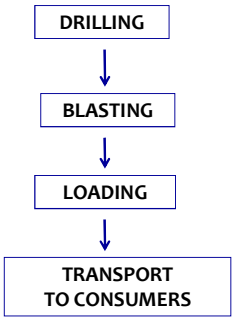
Total mineable reserves : 5,48,252T

5. Method of Mining

Proposed method of mining will be semi mechanized opencast by forming proper benches by driling, control blasting. The mining is proposed as per present situation of the deposit. The masonry stone will be excavated by blasting of small dia holes of 32 mm. and 1500 mm. depth.

Hydrauluic machinaries will be deployed for excavation of masonry stone and loading of the masonary stone. Tippres will be deployed for the transportation of the masonary stone.

PROCESS FLOW CHART OF MINING



6. PROPOSED YEAR WISE PRODUCTION DETAILS OF THE NEXT FIRST FIVE YEARS

The proposed Year-wise production plan for next five years is mentioned in the table given below:

Table – 3

Year Wise Production for Next Five Years

Year	Total Excavation in T
First year	43,569.5
Second year	49,134
Third year	58,282.5
Fourth year	75,639
Fifth year	95,247
Total	**3,21,872**

7. LOADING & TRANSPORT

Tyre mounted Hydraulic machinaries will be deployed from time to time and when required. Trucks and tracor troley will be deployed for transportation of masonary stone from working to consumer.

8. WASTE GENERATION & DISPOSAL

There is no top soil and the generated waste will be second grade mineral and sold out for other purpose.

9. CONCEPTUAL PLAN

At the conceptual stage, total waste material of about 5,013T. Total excavated area of 0.6987 ha will be converted in to water reservoir.

Table – 4

Post Mining Plan (Conceptual) Land Pattern of ML Area (Ha.)

S. No.	Description	Land Use (In ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1.	Top Soil Dump	-	-	-	-	-
2.	External Waste Dump	-	-	-	-	-

3.	(a) Excavation (Voids)	-	0.6987	-	-	0.6987
	(b) Excavation (Dump)	-	-	-	-	-
4.	Road	-	-	-	-	-
5.	Built Up Area	-	-	-	-	-
6.	Township Area	-	-	-	-	-
7.	Afforestation	-	0.3013	-	-	0.3013
8.	Mineral Storage	-	-	-	-	-
9.	Undisturbed Area			-	-	-
	Total	**-**	**1.00**	**-**	**-**	**1.00**

(i) Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Products, Mode of Transport of Raw Material and Finished Product

This is Masonry Stone Mining Lease. The mineral will be used for construction purposes. No raw material will be required to dependent industries.

(ii) Resources Optimization/ Recycling and Reuse Envisaged in the Project, if any, should be briefly Outlined

No waste water will be generated from mining operation. Domestic sewage water generated from office toilet will be disposed in soak pits via septic tank.

(iii) Availability of Water Its Source, Energy /Power Requirement and Source

A. Water requirement:

Total water requirement for the proposed project will be 4.0 KLD which will be sourced by tube well from nearby villages.

B. Power requirement:

The electric power will not be use for the process of mining. Only HSD Fuel will be required for operating machineries.

(iv) Quantity of Waste to Be Generated (Liquid and Solid) And Scheme for Their Management/Disposal:

Domestic sewage water generated from office toilet will be disposed in soak pits via septic tank.

4.0 SITE ANALYSIS

(i) Connectivity

The lease area approx. 15.0 km from the Khetri. Dispensary, hospital and educational facilities are available in Gorir. Railway line is available in Dabla RS which is at a distance of 12.59 km. The lease area is well connected through roads.

(ii) Land Form, Land Use and Land Ownership

The total ML area of 1.0 ha comprises of Govt land. The Stage wise land use and reclamation is given in Table – 5.

Table – 5

STAGE WISE LAND USE AND RECLAMATION AREA (in Ha.)

S. No.	Description	Land Use (In ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1.	Top Soil Dump	-	-	-	-	-
2.	External Waste Dump	-	-	-	-	-
3.	(a) Excavation (Voids)	-	0.6987	-	-	0.6987
	(b) Excavation (Dump)	-	-	-	-	-
4.	Road	-	-	-	-	-
5.	Built Up Area	-	-	-	-	-
6.	Township Area	-	-	-	-	-
7.	Afforestation	-	0.3013	-	-	0.3013

8.	Mineral Storage	-	-	-	-	-
9.	Undisturbed Area			-	-	-
	Total	**-**	**1.00**	**-**	**-**	**1.00**

(iii) Topography

The lease area is undulated terrains .The highest contour is 381 mRL and lowest is 363 mRL.

(iv) 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.

Table – 6

Environmental Settings

S. No.	Particular	Details
1	Nearest Village	Gorir
2	Nearest city/ town	Khetri is approx. 15.0 km
3	Nearest Railway Station	Dabla Railway Station around 12.59 km
4	Nearest Airport	Jaipur international Airport around 132 km
5	Archaeological Important Place	None, within 10 km radius area of mine site.
6	Ecological Sensitive Areas (National Park, Wildlife Sanctuary, Biosphere Reserve etc.)	There is no National Park, Wild Life Sanctuaries, Biosphere Reserves, Tiger Reserves, Wildlife Corridors, etc. within 10 km radius
7	Reserved/Protected Forest within	➢ Nalpur PF approx. 5.0 kms towards NW

	10 km radius	direction. ➢ Dhule PF approx. 7.5 kms towards NW direction. ➢ Mehara PF approx. 3.5 kms towards SW direction. ➢ Bansiyal PF approx. 4.0 kms towards SSW direction. ➢ Dada PF approx. 8.0 kms towards W direction. ➢ Rasulpur RF approx. 13 kms towards NE direction.
8	Nearest River / water body	➢ Chandrawati River approx. 1.0 kms towards East direction. ➢ Krishnawati River approx. 14 kms towards NW direction. ➢ Pawati nala approx. 1 kms towards South direction.

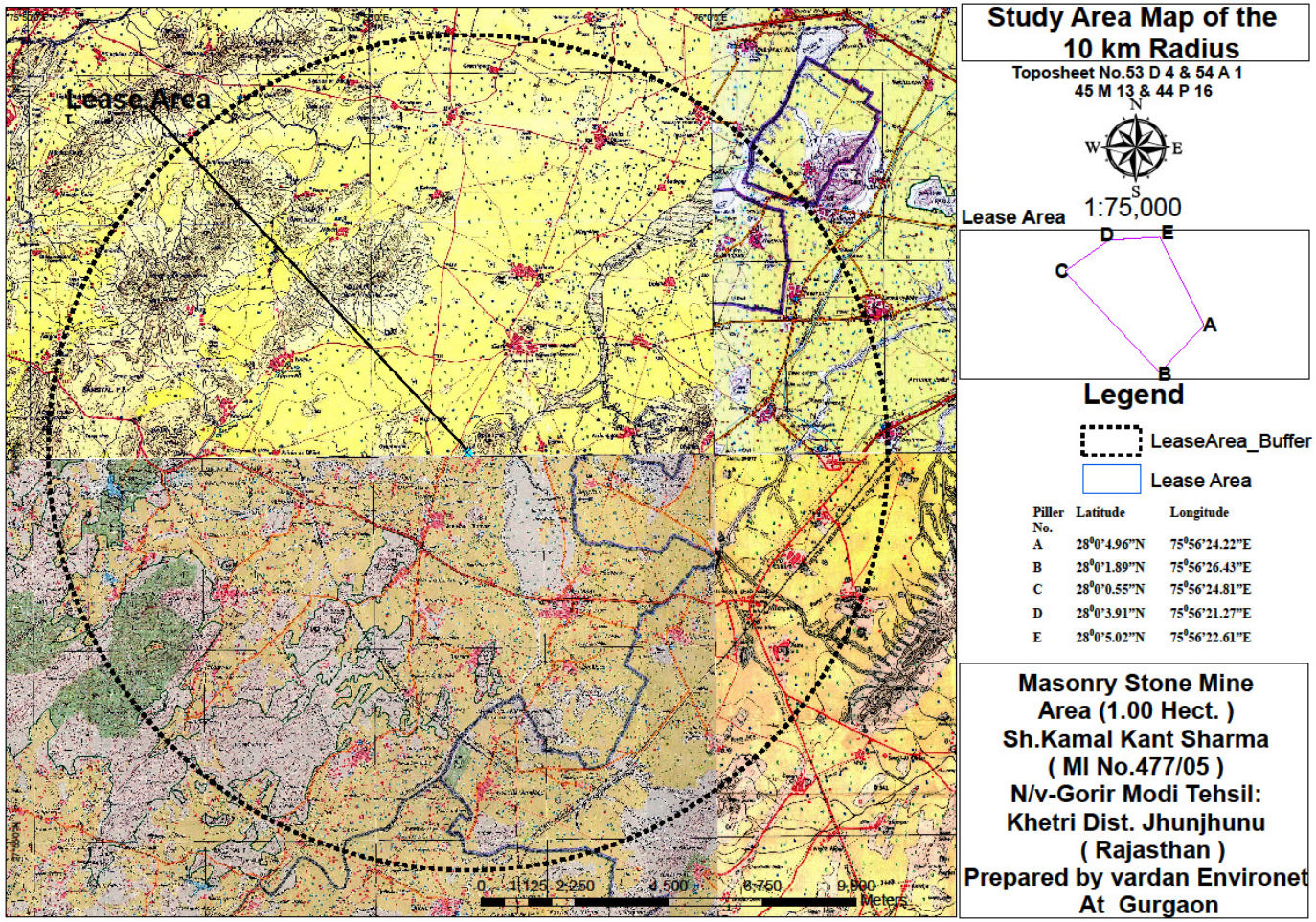


Figure-2 Key Plan

(V) Existing Infrastructure:

There is no building & structure within mining lease area except some vegetations existing on the lease area which will be cleared when required. Total lease area is Govt. Land.

The lease area approx. 15.0 km from the Khetri. Dispensary, hospital and educational facilities are available in Gorir. Railway line is available in Dabla RS which is at a distance of 12.59 km. The lease area is well connected through roads.

5.0 PLANNING BRIEF

(i) Planning Concept (Type of Industries, Facilities, and Transportation etc.) Town and Country Planning/Development Authority Classification

This is a mining Project

(ii) Population Projection

Manpower required will be engaged from nearby areas. No significant influx of people is anticipated in the area.

(iii) Land Use Planning

The extent of proposed mining lease area is 1.0 ha. The area comprises of Govt. Land.

(iv) Assessment of Infrastructure Demand (Physical & Social)

Lessee will assess the demand of infrastructure (Physical & Social) in nearby area of the proposed mine site and same will be developed under social work

(v) Amenities/Facilities

Mining Management will develop the Amenities/Facilities in the nearby area of the proposed mine site as per requirement of local people of the nearby area under corporate social responsibility programs.

6.0 PROPOSED INFRASTRUCTURE

(i) Residential Area (Non Processing Area)

This is not required as mine workers comes from nearby villages. Rest shelter to the workers already exists in the major mining lease of the lessee.

(ii) Green Belt

Green belt will be developed on the approach road and surrounding the pit around 20plants will be planted per year with 80% of survival rate the lease boundary & haul roads.

(iii) Connectivity

The lease area approx. 15.0 km from the Khetri. Dispensary, hospital and educational facilities are available in Gorir. Railway line is available in Dabla RS which is at a distance of 12.59 km. The lease area is well connected through roads.

(iv) Water Management (Source & Supply of water)

Total water requirement for the project will be 4.0 KLD which will be used for domestic as well as dust supression purpose and sourced from nearby village .

(v) Sewerage System

Domestic sewage water generated from office toilet will be disposed in soak pits via septic tank. Outside discharge is not envisaged.

(vi) Industrial Waste Management

No industrial waste water will be generated from this mine mining operation.

(vii) Solid Waste Management

The generated solid waste will be second grade mineral and sold to the nearby market

(viii) Power Requirement & Supply/Source

Electric power will not be required in mining operations due to mining activity in day time.

7.0 REHABILITATION AND RESETTLEMENT (R & R) PLAN

(i) Policy To Be Adopted (Central/State) In Respect Of The Project Affected Persons Including Home Oustees, Land Oustees And Landless Laborers (Brief Outline To Be Given)

Not Applicable as the lease area falls in Govt. Land.

8.0 PROJECT SCHEDULE & COST ESTIMATES

(i) Likely date of start of construction and likely date of completion (time schedule for the project to be given)

The mining activity will be started after obtaining Environmental Clearance from SEAC, Rajasthan.

(ii) Estimated project cost along with analysis in terms of economic viability of the project

(i)	Total Project Cost	: Rs 15.0 Lacs
(ii)	Environment Protection Cost	: Rs 0.50 Lac
(iii)	Cost of CSR	: Rs. 0.50 Lac
(iv)	Cost of Laboures	: Rs. 0.50 Lac

9.0 ANALYSIS OF PROPOSAL

- Proposed Masonry StoneMining Lease will result in growth of the surrounding areas by increasing direct and indirect employment opportunities in the region including ancillary development and supporting infrastructure. Special emphasis on Financial and Social benefits will be given to the local people including tribal population, if any, in the area.
- Development of social amenities will be in the form of medical facilities, education to underprivileged and creation of self help groups.
- No major adverse effect on environment is envisaged as the required mitigation measures are inbuilt in the project.

10.0 ENVIRONMENTAL MANAGEMENT PLAN

10.1 AIR POLLUTION CONTROL

- Sharp drill bits will be used for drilling to reduce generation of dust.
- Green Belt will be developed on outside the lease area.

- Periodical water spraying on the haul roads will be done.

10.2 WATER MANAGEMENT

- There is no surface water body in and around the mining lease area.
- The rain water collected in mining pit will be diverted in the abandoned pit of major mineral mining lease and used for water sprinkling and plantation.
- Domestic waste water generated from office toilet will be disposed in soak pits via septic tank.

10.3 NOISE POLLUTION CONTROL

- Proper maintenance of all machines will be carried out which will reduce noise generation during operations.
- Workers exposed to high noise levels will be provided with ear defenders.

10.4 LAND RECLAMATION

- Total mining lease area is 1.0 hectares.
- The total excavated area will be around 0.6987ha and the same will be convert into water reservoir.

10.5 SOLID WASTE MANAGEMENT

- Total OB/ Mine waste during mining period will be 5,013 T which will be used for construction and maintenance of roads time to time.

10.6 GREEN BELT DEVELOPMENT

- Total 240 trees will be planted at the end of life of mine over an area of 0.33 ha.
- Around 20 trees will be planted during next five years and remaining plantation will be done on 6th years onwards.
- Local species will be preferred for plantation
- Tree guards will be provided for production

Table - 7

ECOLOGY: STAGE WISE CUMULATIVE PLANTATION

S. No.	Years	Total No of Plants	Plantation Area	Plant Species
1	I	20	Along the lease periphery and out side the lease area	Babool, Vilayti Babool, Khejri, Amal Tas, Perkinm Sonia and Neem
2	II	20		
3	III	20		
4	IV	20		
5	V	20		
Remaining Plantation will be done on 6th years onwards				