

# **PRE- FEASIBILITY REPORT**

## EXECUTIVE SUMMARY

### 1.0 Introduction

The Mining Lease for quartz & Feldspar mine for area 117.75 Ha was granted in the favor of M/s B.N. Mining Company near SBBJ Bank, Opposite-Nagar Parisad, Tehsil-Bhopalganj, Dist-Bhilwara (Rajasthan) vide order no. Ni Kha Bhu/Bhil/CC-5/F.1(1) 21@1995@2 dated 01.01.1998 and lease was executed on 06/06/1998 and lease deed was registered on 29/06/1998 for the period of 20 years. The mining scheme with progressive mine closure plan was approved vide order no. SME/Bhi/Mining Plan/Mining Scheme/ML-21/95/157-165 ON 16/01/2014.

The Lessee has been already granted Environmental clearance vide No.-J-1105/6/98-IA/II (M) on 26.02.1998 for the production capacity of 3000 TPA. Now Lessee wants to increase production. The proposed rate of production is 3, 03,200 TPA.

The lease area comprises of Government waste land & Private Land. The estimated project cost is Rs. 70 Lakh. The expected life of mine is 20 years. The life of mine may change depend upon the prospecting results, rate of production and the extent of mechanization done by lessee in near future.

This mining project falls under **Category “A” Project** or activity 1(a) as per EIA Notifications 2006 and its subsequent amendment thereof.

### Salient features of the project

Project Name	Pandru Quartz & Feldspar Mine of M/s B.N .Mining Company
Location of mine	Village- Pandru, Tehsil-Asind, Dist-Bhilwara, Rajasthan
Latitude	25°36'28.1" N
Longitude	74°15'56.0" E
Area	117.75 Ha
Minerals of mine	Quartz & Feldspar
Total Mineable reserves	4985390 Tonne
Life of mine	20 Years

Proposed production of mine	3,03,200 TPA
Method of mining	Opencast Mechanized
No of working days	300 days
Water demand	Drinking & Domestic Uses -2.7 KLD Dust Suppression-6 KLD Green Belt-3 KLD <b>Total- 11.7 KLD</b>
Sources of water	Nearby village
Man power	60
Nearest railway station	Lambiya Railway Station 31 km in East Direction
Seismic zone	Zone II

### 1.1 Present land Use Plan ( In Ha)

Category	Private Waste Land	Government Waste Land	Total Land
Quarry	0.3496	0.1293	0.4789
Road	0.2767	0.1612	0.4379
Dump	0.3345	0.4611	0.7956
Infrastructure	--	0.1793	0.1793
Balance area unused	79.8412	36.0171	115.8583
Total area	80.802	36.948	117.75

### Proposed Planing

Mining method	-	Opencast, Mechanized
Project cost	-	Rs. 70 lakh
Production	-	3,03,200 TPA

### 1.4 Conclusion

The minerals– Quartz & Feldspar are used in various forms in various industries to manufacture various products. Quartz shall be used in ceramics, glass manufacturing, ferrosilicon, induction furnaces lining, and electric lining industries and in paints. Feldspar shall be used in glass, ceramics, abrasives and electrodes (as flux coating, welding rods and inductors). For all these purposes, quartz and feldspar are usually ground to the size of 200 to

300 mesh in grinding units The raw mineral is to be supplied to the sister concern of the lessee and to the other industries in Udaipur and other parts of Rajasthan.

## **2. INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION**

### **2.1 Identification of Project and Project Proponent**

The Mining Lease for quartz & Feldspar mine for area 117.75 Ha was granted in the favor of M/s B.N. Mining Company near SBBJ Bank, Opposite-Nagar Parisad, Tehsil-Bhopalganj, Dist-Bhilwara (Rajasthan) vide order no. Ni Kha Bhu/Bhil/CC-5/F.1(1) 21@1995@2 dated 01.01.1998 and lease was executed on 06/06/1998 and lease deed was registered on 29/06/1998 for the period of 20 years. The mining scheme with progressive mine closure plan was approved vide order no. SME/Bhi/Mining Plan/Mining Scheme/ML-21/95/157-165 ON 16/01/2014.

### **2.2 Brief Information about the Project**

The Lessee has been already granted Environmental clearance vide No.-J-1105/6/98-IA/II (M) on 26.02.1998 for the production capacity of 3000 TPA. Now Lessee wants to increase production. The proposed rate of production is 3, 03,200 TPA.

The lease area comprises of Government waste land & Private Land. The estimated project cost is Rs. 70 Lakh. The expected life of mine is 20 years. The life of mine may change depend upon the prospecting results, rate of production and the extent of mechanization done by lessee in near future.

### **2.3 Need for the Project and Its Importance to the Country or Region**

The minerals– Quartz & Feldspar are used in various forms in various industries to manufacture various products. Quartz shall be used in ceramics, glass manufacturing, ferrosilicon, induction furnaces lining, and electric lining industries and in paints. Feldspar shall be used in glass, ceramics, abrasives and electrodes (as flux coating, welding rods and inductors). For all these purposes, quartz and feldspar are usually ground to the size of 200 to 300 mesh in grinding units The raw mineral is to be supplied to the sister concern of the lessee and to the other industries in Udaipur and other parts of Rajasthan.

## **2.4 Demands-Supply Gap**

The demand for Quartz & Feldspar is ever growing in ceramics, glass manufacturing, ferrosilicon, induction furnaces lining, and electric lining industries.

## **2.5 Imports vs. Indigenous Production**

The quantity of Quartz & Feldspar produced will meet the requirement for Quartz & Feldspar to be imported.

## **2.6 Export Possibility**

There is no proposal to export the Quartz & Feldspar.

## **2.7 Domestic/ Export Markets**

### **DOMESTIC MARKET**

The finished product of Quartz & Feldspar will be used for saleable purpose in the local market

### **EXPORT MARKET**

The proposed mining activity is for indigenous consumption only for local market.

## **2.8 Employment Generation**

The proposed mining activity will provide employment to about 60 workers. The workers will be hired mostly from the nearby villages.

## **3. PROJECT DESCRIPTION**

### **3.1 Type of Project Including Interlinked and Interdependent Projects, If Any.**

The mine is over an area of 117.75 hectares. The proposed production is 3,03,200 TPA. This is an independent mining project and there are no interlinked projects involved.

**The project falls under Category “A” Project or activity 1(a) as per EIA Notifications 2006 and its subsequent thereof**

### **3.2 Location**

The mining lease area is located at Village- Pandru, Tehsil-Asind, Dist-Bhilwara, Rajasthan

Latitude : 25°36'28.1" N

Longitude : 74°15'56.0" E

**3.3 Details of Alternate Sites**

Not Applicable

**3.4 Size or magnitude of operation**

The mine has lease over an area of 117.75 ha. The mine will be worked on the day time only. The average number of working days in the year would be 300.

**3.5 General Geology:**

Geologically the area comprise of Conglomerate, quartzite, Calc genesis, dolomite,biotite schist, hornblade schist, amphibolites, epidiorite of Badnor formation of sand mata complex of Bhilwara Super group.

**3.6 PROJECT DESCRIPTION WITH PROCESS DETAILS**

**3.6.1 Method of Mining**

Since the deposit in this area is massive in nature, it is proposed to carry out only opencast Mechanized mining during this plan period, i.e. five years. The mineral is laying on the sub-surface therefore Mechanized opencast has been the obvious choice.

**The following mining parameters are proposed**

Type of working	:	Opencast, Mechanized
Bench height	:	3 m
Bench width	:	More than 6 m
Overall slope	:	45° maximum

## PRODUCTION DETAILS

The Proposed Production of Quartz & Feldspar in next three year:

Year	Total Tentative Excavation (MT)	Top Soil (MT)	OB/SB/IB(MT)	ROM (MT)		ROM/Waste Ratio
				ORE(MT)	Mineral Reject (MT)	
1st	487962	22501	184676	210589	70196	1:0.250
2nd	569032	22961	221114	243718	81239	1:0.250
3rd	606193	16814	185112	303200	101067	1:0.250
<b>Total</b>	<b>1663187</b>	<b>62276</b>	<b>590902</b>	<b>757507</b>	<b>252502</b>	

### 3.7 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Product/S, Mode of Transport of Raw Material and Finished Product

No raw material will be required for production of Quartz & Feldspar.

In the operation phase Quartz & Feldspar will be excavated by Mechanized method and loaded directly into trucks/trolleys to stone crusher from the mine site. Eventually the finished product will be supplied to the market

### 3.8 Resource Optimization/ Recycling and Reuse

Not envisaged.

### 3.9 Availability of Water Its Source, Energy/ Power Requirement and Source

#### 3.9.1 Water Requirement

Water required is 11.71 KLD. It is proposed to obtain water for drinking from nearby village.

#### 3.9.2 POWER

The operation will be done only from sun rise to sun set hence there is no power requirement for the project at site.

**3.10 QUANTITY OF WASTES TO BE GENERATED (LIQUID AND SOLID) AND SCHEME FOR THEIR MANAGEMENT/ DISPOSAL**

**3.10.1 Solid Waste Generation & its Disposal**

No solid waste generation is expected from the mining operation.

**3.10.2 Liquid Effluent**

NA

**4. SITE ANALYSIS**

**4.1 Connectivity**

The lease area is about 2.1 km south west of the village pandru, Tehsil-Asind, Dist.-Bhilwara, Rajasthan. The lease area is connected to Village-Pandru, by kaccha road. The lease area is about 6 km from asind.

**4.2 LANDFORM, LANDUSE AND LAND OWNERSHIP**

The area forms a part of moderate slope.

**LANDUSE**

**EXISTING LAND USE PATTERN**

<b>Category</b>	<b>Private Waste Land</b>	<b>Government Waste Land</b>	<b>Total Land</b>
Quarry	0.3496	0.1293	0.4789
Road	0.2767	0.1612	0.4379
Dump	0.3345	0.4611	0.7956
Infrastructure	--	0.1793	0.1793
Balance area unused	79.8412	36.0171	115.8583
Total area	80.802	36.948	117.75

**LAND OWNERSHIP**

The proposed lease area is Govt. Waste land & Private waste land.

**4.3 PHYSIOGRAPHY**

Topographically the lease area is plain and gently sloping towards west. It comprises of mostly plain fields within lease area there is no nallah. There is no forest land in this mining lease area. The altitude of the area is 520 to 555 MRL.

**4.4 EXISTING LAND USE PATTERN**

At present the land in the area is not occupied for any other use. There is no inhabitation. Also there is no agricultural activity in the area at present. The existing land use pattern is as under:

<b>Category</b>	<b>Private Waste Land</b>	<b>Government Waste Land</b>	<b>Total Land</b>
Quarry	0.3496	0.1293	0.4789
Road	0.2767	0.1612	0.4379
Dump	0.3345	0.4611	0.7956
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Total area	80.802	36.948	117.75

**4.5 Existing Infrastructure**

Road is near to the working site. Manpower is cheaply available.

**5. PLANNING BRIEF**

**5.1 Planning Concept**

Since the deposit in this area is massive in nature, it is proposed to carry out only opencast Mechanized mining during this plan period, i.e. five years. The mineral is laying on the sub-surface therefore Mechanized opencast has been the obvious choice

## 5.2 Land use Planning

Details of land use Existing land use is given below:

Category	Private Waste Land	Government Waste Land	Total Land
Quarry	0.3496	0.1293	0.4789
Road	0.2767	0.1612	0.4379
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## 5.3 Assessment of Infrastructure Demand (Physical & Social)

On the basis of the preliminary site visit, the infrastructure demand in the villages was assessed on the basis of need and priority.

## 5.4 Amenities/Facilities

### Mines Office, Workshop etc.

Proper site services such as First Aid, temporary shelter, Drinking Water will be provided to the mine workers.

### Transport of Men and Material:

Workers from nearby villages will be engaged for mining and transportation purposes. They will come for work on foot.

The material from the mine will be transported by trucks / dumpers.

### 6.1 Industrial Area (Processing Area)

No infrastructure is proposed.

### 6.2 Residential Area (Non Processing Area)

As local workers from nearby areas will be engaged for the mining activity, no residential area/ housing is proposed.

### 6.3 Green Belt

Plantation will be done in the 7.5 m barrier zone along the periphery of the mining lease area.

#### **6.4 Social Infrastructure**

The following rural activities are being proposed to be done in the region under Rural Development Programme.

- Rural Health service
- Educational Development Programme
- Self-employment, resource development
- Conservation of cultural activities of Odisha
- Agricultural development & environmental protection

#### **6.5 Connectivity**

The lease area is about 2.1 km south west of the village pandru, Tehsil-Asind, Dist.-Bhilwara, Rajasthan. The lease area is connected to Village-Pandru, by kaccha road. The lease area is about 6 km from asind.

#### **6.6 Drinking Water Management**

Water for drinking is required to be 2.7 KLD. It is proposed to obtain water from nearby village.

#### **6.7 Sewerage System**

Domestic waste water will be treated into septic tank followed by soak pit

#### **6.8 Industrial Waste Management**

Not applicable

#### **6.9 Solid Waste management**

No solid waste generation is expected from the mining operations.

#### **6.10 Power Requirement & Supply/Source**

The operation will be done only during the day light; hence there is no power requirement for the project at site.

### **7 REHABILITATION AND RESETTLEMENT (R&R) PLAN**

Not Applicable as no person or family will be up rooted, needing any resettlement of rehabilitation.

### 7.1 Budgets for EMP

SI. No.	Measures	Capital cost (in Rs.)	Total Recurring Cost (in Rs.)
1	Pollution Control i) Dust Suppression Garland drain & ground dump	-	1,00,000 /- 1,00,000 /-
2	Pollution Monitoring i) Air pollution ii) Water pollution	-	1,00,000 /- 1,00,000 /-
3	Green Belt	2,00,000 /-	1,00,000 /-
4	Reclamation of mined out area	1,00,000 /-	50,000 /-
Total		3,00,000 /-	5,50,000 /-

## 8 PROJECT SCHEDULE & COST ESTIMATES

### 8.1 Likely Date of Start of Construction and Likely Date of Completion

No construction activities are proposed. The mining activity will commence only after receiving environmental clearance.

### 8.2 Estimated Project Cost Along With Analysis In Terms of Economic Viability of the Project

Initial cost of the project has been estimated as 70 Lakhs

## 9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

The proposed mine will bring economical benefits to the state by the way of Royalty for mineral and to the local people by way of direct and secondary employment opportunities. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. The Quartz & Feldspar extracted is in high demand in local market.

Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area

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