

***PRE – FEASIBILITY  
REPORT***

## 1. EXECUTIVE SUMMARY

Particulars	Details			
Project name	Dhanwasa Mona Banour lime stone mine			
Location	Near Village –Banour, Tehsil –Paonta sahib, Distt – Sirmour, H.P.			
Latitude	30°34'34.25"N to 30°34'40.41"N			
Longitude	77°44'35.46"E to 77°44'43.55"E			
Toposheet No.	53 F/10, 53F/14			
Total Mine Lease area	4.958 Ha.			
Ultimate depth of mining	1291mRL			
Mineable Reserves	36,33,645 Tonnes			
Capacity	Proposed production –2,00,000 (RoM)			
Life of Mine	18 years			
Estimated project cost	24.0 lacs			
EMP Cost	1.5 Lac / annum			
Power Requirement	NA			
Fuel Requirement	450 lits. /day (Machine & Equipment)			
DG Set	NA			
Highest and Lowest Elevation	S. No.	Particulars	Elevation (mRL)	
	1.	Highest	1422	
	2.	Lowest	1167	
Land use	The project area is barren land .			
Nearest habitation/ town	Banour 1.50 Km towards-NW			
Nearest Airport	Dehradun (110Km) towards SE			
Nearest Highway	SH-1 at about 0.50 Km towards E NH-72B at about 6.50 Km.			
Nearest Railway Station	Dehradun (77 Km), SE			
Power supply	NA			
Nearest Telephone	Banour -1.50 Km			
Nearest Dispensary and Govt. Hospital	Banour -1.50 Km			
Educational facility	Banour -1.50 Km			
Water demand and supply	4.5 KLD, from water suppliers by water tankers.			
Nearest tourist places	None within the study area			
Defense installations	None within the study area			
Archeological Features	None within the study area			
Ecological sensitive zones	None within the study area			
Nearest streams/ rivers/ water bodies (from mine boundary)	Nera Nadi- 6.7 Km Tons River -1.3 Km Giri River-8.3 Km			
Seismic zone	Seismic zone – IV.			

## 2.0 INTRODUCTION OF PROJECT / BACKGROUND INFORMATION.

### 2.1 Identification of the Project and Project Proponent:

<b>Name of the Project</b>	:Dhanwasa Mona Banour Limestone mines.
<b>Location</b>	:Near Village –Banour, Tehsil –Paonta Sahib :Distt- Sirmour H.P.
<b>Proposed Production</b>	:2,00,000 TPA(RoM)
<b>Lease Area</b>	:4.958 ha. (barren land)
<b>Project Proponent</b>	: M/s Mam Chand Goyal & Sons(Partner ship firm)
<b>Name of the applicant</b>	: M/s Mam Chand Goyal & Sons(Partner ship firm)
<b>Address</b>	: M/s Mam Chand Goyal & Sons(Partner ship firm) Ganga Vihar, Haidwar Road, Dehradun
<b>Mob.</b>	:+9412107474
<b>Status of the lessee</b>	:Owner

Mam Chand Goyal, was granted the mining lease over an area of 4.958 Ha in Mauza Banour for mineral limestone for 20 years from- 26.5.2002 to 25.5.2022(Refer Annexure No. 1 of lease deed). The lease area comprises of Khasra Nos. 1746/2,1752/1,1755/1,1760/2 over an area of 4.958 ha in village Banour The status of land is barren land.

After deth of Sh. Mam Chand Goyal lease was transferred to M/s Mam Chand Goyal & Sons (Annexure No. II Supplementary Deed.)

This is the partnership firm there are two partners in the firm.(partnership deed is enclosed as annexure no-III).

## **2.2 Brief Description of nature of the project.**

Mining of Lime stone will be done by open cast Semi-mechanized method with drilling & Blasting. Loading of mineral shall be carried out into trucks. Proposed production of limestone 2,00,000 TPA as (RoM).

## **2.3 Need For The Project And Its Importance To The Country:**

Dhanwasa Mona Banour Limestone Mining Project is basically for the production of Limestone. Limestone has a huge importance in many industries like lime making, Sugar, glass and chemical industry etc. The Limestone finds easy market in the Union Territory of Chandigarh and the adjoining state of Punjab, Haryana that are devoid of this mineral by nature , in addition to market in U.P. and Himachal Pradesh.

## **2.4 Demands-Supply**

Although there are many mines producing Limestone in the district but still requirements of these minerals is not being fulfilled completely. Hence there is a gap in demand and supply of the minerals which could be fulfilled up to some extent from the proposed project.

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

There will be no import for the project. There will be indigenous inputs in the entire mining activity.

## **2.6 Export Possibility**

The mining activity is not prospecting exports.

## **2.7 Domestic/Export Markets**

Lessee would like to sale out the mineral to the different buyers.

## **2.8 Employment Generation (Direct or Indirect)**

The mining project will generate direct & indirect employment. About 89 people will get direct employment and about 20 people will also be affected indirectly and employed with allied and related industries, such as transportation, maintenance, etc.

### 3.0 PROJECT DESCRIPTION

#### 3.1 Type of Project including interlinked and interdependent projects:

The proposed project is for mining of limestone. Lease area is 4.958 ha. & it is proposed to produce to 2,00,000 TPA (RoM) of Limestone. Lease area is situated at N/V –Banour, Tehsil –Paonta Sahib & Dist. Sirmour (H.P.).

No Interlinked or Interdependent project.

#### 3.2 Location

State	:	(Himachal Pradesh)
District	:	Sirmour
Tehsil	:	Paonta Sahib
Village	:	Banour

The project area is 4.958 hectares. The lease area is a barren land. Google Image of the lease area –



**TOPO SHEET NO. WITH LATITUDE AND LONGITUDE** – The Lease area forms a part of Survey of India topo-sheet no. 53F/10 & 53F/14. The lease area is located at following latitude and longitudes:

30°34'34.25"N to 30°34'40.41"N

77°44'35.46"E to 77°44'43.55"E

The highest elevation of the project area is 1422 mRL and lowest being 1167mRL.

### **3.3 Details of Alternate Site Considered and the Basis of Selecting the Proposed Site, Particularly the Environmental Considerations Gone Into Should Be Highlighted:**

Mining is site specific project and limited to mineralized area.

### **3.4 Size/Magnitude of Operation:**

It is proposed to produce 2,00,000 TPA(RoM) of Lime Stone from the lease area of 4.958 hectares by open cast Semi-mechanized method of mining.

### **3.5 Project Description with process details & Flow diagram**

It is a mining project of Limestone from the lease area of 4.958 ha, situated at near village –Banour, Tehsil – Paonta Sahib, District – Sirmour (H.P.). Proposed production is 2,00,000 TPA(RoM) limestone( The mineral produced here will be sold to lime making ,sugar, glass and chemical industry) The method of mining will be opencast Semi-mechanized.

Mining will be done by open cast Semi-mechanized method of mining by forming benches of 3.0 m height and 4.0 width. Drilling & Blasting will be done in sub-benches of 1.5m to 2m only . the mineral and waste shall be loaded manually. The waste shall be dumped in the proposed dump yard.

#### **Production & Waste Plan for the Next Five Years:**

Year	RoM (in tonnes)	Expected Waste(in m3)
2015-16	2,00,000	800
2016-17	2,00,000	820
2017-18	2,00,000	823

#### **Extent of Mechanization:**

S. No.	Machineries	Number
1	Compressor 300-350cfm capacity	1
2	Jackhammer (Holeman) 25 kg	1
3	JCB	1
3	Water tanker (on hire)	1
4	4x4 wheel truck 25 ton capacity	20

### **Mineable Reserves & Life Of The Mine:**

**Total Mineable Reserve : 36,33,645 tonnes**

**Production per year : 2,00,000 (RoM) tonnes**

**Life of mine :  $36,33,645/2,00,000 = 18$  years**

### **3.6 Availability of water its source, energy/power requirement and source :**

Total water requirement in the mine will be about 4.5 KLD for drinking, spraying (dust suppression) and plantation. Water will be purchase from nearby village Through water tankers. Detail of water requirement in KLD is given below:

1. Dust Suppression	– 1.0
2. Drinking	– 2.5
3. Green belt	– 1.0
Total	– 4.5 KLD

Diesel for machine/equipment – about 250 Lt. per day is assumed to be consumed. Truck will be on hire basis so diesel will be provided by contractor.

### **3.7 Quantity of wastes to be generated (liquid and solid) and scheme for their management /disposal:**

Since there is no overburden laying over the limestone deposit, hence no waste will generate. But during the excavation of the limestone , 5% of the limestone is produced as the waste. So considering the annual production of limestone up to- 2,00,000 TPA(RoM). A waste dump yard have been made from 1372 mRL & it shall be spread towards South & south west slope secured with toe walls. Dumping shall be carried out in single terrace & slope of dump shall be kept. 37°.

Year	Waste
	Rejects/ Waste(M <sup>3</sup> )
I	Nil
II	Nil
III	Nil

**3.8 Resource Optimization/Recycling and Reuse Envisaged In the Project, If any, Should Be Briefly Outlet:**

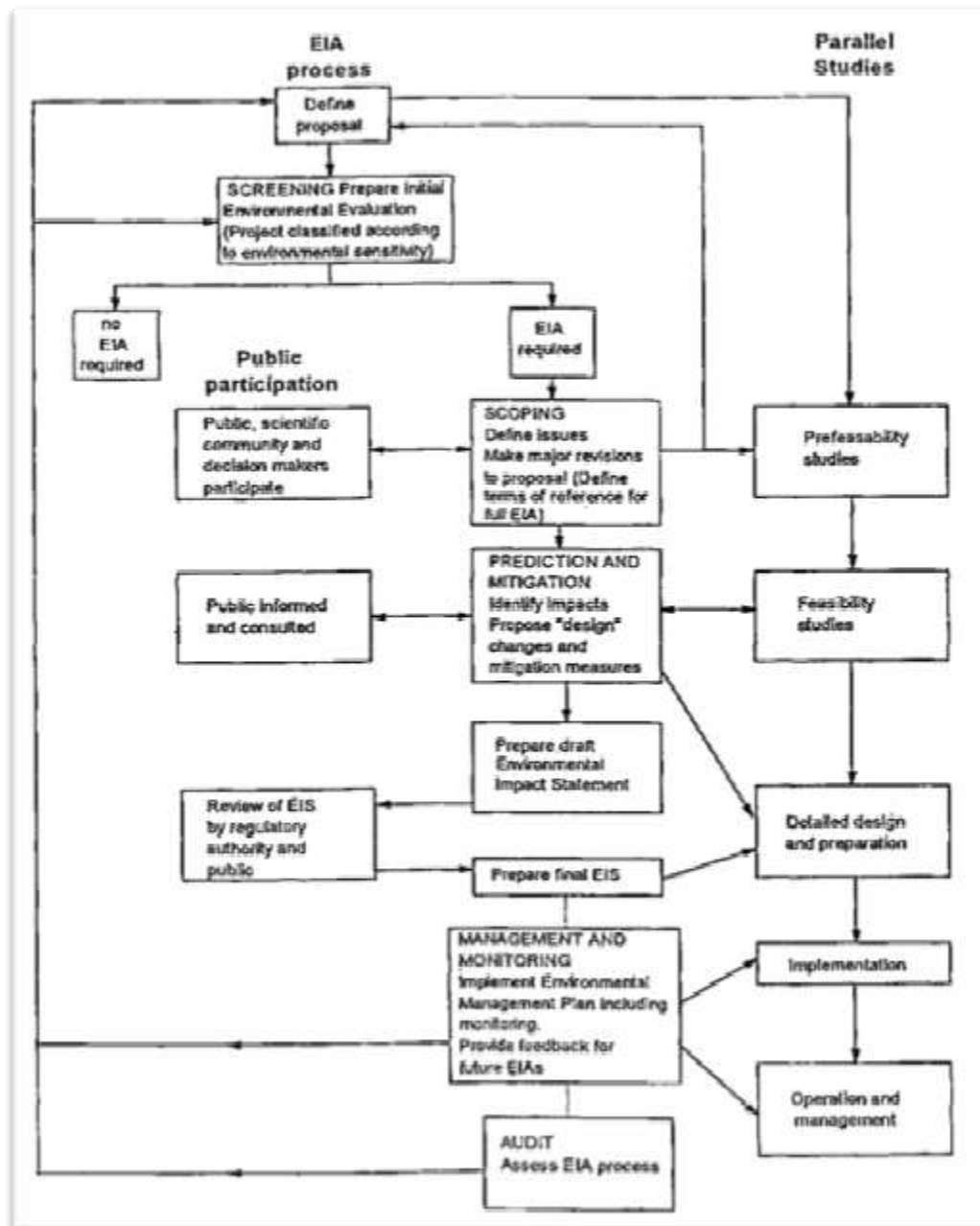
No optimization/ recycling and reuse envisaged in the project.

**3.9 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Products, Mode of Transport of Raw Material and Finished Product.**

The project will itself generate raw material i.e. Mineral Limestone and proposed production is 2,00,000 TPA(RoM)Limestone.



### 3.10 Schematic Representations Of The Feasibility Drawing Which Give Information Of EIA Purpose:



## 4.0 SITE ANALYSIS

- i. The Mining lease area is having proved reserves of Limestone
- ii. There is no human settlement within the lease area.
- iii. Proximity for trade to adjoining industries.

### 4.1 Connectivity:

#### Connectivity details from Project Site:

Sr.No.	Particulars	Details
1.	Road Connectivity	The lease area is located at a distance of 1.5 Km from village Banour in NW direction and Tehsil headquarter Paonta Sahib is about 34.5 Km in SW direction from & connected by tar SH-1
2.	Nearest Highway	SH-1, 0.50 Km, towards East from the project area.
3.	Nearest Railway Station	Dehradun Railway Station 77 Km
4.	Nearest Airport	Dehradun(110 Km.)

### 4.2. Land form, land use and land ownership

The lease area is a barren land. There is no village or human settlement in the lease area. The area is irregular shaped; the highest elevation of the project area is 1422 mRL and lowest being 1167mRL. The lease area forms a part of Survey of India topo-sheet no. 53F/10 & 53F/14

Lease Area	:	4.958 ha.
State	:	Himachal Pradesh
District	:	Sirmour
Tehsil	:	Paonta Sahib
Village	:	Banour

### 4.3 Topography:

The lease area, forms part of the main range of Lesser Himalayas and lies in the trans-Giri tract of District Sirmour. It is generally rugged and mountainous. Locally the area forms NE-SW trading Banour ridge. The highest point is 1422 mRL and the lowest point is 1167 mRL.

Latitude: 30°34'34.25"N to 30°34'40.41"N

Longitude: 77°44'35.46"E to 77°44'43.55"E

#### 4.4 Existing Land use Pattern

The lease area is barren Land .

There is no reserves forest or protected forest land within the lease area.

There is no village or hutments within the lease area. Existing land use pattern is given as below:

S. No.	Particulars	Pre-Operation Phase (Ha.)
<b>A)</b>	<b>Mining Activity</b>	
1	Pits	2.25
2	Road	0.06
3	Plantation	0.00
4	dump Area	0.047
6	Infrastructure	0.001
7	Dressing & sorting yard	0.12
<b>B)</b>	<b>Remaining Virgin land</b>	2.48
<b>C)</b>	<b>Total area</b>	<b>4.958</b>

#### 4.5 Existing Infrastructure

Site services as per Mines Rules 1955 will be provided. Mine Office, First Aid station, Toilets as per the provisions of Mines Rules 1955 shall be continued to be maintained. as per the provisions of Mines Rules 1955.

Medical Facility & other benefits will be provided to Miners Health is as follow:

- Regular medical checkup of the mine employees will be carried out
- Medicines shall be provided free of cost.
- Educational Add shall be provided to the children's of workers.

#### 4.6 Soil Classification

There is no top soil with in the lease area if any top soil encountered during exploitation of mineral will be dumped at purposed dump yard. soil will be used for vegetation growth.

#### Regional Geology:

Regionally the area under reference belongs to the main part of the lesser Himalayas and falls in the North-West edge of the Niglidhar range. Earlier the Krol belt was first investigated by H.B.Meddlicot in 1864, J.B. Andrews in 1934 and West in 1939. Subsequent contribution has been made by Pandey and Kedar Narain (1967), Ranga Rao (1968) and Valdiya (1970). The rocks belonging to Krol series, in order of their supreme position is given below.

#### REGIONAL GEOLOGICAL SET UP OF THE AREA

	Litho logy
<b>Krol E</b>	Grey Limestone, Dolomitic Sandy Limestone & Shale in upper part.
<b>Krol D</b>	Compact grey, Dirty white and pinkish limestone certain bands are highly siliceous and shows elephant skin weathering.
<b>Krol C</b>	Dark grey to black thinly jointed limestone with thin ferruginous stained calcareous shale white, dirty white to greyish at places, crushed crystalline limestone.
<b>Krol B</b>	Crushed puckered, red, green and bleached shale bands and lenses Of grey and dirty white massive dolomitic limestone
<b>Krol A</b>	Thinly bedded compact greyish calcareous shale, ferruginous stained, crushed carbonaceous shale.
<b>Krol Sandstone</b>	Ortho quartzite & friable sandstone

Structure of the krol Belt in this region is broadly represented by thrust – bound synclines of Krol rocks resting over a Jaunsar – shimla state foundation. Tectonic set up is marked by two northwards dipping major thrust and the Krol thrust. Along Nahan thrust the rocks of Nahan formations are overlain by Subathus.

### Local Geology:

Following sequence of formation after prospecting the area which belong to Krol series of the pre-carboniferous age has been observed.

**(I) High Grade Limestone :** The limestone within the lease area may be correlated with krol formation.

In retain area there area patches of high grade limestone gragnented limestone in high grade limestone zone. So in general way high grade limestone comprises of high grade limestone & high grade garmented limestone. The area propose to retain in high grade limestone. Limestone in grey to light grey to whitish in colour, hard compact, massive cry to crystalline rock.

**(ii) Limestone medium grade** Thick bedded medium grade limestone lies towards eastern flank of the area. it is dull, light grey massive limestone found below the high grade limestone. This is hard, medium grained & less jointed compared to high grade limestone. Fine granular cavities area also found in thick rock.

## 4.7 CLIMATIC DATA FROM SECONDARY SOURCES

The area under study falls in tropical monsoon climatic zone. Four seasons are prominent in the area, as given below:

March to June -----summer

July to September -----Monsoon.

October to November -----post-Monsoon

December to February-----Winter.

### b) Rainfall

The South-West monsoon changes its direction to North–East along the lesser Himalayas due to E-W trending syn-axial bend of the north-eastern Himalayas. As the Shivalik ranges run parallel to the direction of rain bearing monsoon, there is relatively less rainfall as compared to the eastern India, due to the obstruction of hill ranges.

### **c) Temperature**

The maximum temperature varied between 26.5°C during December to 37.9°C during June in the year. Correspondingly the minimum temperature was 2°C in December, and minimum temperature was 24.1°C during July in summer.

### **d) Relative Humidity**

Humidity during the year varies between 42% to 82% avg. Months of January, February, March and July to October are comparatively more humid than other months.

### **e) Wind Direction**

The wind direction is generally from SE to NW during March to September. During winter the direction is generally from NE to SW. Wind velocity generally increases during the months of February-June, as compared to those of all other months. Sometimes the area is lashed by high winds and hail-storms.

## **4.8 Social Infrastructure**

The entire requisite infrastructure required for mine will be developed. The infrastructure like office, rest shelter, toilets, first aid stations etc. will be provided at near project site.

### **Nearest Rail Head-**

Nearest railhead is Dehradun which is at a distance of about 84 kms.

### **Dak Banglaw, telegraph, post office etc:**

Regular bus service is available from Paonta Sahib to reach Banour. Rest shelter facilities will be provided at mine site. Postal, medical, treasury, telephone (PCO) and educational facilities exist at Banour village, which is about 1.5 Kms from Mining site. A small market catering to the mining site exists at village Banour.

### **Schools and Public Health centres -**

Educational facilities up to inter collage (10+12) is available in village Banour For higher studies govt. college Paonta Sahib is about 34.5 Kms.

The nearby village Banour which is 1.5 Kms from the mine site is having primary health centre. Civil Hospital Paonta Sahib are about 34.5 Kms. from the mine area.

## **5.0 PLANNING BRIEF**

### **5.1 Planning Concept:**

It is a mining project of mineral Limestone . The proposed production of Limestone 2,00,000 TPA(RoM). Opencast, Semi-mechanized method of mining will be adopted and transportation of mineral shall be done through road by Trucks.

### **5.2 Population Projection**

Man power requirement for mining is estimated to be (92 Nos) 87 Nos. direct from nearby village & 5 skilled from other area. Most of the employees will be recruited from neighboring village depending upon the availability of skilled & unskilled people. Migration of highly educated and skilled person will take place but it will be on temporary basis. So there will no permanently migration of people, hence there will be no population projection.

### **5.3 Land use Planning:**

**Land use pattern(In Hects.)**

S. No.	Particulars	Pre-Operation Phase	Operation Phase	Post-Operation phase
A)	<b>Mining Activity</b>			

1	Pits	2.25	2.97	4.12
2	Road	0.06	0.06	0.00
3	Plantation	0.01	0.09	0.50
4	dump Area	0.047	0.047	0.00
6	Infrastructure	0.001	0.001	0.00
7	Dressing & sorting yard	0.12	0.12	0.00
B)	<b>Remaining Virgin land</b>	2.48	1.67	0.358
C)	<b>Total area</b>	<b>4.958</b>	<b>4.958</b>	<b>4.958</b>

Plantation along lease boundary-0.50 ha. & 1.30 ha as on reclaimed area.

#### **5.4 Assessment of Infrastructure Demand(Physical and Social):**

Site services as per Mines Rules 1955 will be provided at project site. Mine Office, Temple, Labor Quarters and Rest room will be established near mining lease area. First Aid station, Toilets will be Constructed.

The road facility will be provided. The labour requirement is drawn from the nearest villages, shall also be trained for the requirement in mines. Govt. Dispensary is available nearest to ML area in villages.

#### **5.5 Facilities Provided:**

##### **5.5.1 Infrastructure**

The entire requisite infrastructure required for mine will be provided near mine site.

The infrastructure required is office, store, and shelter for workers will be constructed near mine site. For drinking, water will be brought from the nearby village through water tankers. Most of the workers will be from nearby villages so no accommodation at mine site will be required.

##### **5.5.2 Landscaping and Green Belt Development**

It is proposed to plant a total no. 300 trees per year on the statutory barrier area as shown on the lay out plan. The total proposed area for



afforestation up to end of mine life is 1.80 Ha. (0.50 on statutory barrier & 1.30 ha. on reclaimed area ) and expected survival rate is 70%.

A number of species will be planted suitable to this area of climate conditions like Kachner, Chakera, Rubenya, Biul etc. The afforested area will be encircled by a barbed wire fence to protect it from cattle's and regular watering thrice a week (except monsoon) and maturing as required will be done.

**Plantation Programme along Statutory barrier and Back filled reclaimed area**

YEAR'S	NO. OF Saplings	AREA (IN Hect.)	SURVIVAL RATE
1 <sup>st</sup> year	500	0.166	70%
2 <sup>nd</sup> year	500	0.166	
3 <sup>rd</sup> year	500	0.166	

### 5.5.3 Health and safety System

During the opencast working, and allied activities, all the precautionary measures shall be taken into account as per MMR 1961 and MCDR 1988 for safety and security.

Following Safety & security measures will be enforced;

- Moving front of the quarry shall have temporary fencing.
- Permanent fencing will be provided where quarry has reached the ultimate pit limit.
- Mine entrance will have a permanent check post and record shall be maintained of all persons / vehicles entering the mine area.
- Round the clock security arrangement shall be provided to prevent inadvertent entry of persons.

### 5.5.4 Disaster Management and Risk Assessment

In spite of following all the precautionary measures and following all safety rules, regulations and procedures, in mining accidents cannot be ruled out completely. The Project Proponent will formulate a Disaster Management

Plan with the approval of DGMS. Following are the accidents which can take place in mechanised opencast mining and measures proposed to be taken.

- Failure of Benches.
- Fall of human beings or fall of machines from benches/ dumps/haul roads.
- Fire & Explosion in machinery.

**Preventive Measures:**

- Creating berm on the side of benches /haul roads.
- Fire fighting equipment in the machinery/ workshop/ office will be maintained. Persons will be trained and mock rehearsal will be conducted.
- Training of security personnel.
- Procedures as laid down in Disaster Management Plan to be followed.

**Training:**

- Persons will be trained in use of Chemicals and protective equipment, fire fighting equipment, Training in first aid as per Mines Rules 1955

**Emergency Equipment & Facilities:**

- Mobiles.
- Fire fighting equipment's
- Other protective equipment's i.e. goggles, helmet, face shield, hand gloves, safety belts, barricade tape.

First Aid station as per the provisions of Mines Rules 1955.

## 6. PROPOSED INFRASTRUCTURE

S.NO	Details	
1	Mining Area	4.958 hectares.
2	Residential Area	Not Applicable.
3	Connectivity	Nearest Highway: SH-1 0.5 Km from mining lease area. Nearest Road: Village Banour is 3.0 Km away from lease area connected by a kutchra road. Nearest Railway Station: Dehradun(77 km, by road).
4	Green Belt	Up to end of operational phase the total proposed area for afforestation is 0.10 on lease boundary.
5	Water Management	4.5 KLD, Source: will be purchase from water suppliers through water tankers.
6	Power Management	Electricity is not required.
7	Waste Water	Domestic and office effluent will be treated in individual septic tanks.
8	Solid Waste Management	The waste generated will stack on stock yard.
9	Hazardous waste Management	N.A.
10	Social Infrastructure	Physical & Social Infrastructure will be provided and if necessary other facilities will also be provided by mine's proponent.

## 7.0 REHABILITATION & RESETTLEMENT PLAN

Since the project site is private waste land and there is no village or hutments within the lease area. R & R is not applicable to this project.

## **8.0 PROJECT SCHEDULE**

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

The mining is being working out. Application for EC is being filed within stipulated time as required.

### **8.2 Project Cost Estimation**

Estimated Project Cost with the proposed production is 23,75,000

#### **(A) Capital investment**

*Machinery & Tools	= Rs	20,00,000/-
Financial assurance	= Rs.	50,000/-
Social fund & activities (Per Year)	= Rs.	1,00,000/-
EMP(Per year)	= Rs.	1,50,000/-
Miscellaneous	= Rs.	75,000/-
<b>Total cost</b>	<b>= Rs.</b>	<b>23,75,000 (or says 24.0 lacs)</b>

\* Note: trucks will be on hire basis.

#### **(B) Operational cost-**

The mineral lime stone will be mined from the lease area and the cost of per ton of mining will be approx. Rs260/- per tonnes.

### **8.3 Economic Viability**

The anticipated cost of mining is Rs. 260- per ton. Average sale value is Rs. Sale value of mineral = 300 to 1100/- per tonne (Excluding freight)/- per tonne depending on its grade and quality. Hence the project will be viable.

## **9.0 ANALYSIS OF PROPOSAL**

- Project will create direct & indirect employment opportunities within the surrounding region. Unit will use good faith efforts to employ local people from the nearby villages depending upon the availability of skilled & un-skilled man-power surrounding the project site.
- In operation phase, the proposed project would require significant

workforce of non-technical and technical persons. Migration of highly education and skilled experience will result in increase of literacy in the surrounding villages.

- In addition, the proposed project shall enhance the prospects of employment.
- Assessment of the potential socioeconomic benefits during mining focused primarily on work force requirements, acquisition of supplies, and the temporary increased demand for services related to the mining project like food, housing, communications, law enforcement, medical care, local transportation etc. Due to these, additional revenue to local suppliers for required products and services related to the construction and operation phases of the project will generate.
- Thus, mining activities will provide numerous new, although temporary, work opportunities for both skilled and unskilled labor, as well as contribute significantly to the local economy.
- Additional government revenue expected from royalty, taxes, duties and other fees.
- An added benefit to the proposed project will result in considerable growth of stimulating the industrial and commercial activities in the state. Small and medium scale industries may be further developed as a consequence.

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