

***PRE – FEASIBILITY
REPORT***

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1. EXECUTIVE SUMMARY

Particulars	Details		
Project name	Kakrolia Soapstone& China Clay Mine		
Location	Near Village – Kakrolia , Tehsil – Kotri Distt – Bhilwara, Raj.		
Latitude	N 25°23'15" to 25°23'56"		
Longitude	E 75°01'33" to E75°02'18"		
Toposheet No.	45 O/3		
Total Mine Lease area	232.5 hect.		
Present Status	Mining will commence after getting EC.		
Mineable Reserves	62545 tonnes.		
Capacity	Proposed production – 11,175 TPA (ROM)		
Life of Mine	7 years		
Estimated project cost	Rs 53 Lac		
EMP Cost	Rs 3.0 Lac / annum		
Power Requirement	NA		
Fuel Requirement	250 lits. /day		
DG Set	NA		
Highest and Lowest Elevation	S. No.	Particulars	Elevation (mRL)
	1.	Highest	412
	2.	Lowest	359
Land use	The lease area is waste land, agriculture land Grazing land..		
Nearest habitation/ town	Kotri (20),NE		
Nearest Airport	Dabok (Udaipur)		
Nearest Highway	NH-116 A and SH-39		
Nearest Railway Station	Bhilwara (53 Km), SW		
Power supply	Kotri (20),NE		
Nearest Telephone	Kotri (20),NE		
Nearest Dispensary and Govt. Hospital	Kotri (20),NE		
Educational facility	Kotri (20),NE		
Water demand and supply	7.0 KLD, Source- water will available from nearby Ghewria soapstone mine.		
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)	Banas river – 3.5 km in E Kothari river – 8.1 km in S		

Seismic zone	Seismic zone – II.

2.0 INTRODUCTION OF PROJECT / BACKGROUND INFORMATION

2.1 Identification of the Project and Project Proponent:

Mining project for minerals Soapstone and China Clay. M.L. NO 87/82 (old), 107/09 (R)(new) . The project is located near village - Kakrolia , Tehsil – Kotri and District – Bhilwara, Rajasthan. Lease area – 232.5 hect. Proposed production – 11,175 TPA (ROM).

Project Proponent:

Name of the Lessee	M/S Golcha Minerals Pvt. Ltd.
Address	4 th Floor, Golcha Trade Center, M.I. Road, Jaipur. Rajasthan
Mob.	+91 9829016839
Status of the lessee	Private Limited

2.2 Copy of Mining Lease / Letter Of Intent

- The mining lease area was sanctioned for Soapstone and China Clay by Rajasthan State Government vide Order No. Pa.9 (Khan)/Group/-2/84 dated 25-4-1984, for an area of 232.5 hectare from 06-06-1990 to 05-06-2010 in favour of Sh. Ganpat Lal Surya. The lease area was transferred to present lessee M/s. Golcha Minerals Private Ltd. by Rajasthan by State Govt. vide Order No. DMG/BHL/CC III P-1(1) 10/83/3020 dated 29-09-2001, the transfer agreement was executed on 1-02-2002. (Copy of transfer agreement is enclosed as Annexure No.5).

- In accordance with MMDR Amendment Ordinance 2015, under rule 8 (2), the mining lease period has been auto- renewed till 05.06.2040. (Letter enclosed as Annexure 6)

2.3 Nature of the Project:

Mining of Soapstone will be done by open cast Mechanized method of mining. Proposed production of Soapstone is 11,175 TPA (ROM).

2.4 Need For The Project And Its Importance To The Country:

The Mining project falls in the area of the district Bhilwara, Rajasthan devoid of sufficient agriculture activities and other industrial growth. The earning sources of the region are limited. Most of the people are dependent on agriculture. The region has scarcity of water. Mineral wealth of the state Rajasthan provides the employment opportunity to the people of the state as well as region also. Mining is one of the major core sector industries which play a crucial role in the process of country's economic development.

2.5 Demands-Supply Gap:

The greater part of the soapstone/ talc for consumption is reduced to fine powder before use in the industry, and sold to industry in powder form of 200 to 400 mesh size, though major quantity is of 300 mesh. No captive use is made by this Company. The mineral is being sold in India for indigenous consumption.

Soapstone is used in powdered form in varying particle sizes for various uses as given below: -

- 1- Cosmetics - Talcum powder, face powder and creams.
- 2- Soap and Detergent - As Filler
- 3- Paper - Loading agent, filler and stabiliser

- 4- Textiles - Back filling, Sizing and bleaching
- 5- Food - Anti-stacking agent
- 6- Cereals - Polishing of rice and pulses
- 7- Rubber - Filler
- 8- Ceramics - Flux, Insulators
- 9- Fertilisers - Filler and anti stacking agent
- 10- Pesticides - Carrier of active ingredients.

2.6 Imports vs. Indigenous Production

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

2.7 Export Possibility

The mining activity is not prospecting exports.

2.8 Domestic/Export Markets

Lessee would like to sale out the mineral in domestic market as per requirement. No export is proposed.

2.9 Employment Generation (Direct or Indirect)

The mining project will generate direct and indirect employment. About 94 people will get direct employment and 25 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 mining unit of Soapstone and China Clay. It is proposed to produce 11,175 TPA (ROM) of Soapstone. Lease area is situated at N/V – Kakrolia, Tehsil – Kotri and Dist. – Bhilwara, Rajasthan.

No Interlinked or Interdependent project.

3.2 Location

State	:	Rajasthan
District	:	Bhilwara
Tehsil	:	Kotri
Village	:	Kakrolia

The entire project area is 232.5 hectares. The lease area is a waste land, Agriculture land and grazing land.

TOPOSHEET NO. WITH LATITUDE AND LONGITUDE – The lease area forms a part of Survey of India topo-sheet no. 45 O/3.

The lease is located at following latitude and longitudes:

Latitude: N 25°33'10" to 26°33'29"

Longitude: E 75°12'40" to E75°13'21"

The highest elevation of the lease area is 424 mRL and lowest being 340 mRL.

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 Soapstone at 11,175 TPA in the plot area of 232.5 hectares by open cast Mechanized method of mining.

3.5 Project Description with process details & Flow diagram

The proposed project is mining unit of Soapstone and China Clay. It is proposed to produce 11,175 TPA (ROM) of Soapstone. Lease area is situated at N/V – Kakrolia, Tehsil – Kotri and Dist. – Bhilwara, Raj.

Year Wise Production:

Year	Mineral production (tones)	Waste from mineralized zone (tones)	ROM (Tones)
2013-14	8263	2175	10,438
2014-15	8100	2132	10,232
2015-16	8068	2132	10,191
2016-17	8135	2141	10,276
2017-18	8847	2328	11,175
Total	41,413	10,899	52,312

PROPOSED METHOD OF WORKING

During the first five years the Soapstone will mine by mechanized open cast mining method forming benches up to 6.0 meter high and 10.0 m wide benches. The slope of the benches will be kept at 70° inclination. The benches and haul roads will be at gradient not exceeding 1:16. The benches will be joined by 10 m. wide ramps at gradient not exceeding 1:10.

Heavy Earth Moving Machinery will include 0.9 m³ to 2 m³ shovels, 10 T and 20 tonnes capacity dumpers, Dozer etc.

Production plan of Soapstone and OB/ waste removal programme for five years are given above in table.

BLASTING

Deep-hole drilling and blasting will be done for excavating the overburden in hanging wall and foot wall. Soapstone zone is dug by the excavator itself.

Interburden, if any, will be excavated by jack-hammer drilling and blasting.

Drilling

Major chunk of drilling will be done with wagon-drill fitted with DTH hammer. The diameter of the hole drilled is 100 mm. Since the height of benches is 6 m, the depth of drilling will be 6.6 m taking 10% as sub-grade drilling to avoid toe of benches. Spacing and burden will be 3.5 m and 3 m. respectively. Drilling in ore zone will be done by jack-hammers. The holes will be of 33 mm diameter and with a depth of 1.6 m that would meet the requirement of drilling. Spacing and burden of short holes will be 1.0 m and 0.8 m. respectively. Jack- hammer drilling will be done for secondary blasting also.

Blasting

Drilling of blast holes, its depth, diameter, spacing and burden have been described in the previous paragraph. Blasting part is covered in this paragraph.

Blasting Pattern

Blasting is most important job since it dislodges in-situ material and helps to extract overburden and mineral easily. In Kakrolia Mine deep-hole blasting is adopted in over burden benches and small diameter hole blasting is adopted in mineralized zone. Details are described below:-

Type of Explosive

At present, the practice of deep-hole drilling that uses cap-sensitive explosive (O.C.B.G, Toe Blast, etc.) as base charge and Ammonium Nitrate - Fuel Oil as column charge, has been adopted. Primer charges would be 25% of the total charge. In small dia holes only Nitro-Glycerene based explosive SG90 and slurry explosives like Powergel, Dynaprime, OCBG, Telgex, Indoblast, etc. are used. This practice will be continued in the next five years.

Type of explosives and accessories to be used in Kakrolia Mine and their specifications are given below:

For large dia holes (Deep Holes)

Name of Explosive	Length * diameter * Weight	Remarks
O.C.B.G	400 mm * 83 mm * 2.78 kg.	Primer
Powergel, Dynaprime, Indoblast	400 mm * 83 mm * 2.78 kg.	Slurry Explosive
ANFO	In prilled form	Prilled Ammonium Nitrate is mixed with 6 to 7% (by weight) of Fuel Oil.

For small dia holes

S.G. 80	200 mm x 25 mm x 125 gm.	Nitro-glycerene based
S.G. 90	200 mm x 25 mm x 125 gm.	Nitro-glycerene based

Year wise waste generated

Year	Minerals Production (in MT)	Waste from Mineralised Zone (in MT)	ROM (in MT)	O. B. Waste (in MT)	Total Waste (in MT)	Stripping Ratio
2013-14)	8,263	2,175	10,438	202,154	204,329	1:24.7
2014-15	8,100	2,132	10,232	28,706	30,838	1:03.8
2015-16	8,068	2,123	10,191	82,885	85,008	1:10.5
2016-17	8,135	2,141	10,276	77,520	79,661	1:9.8
2017-18	8,847	2,328	11,175	68,947	71,275	1:8.0
Total	41,413	10,899	52,312	460,212	471,111	1:11.37

Extent of Mechanization

Machine	Num. of machine	Capacity	Motive power	Proposed
Drilling machine	1	14-15 m/ hr.	Compressed air	1 (for 9 days in month)
Compressor	1	450 cfm.	Diesel	1 (for 9 days in month)
Excavator	1	0.9 m3	Diesel	1
Tipper	4	10 MT	Diesel	4

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

Total water requirement in the mine will be about 7.0 KLD for drinking, spraying and plantation. Water will available from nearby Ghewaria soapstone mine. Detail of water requirement in KLD is given below:

1. Dust Suppression	– 2.5
2. Drinking	– 3.0
3. Green belt	– 1.5
Total	– 7.0

Diesel for trucks/equipment – about 250 Lt. per day is assumed to be consumed. Diesel will be brought from outside, from nearby diesel pumps. No electricity will be required at mine site.

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

There is single dump in this area. It is situated 130 m. away from working pits, in south-west direction. At present, waste is being dumped on this dump

Spread of Dumps

Name of Dump	Dimension (m x m)	Location	Height (m)	Quantity m ³	Condition
Dump	80 x 50	(-196, -260--1536,1614)	2.7	10,800	Active Dump

Nature and Quality of Waste

The waste being generated consists of highly siliceous dolomitic limestone, quartzite and ferruginous quartzite. The analysis reports of the dolomitic limestone show that it is neither suitable for the steel plants nor for the cement industry, at present. The dolomitic limestone would be used in future, if cement and steel making technology is changed.

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

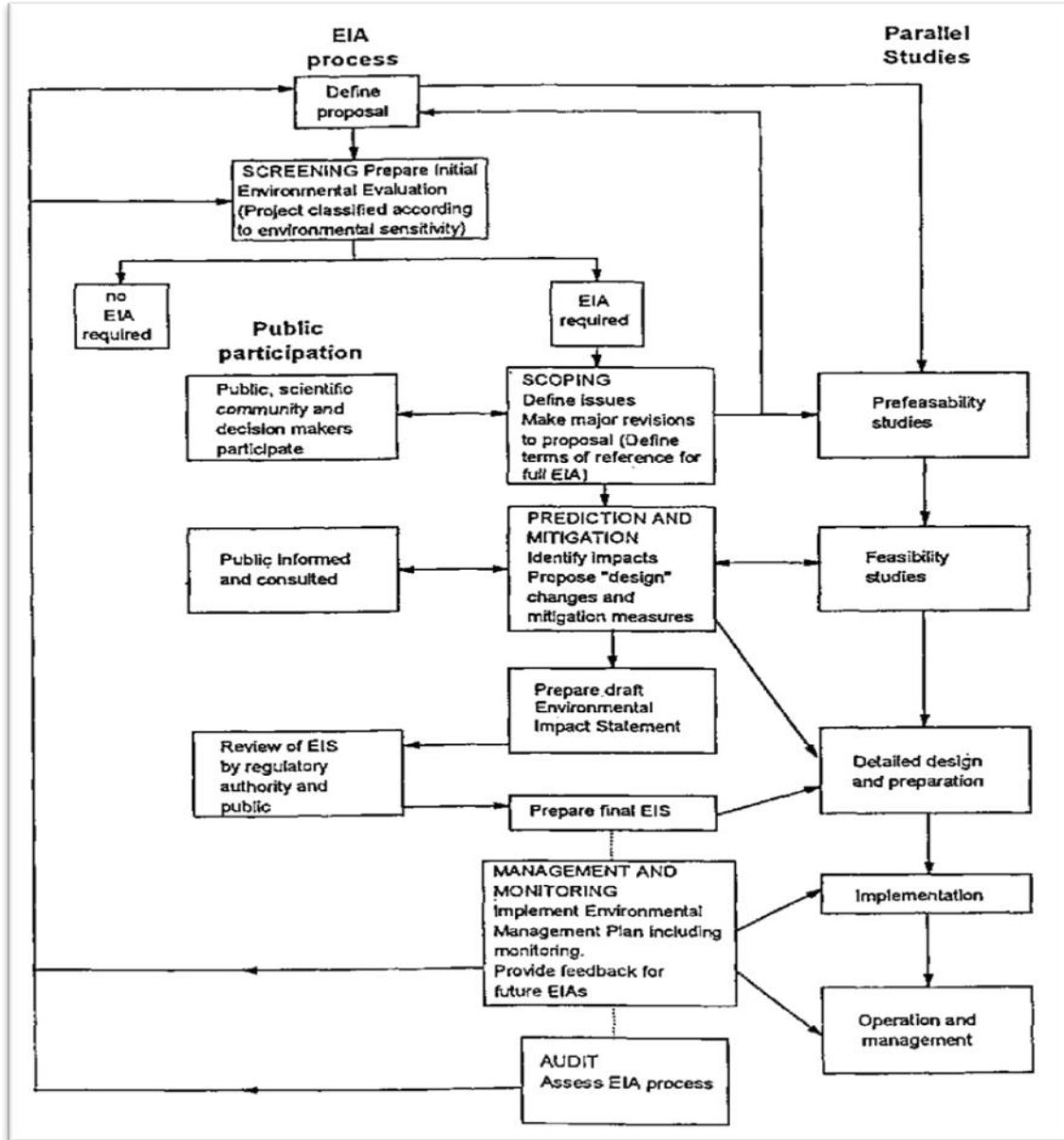
Not applicable.

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 Soapstone and proposed production is 11,175 tones/annum.

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

Layout Plan & Conceptual Plan is enclosed which gives schematic representation of Mineral Exploration, Mining, Ultimate Pit Limit, Disposal of waste and Post Mining land use pattern.



4.0 SITE ANALYSIS

The lease areas is for mineral Soapstone which is suitable for use in Insecticides and Paper industry, it is site specific. The selected site has the following advantages.

1. The area chosen is not having habitation.
2. The site is well connected by road.
3. There are no industries near the site and there is no pollution.

4. No endangered species around the mine site.
5. Availability of labors from nearby villages.
6. Proximity to the market.

4.1 Connectivity:

Connectivity details from Project Site:

Sr.No.	Particulars	Details
1.	Road Connectivity	The lease area is located at a distance of 20 km. from Kotri and Bhilwara is 53 km far from lease.
2.	Nearest Highway	NH-116A and SH-39
3.	Nearest Railway Station	Bhilwara (53 Km away from Mines towards SW)
4.	Nearest Airport	Dabok (Udaipur)

4.2. Land form, land use and land ownership

The lease area is a waste land Agriculture land and grazing land. The northern and north-west part is occupied by small NE-SW trending hill with a gentle slope towards south-west with little undulations.

Major portion of the area is occupying central & southern portion is partially rocky and partially soil covered

Lease Area : 232.5 ha.
State : Rajasthan
District : Bhilwara
Tehsil : Kotri
Village : Kakrolia

4.3 Topography:

The northern and north–west part is occupied by small NE-SW trending hill with a gentle slope towards south-west with little undulations. Major portion of the area is occupying central & southern portion is partially rocky and partially soil covered.

Highest elevated point of the hill is 412 mRL near F pillar of the lease area and the lowest RL is 359 m. on western part near pillar C. Rest part of lease is plain land with two hummocks in south. A nallah originates from north–western hills and Nallah comes to central portion of lease and turns towards western side of lease.

In summer season water table level goes down to 320 m. above mean sea level and in monsoon it rises up to 330 m. MSL.

Fair growth of the vegetation is observed in the hill. There is a PWD metalled road passing nearly 100 m. away in north-east part of lease area.

A Low Tension electrical line is passing in eastern side of lease for tube well of Kakrolia drinking water project.

There is no railway line or canal in this area. There is no forest land in the lease. An agricultural land also exists due south-east and north-east of lease area. There is no village in the lease area.

4.4 Existing Land use Pattern

The lease area is a mixture of waste land, Grazing land and agriculture land. Land use pattern is given as below:

Present Land use pattern within the Lease is given below:

Particulars	Total
Pits	0.8600
Dumps	0.2800
Road & Power Line	-
Building, Store, Power Station & Workshop	-

Grazing Land	42.72
Agriculture land	67.33
Plantation	-
Remaining Govt. waste land	121.31
Total	232.500

4.5 Existing Infrastructure

A Colony and Guest-house of Company is constructed on the bank of the Banas River, near Ghewaria village which is 4 km. away from Kakrolia Mine. It is common for all the mines of the lessee. A tube-well and a well have also been dug by lessee in the colony and Ghewaria village for drinking water. Electricity is available from AVVNL for domestic use at the Ghewaria colony. No electricity is used in mining operation.

4.6 Soil / rock classification

Soil and soapstone are present in the area. The major rock types in the area are Soapstone.

4.6.1 Description of the rocks units within the lease area:

REGIONAL GEOLOGY

According to the latest stratigraphic succession established by Geological Survey of India in Rajasthan, the litho units of this area are Pre-Aravalli Age and they have been grouped in to Jahazpur Group belonging to the Bhilwara Super Group. The Precambrian rocks of Bhilwara district have been classified into Bhilwara Supergroup (>2500 m. y.), the Aravalli Supergroup (2500 – 2000 m. y.), the Delhi Supergroup (2000 – 850 m. y.) and the Vindhyan Supergroup (900 – 570 m. y.).

The Bhilwara Super Group includes Banded Gneissic Complex represented by Sand Mata and Mangalwar Complexes and the Hindoli Group. Rocks of

Bhilwara Supergroup are intruded by Giyengarh – Asind acidic rocks, amphibolite, norite, dolerite and granites. The Lower Proterozoic calcareous rocks, chiefly consisting of calc-schist, calc-gneiss, dolomite and also of mica schist, chert, etc., are grouped within Jahazpur Group, which occurs as isolated cover sequence overlying the Mangalwars. These are exposed between Kachhola and Jahazpur. The Rajpur-Dariba, Pur-Banera Groups, Aravallis, Delhis and Vindhians are not found exposed in the area.

The lithostratigraphic succession of Bhilwara Supergroup is given below to show the position of Jahazpur Group in which the Lease area falls, in the Regional Setup :-

Supergroup	Age	Group
		Ranthambhor Group
		Rajpura-Dariba Group
	Lower Proterozoic	Pur-Banera Group
		Jahazpur Group
Bhilwara Super-Group		Sawar Group
		Hindoli Group
	Archaean	Mangalwar Complex
		Sandmata Complex

- (1) Some confirmed features of litho units exposed in this region are as follows:-
Dolomites are generally fine grained, but light brown to grey coloured with intercalation of argillaceous bands, rich in calc- silicate mineral at places. The maximum thickness of dolomitic limestone is 660 m.
- (2) Ferruginous cherty breccia bands vary in thickness from 10-85 m. and form prominent ridges. These bands invariably conform to the strike continuity of the Dolomite and Quartzite with pinch and swell behavior. Thickness of Ferruginous Quartzite varies, and maximum thickness is 550 m. They are highly jointed and impregnated.

Local Geology

The litho-units occurring in the lease area pertain to Pre-Aravalli Age, Jahazpur Group and geological epoch.

Following geological succession has been observed in the area.

Recent & sub recent - Alluvium & blown sand.

Post Bhilwara Group

Ferruginous Quartzite

Bhilwara Super Group Jahajpur Group Soapstone Dolomite, Quartzite
Chambaleshwar Formation

Outcrops of Dolomitic limestone occupy small part in the plains of lease area in the form of hillocks. The hill lying in the lease area mainly consists of quartzites and isolated patches of ferruginous quartzites.

Lithological Description:-

i) **FERRUGINOUS QUARTZITE**

It is hard massive to bouldery in nature, compact and fine to medium grained. At many places it is cherty. It is yellowish grey to greyish-red and occasionally greyish or grey coloured. As its name, it contains iron which becomes very rich at some places and gives greyish colour to it. At surface, it is weathered. This characteristic is more or less uniform over the entire area.

(ii) **DOLOMITIC LIMESTONE**

This is hard, compact, fine to medium grained, light greyish, white to light grey in colour and crystalline and bedded or sheeted, because of joints at closer intervals parallel to the bedding planes (Analysis as Annexure:21).

(iii) **QUARTZITE**

Quartzite is hard, brittle, both bedded and massive, light reddish, white to reddish or pinkish coloured. At some places, it is greyish coloured, reddish and pinkish quartzites are generally seen on ridge of the hill. It is fine to medium grained. Bedded quartzite breaks in tabular shape, whereas massive quartzite breaks in conchoidal shape.

iv) **SOAPSTONE**

Soapstone is the single major economic mineral found so far. Though China Clay was also included in lease deed for mining purpose but it is not exposed

in the excavated area in lease area. China Clay may be found below alluvium because mining of China Clay is being carried out in surroundings of lease area. Three boreholes were drilled but found negative. Further exploration will be done for confirmation of China Clay mineral.

4.7 CLIMATIC DATA FROM SECONDARY SOURCES

As usual there are 3 types of seasons, (1) Summer, (2) Rainy and (3) Winter in this region. Summer season during March - June is very hot and temperature rises up to 45° C. Rainy season is neither hot nor cold. Only due to cold breeze coming from Bay of Bengal and Arabian Sea following the depression of pressure the temperature goes down from 30 C to 20 C. Winter season (Dec – Jan) is very cold with minimum temperature of 2 C. Rains are nearly 60-70 cm. annually. General wind direction is S-W to N-E., N-E to S-W directions of winds indicates heavy rain fall. Relative humidity varies from 20% - 65%. Average wind velocity is 5 km/h.

4.8 Social Infrastructure

The basic infrastructure already exists in the lease area like office, store, and shelter for the workers. A first aid station will also be constructed and maintained. Drinking water will be brought from the nearby water source. Communication services like post office and telephones are available in the nearby village. Some of the villagers are having mobile phones.

5. PLANNING BRIEF

5.1 Planning Concept:

It is a mining project of mineral Soapstone. The proposed production is of 11,175 TPA. Opencast, mechanized method of mining will be adopted and transportation of mineral shall be done through road by trucks.

5.2 Man Power requirement:

Total Man power requirement for mining is estimated to be 94 Nos including skilled, semi skilled and administrative staff. Most of the workers will be recruited from neighboring village.

5.3 Land use Planning:

Land use pattern (Hects.)

Particulars	Present(Hect)	Position at the end of 5 th year (Hect)	Position at the end of mine (Hect)
Pits	0.8600	2.2350	4.3950
Dumps	0.2800	3.3200	5.1960
Road & building	-	0.4000	0.4000
Grazing Land	42.72	42.7200	42.7200
Agriculture land	67.33	67.3300	67.3300
Plantation on barren land	-	1.5000	2.2000
Remaining Govt. waste land	121.31	114.9950	110.2590
Total	232.50	232.50	232.50

- At the end of mine total 9.165 hect. area will be covered under plantation in which 2.200 hect area on barren land, 1.769 hect area on mine out benches and 5.196 hect area on Dump.
- 2.621 hect area of pit will be converted as water reservoir.

5.4 Facilities Provided:

5.4.1 Infrastructure

The infrastructure required is office, store, and shelter for workers which already exist at the mine site. For drinking, water will be brought from the tube well outside the lease area & this water is potable. Most workers will be from nearby villages so no accommodation at mine site will be required.

5.4.2 Landscaping and Green Belt Development

Year	Proposed plantation	
	Area in hect.	No. of saplings
I	0.3	300
II	0.3	300
III	0.3	300
IV	0.3	300
V	0.3	300
Total	1.5	1500

5.4.3 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 and leaving the mine area.
- Round the clock security arrangement shall be provided to prevent inadvertent entry of persons.

5.4.4 Disaster Management and Risk Assessment

The mining activities will involve accident like landslides, fall of material or equipment from benches and failure of dump retaining wall. The applicant will prepare a detailed emergency plan in consultation with DGMS.

6. PROPOSED INFRASTRUCTURE

S.NO	Details	
1	Mining Area	232.5 hectares.
2	Residential Area	Not Applicable
3	Connectivity	The lease area is located at a distance of 20 km. from Kotri and Bhilwara is 53 km far from lease.
4	Green Belt	300 saplings will be planted per year.
5	Water Management	7.0 KLD, Source- well in nearby village Madhopura..
6	Power Management	N.A.
7	Waste Water	Domestic and office effluent will be treated in individual septic tanks.
8	Solid Waste Management	The undersized Soapstone will be stacked in the mine. It will be stacked on the pit floor in the mined out area.
9	Hazardous waste Management	N.A.

7. REHABILITATION & RESETTLEMENT PLAN

Since the project site is a mixture of Government waste land, Grazing land and private lands and there is no reserves forest or protected forest land within the lease area. There is no village or hutments within the lease area. R&R is not applicable to this project.

8. PROJECT SCHEDULE

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

The project activity will be started after getting the Environmental Clearance from MoEF.

8.2 Project Cost Estimation

Estimated Project Cost with the proposed production is Rs 53 Lac.

(A) Capital investment

A site office, store & First Aid Station	= Rs. 1, 00,000/-
Machinery & Tools	= Rs 35, 00,000/-
Financial assurance	= Rs. 1, 00,000/-
PMCP	= Rs. 2,00,000 /-
Social fund & activities	= Rs. 5, 00,000/-
EMP	= Rs. 8, 00,000/-
Miscellaneous	= Rs. 1, 00,000/-
Total cost	= Rs. 53,00,000 /-say 53.00 lacs

(B) Operational cost-

The mineral Soapstone will be mined from the lease area and the cost of per tonne of mining will be app. Rs. 220/- per tonne.

8.3 Economic Viability

The anticipated cost of mining is Rs. 220/- per ton. Average sale value is Rs. 290/- ton for lower grade (insecticide grade) and Rs. 1200/- ton for high grade (paper grade). Hence the project will be viable.

9. 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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