

**PRE FEASIBILITY REPORT
OF
MEVASA BAUXITE (ALUMINOUS LATERITE) MINING PROJECT
FOR
TERMS OF REFERENCE**

Survey Number	259
Village	Mevasa
Taluka	Kalyanpur
District	Devbhumi Dwarka
State	Gujarat
Capacity	149248 TPA
Lease Area	8.73.05 Ha
Project Cost	Rs. 3 Crores

Name of Project Proponent: Shri Patel Kaushikkumar

Registered Office Address: Plot No. 1148/A/1,

Near Swaminarayan Temple,

Sector-2/D, Gandhinagar-382007, Gujarat

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SUBMITTED BY

Shri Patel Kaushikkumar

Registered Office Address: Plot No. 1148/A/1,

Near Swaminarayan Temple,

Sector-2/D, Gandhinagar-382007, Gujarat

1.0 Executive Summary

The proposed mining lease is situated near Village Mevasa, Taluka Kalyapur, District Devbhumi Dwarka and State Gujarat. The mining lease area covering 8.73.05 hectares having Survey No 259 consists of private land. The letter of intent for the grant of mine of mineral Bauxite (Aluminous Laterite) was issued vide order no. MMR/102021/BLK/534113/CHH1 dated 30.06.2021.

The aforesaid lease area measuring 8.73.05 ha is for extraction of Bauxite (aluminous Laterite). The annual production is targeted at 149248 TPA MTPA. Open cast semi mechanized mining method is proposed to be adopted to mine out the mineral. Review of Mining Plan was approved by the Regional Controller of Mines, Gandhinagar dated 12.04.2022. The project cost is Rs 3 Crores. Approved mine plan is attached in **Additional Documents**.

This mining project falls under Category ‘A’ Project or activity 1(a) as per EIA Notifications 2006, and its subsequent amendments.

Salient features of the project

Project Name	Mevasa Bauxite (Aluminous Laterite) Mining Project (Survey No. 259) Proposed By: Shri Patel Kaushikkumar		
Location of Mine Site	Village : Mevasa Tehsil : Kalyanpur District : Devbhumi Dwarka State : Gujarat		
Latitude & Longitude	Pillar No.	Latitude	Longitude
	1	22°15'14.96"N	69° 17' 51.10" E
	2	22°15'15.70"N	69° 17' 53.86" E
	3	22° 15' 16.25" N	69° 17' 55.92" E
	4	22° 15' 17.23" N	69° 17' 57.11" E
	5	22° 15' 19.72" N	69 17' 59.87" E
	6	22° 15' 19.92" N	69° 18' 0.22" E
	7	22° 15' 21.09" N	69 18' 1.94" E
	8	22° 15' 22.03" N	69° 18' 4.67" E
	9	22° 15' 18.93" N	69° 18' 7.59" E
	10	22° 15' 18.80" N	69° 18' 7.00" E
	11	22° 15' 17.37" N	69 18' 4.87" E
	12	22° 15' 16.76" N	69° 18'4.20" E
	13	22° 15' 15.36" N	69° 18' 2.52" E
	14	22° 15' 14.94" N	69 18' 1.65" E
	15	22° 15' 13.54" N	69 18' 2.03" E
	16	22° 15' 11.53" N	69 18' 0.70" E
	17	22° 15' 10.68" N	69° 18' 0.69" E
	18	22° 15' 10.62" N	69° 18' 0.38" E
	19	22° 15' 9.13" N	69° 17' 55.55" E
	20	22° 15' 7.44" N	69° 17' 54.40" E
	21	22° 15' 6.86" N	69° 17' 53.35" E
22	22° 15'7.96" N	69° 17' 52.86" E	

	23	22° 15' 8.39" N	69° 17' 52.86" E
	24	22° 15' 12.16" N	69° 17' 52.31" E
Topo-sheet number	F42 J08		
Minerals of mine	Bauxite (Aluminous Laterite)		
Geological Reserves	994498 Tonnes		
Mineral reserves	695530 Tonnes		
Life of mine	About 5 years		
Proposed production of mine	149248 MTPA		
Method of mining	Open Cast Semi Mechanized		
No of working days	300		
Water demand	Total water requirement is about 9 KLD (1 KLD (Drinking & Domestic Uses) + 3.5 KLD (Plantation) + 4.5 KLD (Dust Suppression)).		
Sources of water	The required water will be purchased through private tankers.		
Man power	13		
Nearest railway station	Bhopalka Railway Station is about 16 Km in South East direction.		
Nearest State Highway/ National highway	National Highway 947 is about 9.512 Km in South direction State Highway 29 is about 12.347 Km in South East direction.		
Nearest airport	Jamnagar Airport is about 75.0 Km in North-East direction.		
Environment Sensitivity	Marine Sanctuary, Gulf of Kutch, Devbhumi Dwarka: About 1.267 Km. Marine National Park, Gulf of Kutch, Devbhumi Dwarka: About 6.233 Km.		
Seismic zone	Seismic Zone IV, as per seismic zone map of India		

1.2 Proposed Planning

Mining method- Open Cast Semi Mechanized

Project Cost -Rs. 3 Crores

Production - 1,49,248 MTPA

1.3 Conclusion

The production of mineral will benefit the State in the form of royalty and dead rent. Apart from this, the project will generate direct and indirect employment opportunities to the tune of about 13 persons from the nearby villages. Also, the mine owner will conduct medical camps at regular intervals in the nearby villages and will also develop much needed infrastructure like toilets, school furniture, water tankers, etc.

2. INTRODUCTION OF THE PROJECT/BACKGROUND INFORMATION

2.1 Identification of Project and Project Proponent

The proposed mining lease is situated near Village Mevasa, Taluka Kalyapur, District Devbhumi Dwarka, and State Gujarat. The mining lease area covering 8.73.05 hectares having Survey No 259 consists of private land. The letter of intent for the grant of mine of mineral Bauxite

(Aluminous Laterite) was issued vide order no. MMR/102021/BLK/534113/CHH1 dated 30.06.2021. The aforesaid lease area measuring 8.73.05 hectares is for extraction of Bauxite (aluminous Laterite). The annual production is targeted at 1,49,248 MTPA. Open cast semi mechanized mining method is proposed to be adopted to mine out the mineral. Review of Mining Plan was approved by the Regional Controller of Mines, Gandhinagar dated 12.04.2022. The project cost is Rs 3 Crores.

2.2 Brief Information about the Project:

The proposed Mevasa Bauxite (Aluminous Laterite) Mining Project over an area of 8.73.05 ha is situated near Village Mevasa, Taluka Kalyanpur, District Devbhumi Dwarka, and State Gujarat. The aforesaid lease area measuring 8.73.05 Ha is for extraction of Bauxite (aluminous Laterite) only. The annual production is targeted at 1,49,248 MTPA. The method of mining will be adopted as open cast semi mechanized mining. Water requirement for the proposed project for drinking, dust suppression and other use will be around 9.0 KLD. The cost of the project is Rs 3 Crores.

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

Bauxite is a mixture of the minerals Gibbsite ($\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$) Boehmite (alpha monohydrate, $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$) and Diaspora (beta monohydrate, $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$). It is a unique mineral in the sense that, by and large, this is the only mineral from which aluminum is extracted economically. Beside aluminum its other important uses are in the manufacture of refractory, abrasive and chemicals. Low-grade Bauxite finds use in cement industry. Among minor uses mention may be made of its use as a fluxing material in steel melting shop and in Ferro-alloy industries in place of fluorspar and as absorbent in the refining of kerosene. As in this mining lease, the lessee is producing low grade Bauxite, which will be used in the cement industries.

2.4 Demands-Supply Gap

The Bauxite present in the area is economical because the cost of extraction is less than sale value. Hence, mining of Bauxite in this area is techno-economically viable. The requirement of Bauxite for cement industries will be fulfilled by this mine lease.

2.5 Imports vs. Indigenous Production

The development needs will be met only through locally produced Bauxite against the high cost of imported material.

2.6 Export Possibility

The Project Proponent would like to sale out the mineral in domestic market only. As such there is no export possibility.

2.7 Domestic/Export Markets

As the demand for mineral is high in international market so, export possibility will be explored.

2.8 Employment Generation

The total manpower requirement for this mining project is 13 persons. Preference for employment will be given to locals. The project will also generate indirect employment opportunities for the locals.

3. PROJECT DESCRIPTION

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

The mine is spread over an area of 8.73.05 Ha. The proposed production is 1,49,248 MTPA. This is an independent mining project and there are no interlinked projects involved.

3.2 Location

Mevasa Bauxite (Aluminous Laterite) Mining Project over an area of 8.73.05 ha is situated near Village Mevasa, Taluka Kalyanpur, District Devbhumi Dwarka and State Gujarat.

Topo Sheet No. :F 42 J08

Latitude: 22°15'14.96"N

Longitude: 69° 17' 51.10" E

Approach: The mine lease area is around 3.211 km away from Mevasa village in South East direction. NH-947 is 9.512 km in South West direction. The nearest Railway Station is Bhopalka Railway Station which is about 16 Km in South East direction. Jamnagar Airport is about 75.0 Km in North-East direction.



Fig 1: Location Map of Proposed Project Site Showing on Google Earth Image

3.3 Details of Alternate Sites

Mining is site specific so no alternative site is proposed.

3.4 Size or magnitude of operation

The mining lease has been granted over an area of 8.73.05 ha. The proposed production is 1,49,248 MTPA. The average number of working days in a year would be 300.

3.5 Physiography

The area falls on the Survey of India Toposheet No. F42J08. Topographically lease area is having a plain terrain. There is no watercourse present in the form of river nallah etc inside the lease.

The highest RL (m) is 13.99 MSL and the lowest is 9.019 MSL.

Drainage Pattern: the lease area is having dendritic drainage. No prominent drainage feature is established in the area. Rainwater flows as per natural slope of the surface in south direction. Entire surface precipitation joins natural nallah which is outside and far from the lease boundary. No water bodies exist in the adjoining area.

Vegetation: The area is devoid of any vegetation. Plantation will be carried out by lessee, no vegetation can be seen in the area.

Climate: The area is arid in nature and being in the vicinity of sea, experiences typical coastal climate with high humidity. The wind direction is generally SW-NE. Being nearer to the seacoast, the area also experiences sea and land breeze. The difference in the temperature during summer and winter is very large. In winter, January is the coldest month, while in summer May and June are hottest months. The average temperature during winter is around 20⁰C while in summer it is 38⁰C. The maximum temperature in winter is around 33⁰C while the minimum is 12 ⁰C. In summer, the temperature raises to a maximum of 40⁰C while is records and minimum of 27⁰C.

Rainfall: The average maximum rainfall is 220-225-mm, which is mainly received during the months of July-September.

3.5.1 Regional Geology

Devbhumi Dwarka is newly formed district which was carved out of Jamnagar district on 15th August 2013. The district consists of 4 talukas i.e. Khambhalia, Kalyanpur, Dwarka and Bhanvad. The name of Devbhumi Dwarka was derived from Dwarkadhish Temple of Dwarka city which is one of the four holy places according to Hindu Mythology. The district covers an area of 4051 sq. km. is bounded by Jamnagar district in the east, Porbandar district in the south, Arabian sea in the west and Gulf of Kachchh in the north. The district can be divided into three physical regions (i) the coastal plains including the offshore islands (ii) the plains and (iii) the undulatory and hilly terrains. The district has a good sea coast and well developed sea ports and is well connected by roads and railways. The annual average of the district is between 2594 mm. the district is devoid of any perennial river.

Devbhumi Dwarka has volcanic rocks and associated intrusive belonging to the Deccan Volcanics laterites of Bhatia Formation (Palaeocene age) sediments belonging to the Gaj Formation of Lower to Middle Miocene age, the Dwarka Foundation of Middle Miocene to Pliocene age and undifferentiated alluvium sand dunes, Rann clay, mud and coral reef of recent period. Basalt is the prominent rock type and is transverse by basalt and dolerite dykes. The Eocene sediments include clays, limestone, sandstone, marl and conglomerate. These rocks are fossiliferous Miliolite formation containing limestone, sandstone, clay and conglomerate, forms blanket like deposits. The recent deposits have been deposited by Marine, fluvial and Aeolian agencies. These soils are clayey, loamy, mixed and calcareous in nature. Bouger Gravity Anomaly contours range from 0 to 60m gal while the basement depth varies from less than 1000m to more than 1700m. a prominent N-S trending lincament passes through the area. An earthquake epicenter has been recorded close to this lincament. Seismologically, the northwestern part of the district falls under high intensity and the southeastern part comes under modern intensity area. Ground water prospects are good in vegetation anamaly, vegetation fill, pediplain, Miliolite limestone ridges and piedmont zones of geomorphical domains.

Lithology	Formation	Age
Undifferentiated alluvium sand dunes, Nandan clay, mud, soil / coral reef		Recent
Foraminifera Bauxite (gritty, pellitic and shelly) calcareous sandstone, calcareous clay and conglomerate	Miliolite Formation	Pleistocene
Bauxite (shelly and sandy) clay, Marl, sandstone, sandy and shelly Bauxite, Marl and shelly variegated Bauxite	Dwarka Formation	Middle Miocene to Pliocene
Shelly Bauxitem foraminiferal Bauxite, marl, calcareous sandstone, varigated clay and conglomerate	Gaj Formation	Lower Miocene to Middle Miocene
Laterite	Bhatia Formation	Palaeocene to Eocene
Olivine-gabbro	Deccan Volcanics	Upper Cretaceous to Eocene
MicrogNandanaite, felsite porphyry/ gNandanaophyre		
Rholite flows		
Dykes of basalt and dolerite		
Basaltic Flows		

(c) Detail description of Geology of the area:-

The local geological successions of the area are given as below:

Period	Formation
Recent	Over burden soil/ Alluvium
Sub-recent	Calcareous sand dunes
Tertiary	Gaj Formation

	Bhatia formation
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The study area is mostly covered by Alluvium/Soil and Clay of Recent period. Major soil type of the area is shallow to medium brownish in nature. Whereas in Mevasa block it is found on the surface in terms of overburden. The Bauxite of Bhatiya formation presents Paleocene to Eocene age.

The description of litho units are as under:-

Soil: the soil if found in the lease area which is lying over the Bauxite mineral deposit. It is brownish and blackish in colour, with fine to medium grain size. The black soil is regarded as alluvial black soil. The thickness of soil varies from 0.17m to 0.24m in the lease area.

3.6 Project description with process details

3.6.1 Method of Mining

Proposed method of mining:

The mining will be carried out by semi mechanized open cast mining method by forming benches. The heights and widths of the benches are 5.0 m and 5.0 m respectively. Manual sorting will be done and further transportation will be carried out by loading of mineral in trucks. The existing weathered road is being used as approach road for transportation. No drilling & Blasting proposed. The mining plan is prepared for next five years. Mining will be carried out by semi mechanized open cast method.

Proposed Production Plan- Yearly

S.No.	Year	Total Handling (T)	Waste Quantity (T)	ROM Quantity (T)	ROM Quantity Saleable Mineral (t)
1	Year 1	114780	67325	47455	47455
2	Year 2	184472	127219	57253	57253
3	Year 3	124157	65775	58382	58382
4	Year 4	297577	213331	84246	84246
5	Year 5	268762	119514	149248	149248

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 Bauxite.

3.8 Resource Optimization/ Recycling and Reuse

Only water will be used as resource optimization/recycling at the mine site.

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

3.9.1 Water Requirement

Total water requirement is about 9 KLD (1.0 KLD (Drinking & Domestic Uses) + 3.5 KLD (Plantation) + 4.5 KLD (Dust Suppression). The required water will be purchased through private tankers.

3.9.2 Power

The mine will work in one shift (i.e., general shift) only that is in day time, so no lighting arrangements will be required.

3.10 Quantity of wastes to be generated (Liquid and solid) and Scheme for their Management/Disposal

3.10.1 Nature of Waste

As the mining operation during the plan period will be broken up additional area and top soil will be generated during plan period.

Waste that is likely to be generated will be in the form of associated clay with the bauxite horizons as mineral waste. It is below the threshold grade which has no sale value in present market but it may have future market therefore the reject will be stacked separately at statutory barrier.

The waste generated during plan period is given below in table:

Year	Topsoil (cum)		Mineral Waste(cum)	
	Reuse/spreading	Storage	Backfilling	Storage
First	0	Nil	-	67325
Second	0	Nil	-	127219
Third	0	Nil	-	65775
Fourth	1294	Nil		213331
Fifth	3772			119514

3.10.2 Liquid Effluent

Not applicable

4. SITE ANALYSIS

4.1 Connectivity

The mine lease area is around 3.211 km away from Mevasa village in South East direction. NH 947 is 9.512 km in South West direction. The nearest Railway Station is Bhopalka Railway Station which is about 16 Km in South East direction. Jamnagar Airport is about 75.0 Km in North-East direction.

4.2 Landform, Land use and Land ownership

Total mining lease area of the project is 8.73.05 ha comprising of private land.

4.3 Topography and Drainage

The area falls on the Survey of India Toposheet No. F42J08. Topographically lease area is having a plain terrain. There is no watercourse present in the form of river nallah etc inside the lease.

The highest RL (m) is 13.99 MSL and the lowest is 9.019 MSL.

Drainage Pattern: the lease area is having dendritic drainage. No prominent drainage feature is established in the area. Rainwater flows as per natural slope of the surface in south direction. Entire surface precipitation joins natural nallah which is outside and far from the lease boundary. No water bodies exist in the adjoining area.

4.4 Present land Use Pattern

The mining lease area consists of Private land.

S. No.	Head	Area (Ha)
1.	Area under mining	-
2.	Overburden/ dumping/ mineral stack	-
3.	Roads	-
4.	Processing Plant	-
5.	Workshop etc.	-
6.	Township area	-
7.	Others to specify Plantation	-
8.	Remaining Land	8.73.05
	Total	8.73.05 Ha

4.5 Infrastructure

Mine site office will be established with relevant records of mining personal and for statutory purposes. Vehicle conveyance to the staff/employees will be provided who travel from nearby residing location. Mobile communication facility will be provided from senior supervisory staff to mines manger level. A temporary rest shelter for labors and water tank (capacity of 500 liters) for storing drinking water will be provided for usage of workers.

4.6 Geomorphology and Soil Type

Physiographically the district can be divided into the following units: Hilly areas and Coastal & alluvial Plains.

Jamnagar, Jodiya, Khambaliya and Kalyanpur talukas are characterised by plain topography, whereas Jam Jodphur, Lalpur and Bhanwad talukas are characterised by hilly terrains. Cliffs are found in the Dwarka taluka with height upto 30m. Barda, Alech, Gop etc are famous hill ranges in the district. Mount Venu is the highest summit of Barda hills that attains a height of 617.1 metres. Okha Rann is a low-lying marshy area. Low coastal dunes and sand banks run along the north and west coasts. Jamnagar, Jodiya and Kalyanpur are plain areas.

Soils of the district may be broadly classified as Coastal alluvial, medium black, shallow black and hilly. The medium black and shallow black soils are the main soil type of the district, while the coastal and hilly soils are the sub-soils. The black soil is rich in mineral and organic matter and is more fertile. The medium black soils are found in Dhrol, Jamnagar, Khambaliya, and kalyanpur talukas. These soils are generally 25 to 50 cm deep. Shallow black soils are found in Kalawad, Jam Jodhpur, Bhanwad, Okhamandal and Lalpur talukas. It is about 25cm deep. The coastal alluvial soils are found in Kalyanpur, Khambaliya, Jamnagar and Jodiya talukas. These soils are mostly saline and alkaline in nature. Hilly soils are found in southern parts of the district, particularly Bhanwad, Lalpur, Jam Jodhpur and Kalawad talukas.

(Source:- District Groundwater Brochure, Jamnagar District, Gujarat, Central Ground Water Board, West Central Region, Ahmadabad, November 2013).

4.7 RAINFALL & CLIMATE

The district has semi-arid climate. Extreme temperatures, erratic rainfall and high evaporation are the characteristic features of this type of climate. The average annual normal rainfall is 573.4 mm for 30 years. Climatological data of Jamnagar IMD station (1951-1980) is given in the below table.

Climatological data of Jamnagar IMD station (1951-1980)

Month	Max Temp (Deg.C)	Min Temp (Deg.C)	Humidity (%)	Wind Spd. Kmpd	Sunshine (Hours)	Solar Rad. (MJ/m ² /d)	Eto (mm/d)	Rainfall (mm)
January	26.3	10.7	52.5	143.7	8.9	17.0	3.6	1.7
February	29.0	12.8	54.0	127.4	9.3	19.5	4.1	1.8
March	33.0	17.4	58.0	143.7	9.6	22.3	5.3	1.1
April	35.4	21.4	62.0	181.3	10.3	25.0	6.4	0.0
May	36.4	24.9	65.5	259.7	10.2	25.3	7.2	0.9
June	35.9	26.7	70.5	264.6	7.9	21.8	6.3	91.6
July	33.0	25.7	78.0	254.8	5.0	17.4	4.8	197.6
August	31.5	24.8	80.5	231.9	4.9	16.9	4.3	180.3
September	32.2	23.5	76.5	158.4	7.0	19.0	4.5	62.0
October	34.5	21.2	62.0	114.3	8.8	19.5	4.6	28.6
November	31.8	16.7	52.0	112.7	9.0	17.5	3.9	7.0
December	27.9	12.4	52.5	122.5	8.6	15.9	3.3	0.8
Total	-	-	-	-	-	-	-	573.4
Average	32.2	19.9	63.7	176.3	8.3	19.8	4.8	-

4.8 Social Infrastructure available:

The mine lease area is around 3.211 km away from Mevasa village in South East direction. NH-

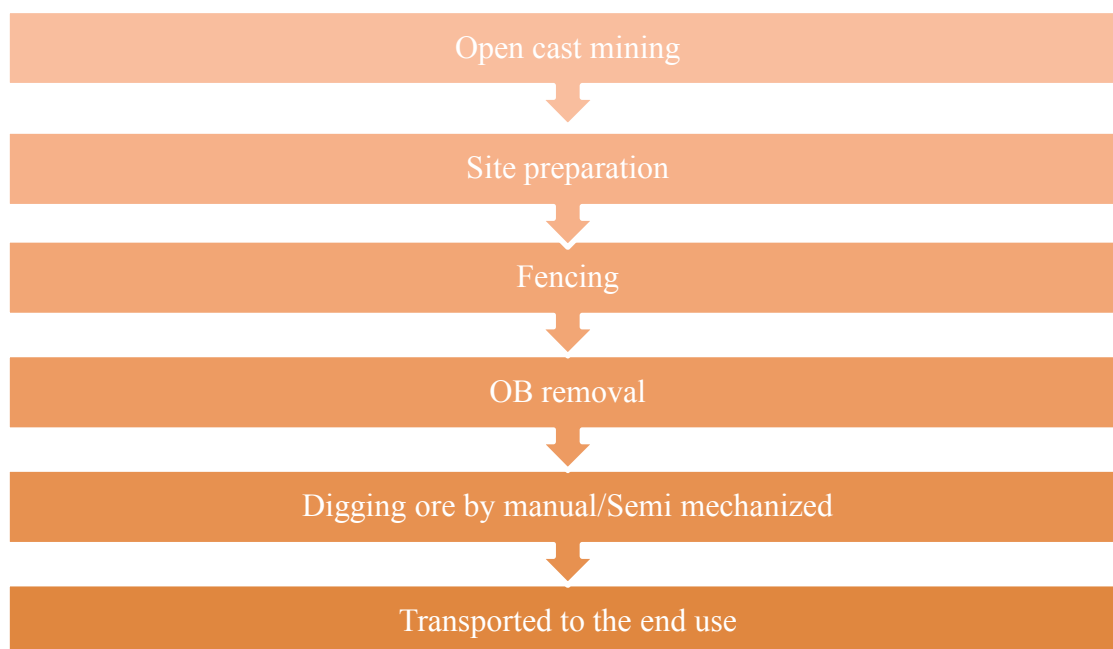
947 is 9.512 km in South West direction. The nearest Railway Station is Bhopalka Railway Station which is about 16 Km in South East direction. Jamnagar Airport is about 75.0 Km in North-East direction.

5 PLANNING BRIEF

5.1 Planning Concept

The mining will be carried out by semi mechanized open cast mining method by forming benches. The heights and widths of the benches are 5.0 m and 5.0 m respectively. Manual sorting will be done and further transportation will be carried out by loading of mineral in trucks. The existing weathered road is being used as approach road for transportation.

Schematic diagram



Extent of mechanization:

Type of machinery and equipment proposed to be used in different activities of excavation, loading & transportation is as follows:

Type of Machinery	Quantity	Capacity
Dumper	1	20 MT
Excavator	1	1.22 cum

5.2 Population Projection

Temporary influx of people will be there as the managerial and supervisory staff will be recruited from nearby area.

5.3 Land use Planning

At the end of life of mine, the damage to the landscape in the form of pit (about 1.2442 ha), will be degraded. The details of other component are given in the following table:

S. No	Type of land use	At the end of mine lease
1	Area under mining	1.2442
2	Overburden/ dumping/ mineral Stack	0.4488
3	Roads	0.1911
4	Infrastructure	0.0060
5	Workshop etc.	-
6	Township area	-
7	Others to specify plantation	-
8	Undisturbed Land	6.8404
	Total	8.73.05

5.4 Assessment of Infrastructure demand (Physical & Social)

The infrastructure demand in the village will be assessed on the basis of need and priority.

Physical Infrastructure

The road facility is already available. Other infrastructure facilities required are transport facilities for mine labors which will be made available by way of jeep, two wheelers etc.

Social Infrastructure

An occupational health unit will be constituted and the following measures will be adopted:

1. Periodical Medical Checkup program for all the workers and first-aid box with necessary equipment will be provided.
2. Training for workers regarding occupational hazards and
3. Use of Safety equipment i.e. dusts mask, safety shoes, gloves etc.

5.5 Amenities/Facilities

As per the approved mining plan, it is proposed to construct and provide site services like office, first aid, rest shelter, urinals and maintenance workshops etc. as per the statutory requirements.

6. PROPOSED INFRASTRUCTURE

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

Total area of green belt to be developed would be 10% of mine lease and their surrounding area.

As the mine lease area is 8.73.05 ha so plantation would be around 0.873Ha.

- Green Belt will be developed around the lease boundary, haul roads and plantation will be done on undisturbed area, reclaimed area, dump site, workshop & mine office, etc.

- Local species will be planted in consultation with Forest Department.

The maintenance such as suitable fencing, watering, replacement of dead plants etc. is being taken regularly and activity will continue in future for better survival rate.

6.4 Social Infrastructure

Proposed project will result to growth of the surrounding areas by increased indirect employment opportunities in the region including ancillary development and supporting infrastructure. The project will also establish social infrastructure for its employees as well as for the local community.

6.5 Connectivity

The mine lease area is around 3.211 km away from Mevasa village in South East direction. NH-947 is 9.512 km in South West direction. The nearest Railway Station is Bhopalka Railway Station which is about 16 Km in South East direction. Jamnagar Airport is about 75.0 Km in North-East direction.

6.6 Drinking Water Management

Water for drinking and domestic purpose will be 1.0 KLD. The required water will be purchased through private tankers.

6.6 Sewerage System

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

6.7 Industrial Waste Management: Not applicable

6.8 Solid Waste Management

Top soil generated from the lease area will be used in plantation within the lease area.

6.9 Power Requirement & Supply/Source

The mine will work in one shift (i.e., general shift) only, so no lighting arrangement will be required.

7. 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 Laborers (Brief outline to be given)

As the lease land is a Private land, the question of Rehabilitation and Resettlement of project affected people does not arise.

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 clearance and other statutory clearance from the authority.

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

Estimated project cost is Rs. 3 Crores. The lessee has all the mining equipments required for the scientific mining. The mine will be Eco-Friendly. Economically the ore is mineable as compared to overburden thickness.

9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

The proposed mine will bring about economic benefits to the state in the form of Royalty. The local people will be benefitted by getting direct and indirect employment opportunities. The project will provide livelihood to the poorest section of the society/economically backward population in the area. It will provide employment to the people residing in the vicinity of mining area directly or indirectly. The mine management will also help nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self-help groups, etc. Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area.