

Pre – Feasibility Report

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1. Executive Summary

M/s. Sri Venkata Sai Granites proposes to conduct semi mechanized open cast method quarrying for black granite extraction in an area of 5.364 ha in Survey No. 44/1 of Pasumanda Village, Gudipala Mandal, Chittoor District, Andhra Pradesh. Transfer of quarry Lease permission accorded orders issued for the un-expired portion of the lease period i.e. up to 16.09.2030 by Director of Mines and Geology, Hyderabad vide proceedings no. 38455/R5-1/2011, Dt. 14.03.2012. Total project cost proposed for the project is Rs. 55 Lakhs.

2. Introduction of the Project / Background Information:

i) Identification of Project and project Proponent

Transfer of quarry Lease permission accorded orders issued for the un-expired portion of the lease period i.e. up to 16.09.2030 by Director of Mines and Geology, Hyderabad vide proceedings no. 38455/R5-1/2011, Dt. 14.03.2012. Smt. P. Amruthavalli is the Managing Partner of the company and experience in granite export business.

ii) Brief description of nature of the project

Granite is one of the most popular building materials. It has been used for thousands of years in both interior and exterior applications. Granite dimension stone is used in buildings, bridges, paving, monuments and many other exterior projects. Indoors, polished granite slabs and tiles are used in countertops, tile floors, stair treads and many other design elements. Granite is a prestige material, used in projects to produce impressions of elegance and quality. Open cast method of mining to be carried out in this mine by manually and semi mechanization by using compressor operated jack hammer drills, excavators and using dumper etc. Transportation will be made by trucks to dispatching points. Hydraulic excavator and compressor operated jack hammers to be used for cutting the rock.

Need for the project and its importance to the country and or region

Granite has been extensively used as a dimension stone and as flooring tiles in public and commercial buildings and monuments. With increasing amounts of acid rain in parts of the world, granite has begun to supplant marble as a monument material, since it is much more

durable. Engineers have traditionally used polished granite surfaces to establish a plane of reference, since they are relatively impervious and inflexible.

iii) Demand - Supply Gap

The project is envisaged to meet the demand supply gap in both domestic market and export market, as Granite demand is increasing day by day.

iv) Imports Vs. Indigenous Production

The unit is being set up to meet the increasing demand of the Granite in the national and international market. This is not for import substitution.

v) Export possibility

The finished products shall be exported to the domestic and international market based on quality.

vi) Domestic/export Markets:

The project is expected to have domestic and export sales based on the quality of mineral, demand and costing etc.

vii) Employment Generation (Direct and Indirect) due to the project:

The following employees are required for the proposed mining project/activity.

S. No	Employee	Quantity
1	Mines manager	1
2	Blaster cum mate	1
3	Drillers	4
4	Excavator Operator	1
5	Compressor operator	1
6	Tipper Operators	2
7	Cutters	7
8	Helpers	8
9	Watchman	1
10	Chisel Men	2
	Total	28

Daily 15 members of labors will employ in this mine. Drinking water and first aid facilities are provided in this area.

3. Project Description

i) Type of Project including interlinked and interdependent projects, if any:

The Black Granite quarry is Open cast semi mechanized method. Jack hammer drilling and Wire Saw cutting will be deployed based on the favorable conditions. It is an independent project.

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

The quarry lease area falls in the Survey of India topo sheet no. 57 O/4 with GPS (WGS-84 datum) co-ordinates of Latitude 13°04'53.5"N and Longitude 79°09'45.1" E with an elevation of 393 m. The nearest village Kuppaganipalle located at a distance of 1.9 km in North East direction. The nearest town is Chittoor located at a distance of 16 kms in Northwest direction. Railway station is Ramapuram at a distance of 2.5 kms in Northeast direction. The road access is Kammathimmaiahpalli village road passing at a distance of 1.2km from the QL area in North direction. The lease area can be accessible through a cart track. Chittoor to Chennai highway road (NH-4) is passing at a distance of 2.8 km in west direction. Basavapalle Reserved forest is at a distance of 1.2 km in SW direction. Chittapara Reserved forest is at a distance of 2.4km in South west direction. Chilapalle Reserved forest is at a distance of 3.9 km in North direction. Magimandalam Reserved forest is at a distance of 4.97 km in Southeast direction. Bommasamudram Extension Reserved forest is at a distance of 5.0 km in Southwest direction. Panamadangi Reserved forest is at a distance of 7.6km in Southwest direction. Kanjanur Reserved forest is at a distance of 7.2km in SouthWest direction. Andhra Pradesh and Tamil Nadu interstate boundary is at a distance of 3.2 km in Southeast direction. There is no national park, wildlife/bird sanctuary and critically polluted areas within 10km radius from the quarry lease area. Location map of the mine lease area is presented in [figure 1](#).

iii) Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted.

No alternative sites considered, the proposal is mining project and it is site specific.

iv) Size or magnitude of operation:

It is proposed to produce black granite average production of 2246 m³/annum by semi mechanized open cast method mining.

v) Project description with process details (a schematic diagram/flow chart showing the project layout, components of the project etc. should be given)

Open cast method of mining to be carried out in this mine by manually and semi mechanization by using compressor operated jack hammer drills, excavators and using dumper etc., Transportation will be made by trucks to dispatching points. Hydraulic excavator and compressor operated jack hammers to be used for cutting the rock close spaced drilling of 0.2m will be adopted along a straight line and charged with low explosives to avoid feather cracks.

vi) 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 is required, project is for mining granite. The extracted granite is mainly sold for export (contingent on the quality) and or in domestic market.

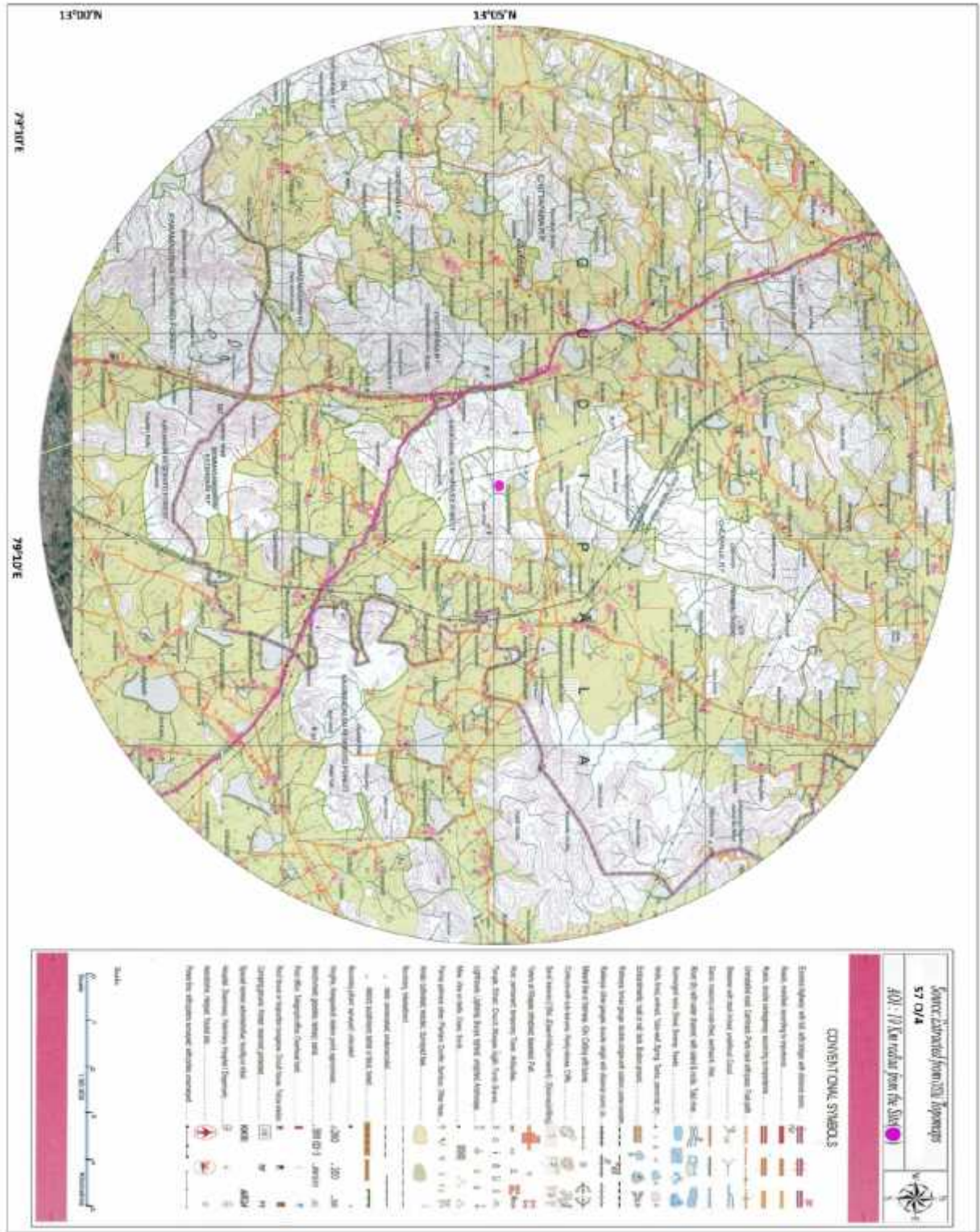


Figure – 1 Quarry lease location map

vii) Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined.

The waste generated will be used for backfilling in the worked out pits after completion of mine workings. The reclaimed land will be cover with top soil and green belt will be developed to get rehabilitation. Some of the material from the waste may be sorted out and used for making small blocks known as 'Khandas' to be used by the local unit for making tiles. The market for tiles is good at the moment and they will offer better substitute for marble in terms of price and quality. Some rejected and unsorted material may be used in the civil engineering projects in the vicinity of the area. The waste material can also be crushed into smaller sizes and can be used as road metal.

viii) Availability of water its source, energy/power requirement and source should be given

Water Requirement

Water requirement is mainly for drinking purpose, domestic purpose, green belt maintaining and for sprinkling on Mine haulage roads the water shall be drawn from nearby village. The domestic waste water shall be sent to septic tank followed by soak pit. Rainwater Catch Pond of 20 KL capacity will be provided to collect the storm water for reuse. This will ensure that the rainwater is effectively used and minimizes the drawl of ground water resources. The required water shall be drawn from the local villages through tankers.

Total Water requirement

S. No	Water Usage	Quantity KL/day
1	For wet drilling operation	0.7
2	For water sprinkling on mine haulage roads	2.0
3	Domestic	1.3
4	Green Belt	1.0
Total		5.0

Electricity:

Power facility is there in nearest villages and Kuppaganipalli village is located at a distance of 1.9 km from the QL area. Power generator is also proposed to use during power shutdown periods.

ix) Quantity of wastes to be generated (liquid and solid) and scheme for their Management/disposal

During the five years period the total quantity of waste likely to be generated is 58970 Cu. m. It consists of granite blocks of various sizes, shapes and dimension. Since the life of the quarry is 56.8 years based on the reserves estimated.

The waste generated during the five years may be dumped in the zone separately reserves for dumping in the North Western side part of the area. The length of the dump is proposed to be 92 m, width 55m and height will be about 20m. During the first five years about 58970 m³ of waste material will be generated.

4. Site Analysis

4.1 Quarry Location

The quarry lease area falls in the Survey of India topo sheet no. 57 O/4 with GPS (WGS-84 datum) co-ordinates of Latitude 13^o04'53.5"N and Longitude 79^o09'45.1" E with an elevation of 393 m. The nearest village Kuppaganipalle located at a distance of 1.9 km in North East direction. The nearest town is Chittoor located at a distance of 16 kms in Northwest direction. Railway station is Ramapuram at a distance of 2.5 kms in Northeast direction. The road access is Kammathimmaiahpalli village road passing at a distance of 1.2 km from the QL area in North direction. The lease area can be accessible through a cart track. Chittoor to Chennai highway road (NH-4) is passing at a distance of 2.8 km in west direction. Basavapalle Reserved forest is at a distance of 1.2 km in SW direction. Chittapara Reserved forest is at a distance of 2.4km in South west direction. Chilapalle Reserved forest is at a distance of 3.9 km in North direction. Magimandalam Reserved forest is at a distance of 4.97 km in Southeast direction. Bommasamudram Extension Reserved forest is at a distance of 5.0 km in Southwest direction. Panamadangi Reserved forest is at a distance of 7.6km in Southwest direction. Kanjanur Reserved forest is at a distance of 7.2km in Southwest direction.

5. Planning Brief

The project is envisaged to be put in production/mining by this year, and the production shall be initiated thereon. Geologists and Mining engineer are identified for preparing the detailed project report.

6. Proposed Infrastructure

The applied area is located at 1.9 km towards North East of kuppaganipalle village. The road access is Kammathimmaiahpalli village road passing at a distance of 1.2 km from the QL area in North direction. The lease area can be accessible through a cart track. Railway station is Ramapuram at a distance of 2.5 kms in Northeast direction.

6.2 Utilities

Proponent has been decided to undertake mechanized mining operations; the following mentioned mine machinery will be deployed.

- I. Excavator – One
- II. 50 CFM – Air Compressor-one
- III. Jack hammers – 4 units
- IV. 18 tonnes tippers – 2 no's

- V. Minor Tools: Chisels, Crowbars, pick of axes spades and hammers of different sizes.

6.3 Waste management

Liquid Effluents

There is no effluent generated from the mine operations. The effluent generated from the domestic is sent to septic tank followed by soak pit. The water draining the dump will be send through a single point to siltation tank. Silt carried from the quarry face will be deposited in the siltation tank and silt free water will be passed into the surrounding environment.

Air Pollution

The black granite mining does not involve dust formations. The dust anticipated at drilling place will be suppressed by putting cloth around the hole and the dust would be generated during blasting, drilling and mining and also during handling and transportation of the material. The suggested control measures are Dust suppression systems (water spraying) to be adopted at Faces/sites before and after blasting, Faces/sites while loading; and Use of sharp drill bits for drilling holes and drills with water flushing systems (wet drilling) to reduce dust generation. Regular water spraying on haulage roads during transportation of granite. Dusk masks will be provided to the workers in the dressing section and dust collector in the drilling section.

Solid waste

During the five years period the total quantity of waste likely to be generated is 58970 Cu. m. It consists of granite blocks of various sizes, shapes and dimension. It is estimated that about 3302320 cu. m. of waste will be generated during the entire life of the mine, since the life of the quarry is 56.8 years or 56 years based on the current level of information. The reserves will be revised once the exploration is completed and a few trial pits are opened up and the quality and quantity of granite is proved.

The waste generated during the five years may be dumped in the zone separately reserves for dumping in the North Western side part of the area. The length of the dump is proposed to be 92m, width 55m and height will be about 20m. During the first five years about 58970 m³ of waste material will be generated.

7. Rehabilitation and Resettlement (R&R) Plan

NA.

8. Project Schedule & Cost Estimates**i) Likely date of start of construction and likely date of completion (Time schedule for the project to be given)**

Construction activity involves mine office cum rest shelter and toilets with temporary structures. The roof will be of asbestos sheets covered by hay to keep it cool in summer. A first aid certificate holder will be the in-charge of the first aid room. Protected drinking water will be provided and stored in earthen pots. It will start after obtaining all statutory clearances, estimated date of construction and completion by this year.

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

The estimated cost of the project is approximately Rs. 55.0 Lakhs.

Purpose	Cost Rs. In Lakhs
Civil buildings	4
Machinery	44
Occupational health and Safety equipments	3
Contingencies & pre-operative expenses	4
Total Project cost	55