

**APPLICANT**

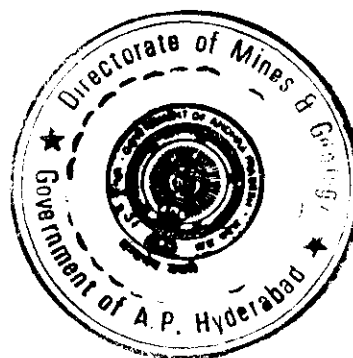
**DESIGNER ROCKS PVT LTD  
HYDERABAD**

**MINING PLAN FOR COLOUR GRANITE IN SURVEY NO 27  
(EXTENT 3.000 HECTARES) OF MEELASTHIWADA VILLAGE,  
TEKKALI MANDAL, SRIKAKULAM DIST, ANDHRA PRADESH**

**PREPARED BY**

**A.S.CHAUHAN  
(RQP /DMG/HYD/O63/2002)  
(RQP/HYD/232/2004/A)  
2-2-1130/25/A/1, SHIVAM ROAD  
NEW NALLANUNTA, HYDERABAD -500044  
ANDHRA PRADESH**

**APPROVED**



GOVERNMENT OF ANDHRA PRADESH

Letter No. 40601/R1-1/MP/2005

Dated. 7.7.2006

From :

Sri. P. Rajasekhar Reddy, M.Sc.,  
Joint Director of Mines & Geology  
C/o Director of Mines and Geology,  
Hyderabad.

To

M/s Designer Rocks (P)  
201, Archana Apartments  
Begumpet,  
Hyderabad.

Sir,

Sub:- Approval of Mining Plan - Quarry Lease for Colour Granite over an extent of 3.000 Hects in S.No. 27 of Meelisathiwada Village, Tekkali Mandal, Srikakulam District - in favour of M/s Designer Rocks (P) Ltd., - Mining Plan - Approval Regarding.

Ref:- 1. DM&G, Lr. No. 40601/R1-1/2005, dt. 3.6.2006.  
2. Lr. dt. 6.7.2006 along with 5 sets of Mining Plan from M/s Designer Rocks (P) Limited.

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In exercise of the powers conferred as per Sub-Rule 5 of Rule 5 of Granite Conservation and Development Rules 1999, I hereby approve the Mining Plan for colour Granite over an extent of 3.000 Hects in S.No. 27 of Meelisathiwada Village, Tekkali Mandal, Srikakulam District in favour of M/s Designer Rocks (P) Ltd., This approval is subject to the following conditions:-

- 1) This Mining Plan is approved without prejudice to any other law applicable to the mine area from time to time whether made by the Central Government, State Government or any other authority.
- 2) It is clarified that this approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act, 1957 or the Mineral Concession Rules, 1960 and any other law including the Forest Conservation Act, 1980.
- 3) The approval authority does not owe the responsibility with regard to assessment of the reserves, erroneous certification made by the mine owner, which is tentative subject to modifications.

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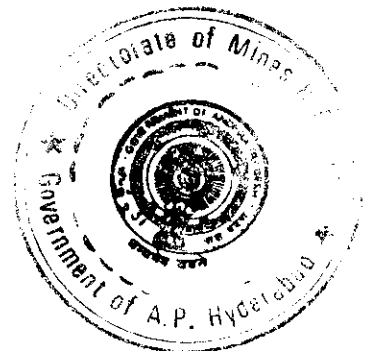


PLATES

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**ANNEXURE LIST**


- |    |              |  |
|----|--------------|--|
| 01 | ANNEXURE - 1 | Proceeding no 10615/R1-3/ 2001 Dated 1-06-2001 |
| 02 | ANNEXURE - 2 | Proceeding no 3035/Q/2001dated 12-06-2001      |
| 03 | ANNEXURE - 3 | Notice of ADMG                                 |



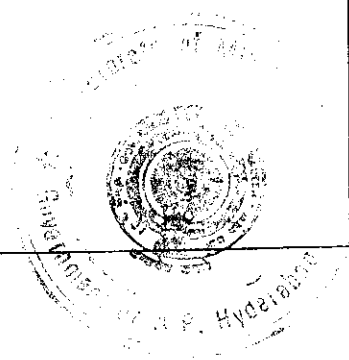
**DECLARATION**

Certified that the Mining plan in respect of Colored Granite over an extent of 3.0 Ha in Survey No 27 of Meelasathiwada Village, Tekkali Mandal, Srikakulam District in the State of Andhra Pradesh has been prepared in consultation with me. I have understood its contents and agree to implement the same in accordance with law

for M/S DESIGNER ROCKS PVT LTD

  
S.SAMBESH RAO  
Managing Director

Date:05-07-2006



**CERTIFICATE**

Certified that the provision of Mines Act, Rules and Regulations made there under have been observed in preparation of the Mining Plan in respect of Coloured Granite over an extent over an extent of 3.0 Ha in Survey No 27 of Meelasathiwada Village, Tekkali Mandal, Srikakulam District in the State of Andhra Pradesh. Wherever specific permissions are required, the applicant will approach the Director General of Mines safety.

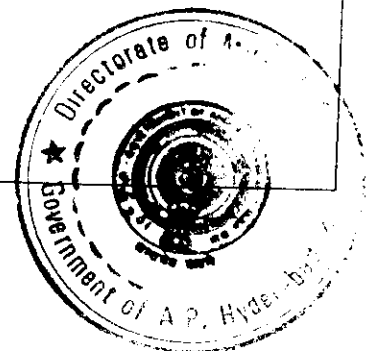
It is also Certified that the information furnished in the Mining plan is true and correct to the best of my knowledge.

**A.S. CHAUHAN**

*A.S. Chauhan*

Registered Qualified Person  
(RQP/DMG/HYD/063/2002)  
RQP/HYD/232/2004/A

Date: 05-07-2006



**CERTIFICATE**

This is to Certify that the provisions of Granite Conservation and Development Rules 1999, have been observed in the preparation of Mining Plan in respect of Coloured Granite over an extent over an extent of 3.0 Ha in Survey No 27 of Meelasathiwada Village, Tekkali Mandal, Srikakulam District in the State of Andhra Pradesh and where ever specific permissions are required, the applicant will approach the Director of Mines and Geology at Hyderabad .

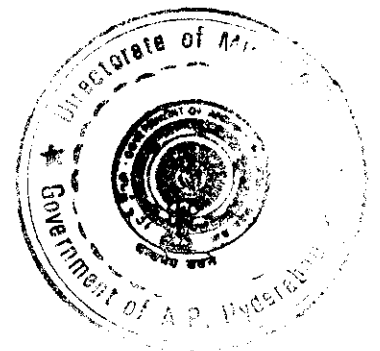
It is also certified that the information furnished in the Mining plan is true and correct to the best of my knowledge.

**A.S. CHAUHAN**

*A.S. Chauhan*

**Registered Qualified Person  
(RQP/DMG/HYD/063/2002)  
RQP/HYD/232/2004/A**

Date: 05-07-2006



MINING PLAN FOR COLOUR GRANITE OVER AN EXTENT OF 3.000 HECTARES IN S.NO 27, OF MEELASATHIWADA, TEKKALI (M), SRIKAKULAM DIST, A.P.

## INTRODUCTION

M/S ROCK MANSION was granted a Quarry Lease for colored granite in S. No 27, of Meelasathiwada village, Tekkali mandal over an extent of 3.00 Hectares for a period of 15 years vide proceedings no 12144 /R1-38/ 94 dated 6-11-97. Subsequently, Rock Mansion applied for transfer of lease in favor of M/S Designer Rocks (P) Ltd on 19-12-2000. The Director of Mines and Geology vide proceeding no 10615 / R-3/ 2001 Dated 1-06-2001 had granted the transfer of lease in favor of M/S Designer Rocks (P) Ltd for the un expired portion of the Lease period and will be in force up 9-11-2012. The transfer lease deed was executed on 12-06-2001 in the Office of ADMG, Srikakulam and work orders were issued to M/S Designer Rocks (P) Ltd vide proceeding no 3035 /Q/ 2001 dated 12-06-2001. The ADMG vide his letter had directed the applicant to submit the Mining plan under rule 17 (1) of GCDR, 1999. The work of preparation of Mining Plan was undertaken by the A.S CHAUHAN, RQP and is prepared as per guide lines circulated by the Director of Mines and Geology, Government of A.P and in conformity with the Granite Conservation and Development Rules, 1999.

### 1.0 GENERAL

a) Name of the applicant with complete address:

DESIGNER ROCKS PVT LTD  
201, ARCHANA APARTMENTS  
BEGUMPET, HYDERABAD 500016 A.P

This Mining Plan is Approved subject to the Conditions/Stipulations Indicated in the Mining Plan Approval Letter No..... 4060/R-1/MP/2005, dated 07.07.2005

b) Status of the Applicant:

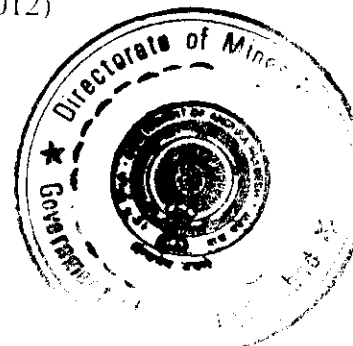
M/S DESIGNER ROCKS PVT LTD, is a private limited company incorporated under Companies Act 1956 on 29-5-1998 with Sri S. Sambesh Rao as Managing Director. The company is an established Granite miner cum Exporter with major working Granite quarries existing in Srikakulam and Nizamabad Dists of A.P. The company has not only highly experienced professional, but also have required machinery and are financially sound.

c) Mineral or minerals the Applicant wants to Mine : COLORED GRANITE

d) Period of Quarry Lease Granted: 15 Years (valid up to 9-11-2012)

**APPROVED**

*P. Rajasekhar Reddy*  
P. Rajasekhar Reddy  
Joint Director  
Dept. of Mines and Geology.  
Govt of A P Hyderabad.





**e) Name, Address and registration no of the RQP who prepared the mining plan:**

A.S. CHAUHAN,  
M.Sc.PGDEM  
H.No 2-2-1130/25/A/1  
Shivam Road, New Nallakunta  
Hyderabad -500044 A.P.  
Phone 040-27618367  
(RQP/DMG/HYD/063/2002)  
(RQP/HYD/232/2004/A)

**2 LOCATION AND ACCESSIBILITY:**

a) The subject area lies in the Survey of India Topo sheet No 74 B/2. It is located on North latitude -84° 12' 30" and E longitude 18° 37' 30" (Plate I)

Dist & State	Mandal	Village	S.No	Area in Hectares	Ownership
Srikakulam Andhra Pradesh	Tekkali	Meelasathiwada	27	3.000	Govt. land

**b) Boundaries:**

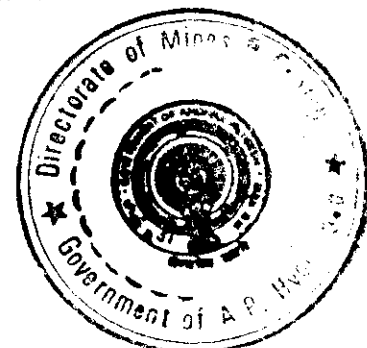
The applied area is bounded in the North by Government land, on the South by Quarry lease of M/s Gallop Granites, in the West by the Q.L of M/ Designer Rocks Pvt Ltd , and in the West S. no 27.

**c) Accessibility:**

The subject area is located at a distance of 10 Kms from Tekkali on the Tekkali – Parlakamudi road. After traveling about 5 Kms on that road a diversion towards north has to be taken from the village Sitharamapuram. From here the area is located at a distance of 5 kms via Borugupeeta village. It can be approached for the first 5 kms by a good metalled road and the balance by a katcha road.

**d) Infrastructure:**

Climate : Moderate  
Terrain : Flat terrain with some hillocks  
Water : Sufficient ground water is available  
Electricity : About 500 mts from the area  
Roads : The area is connected by good road for 5 kms and the balance by a katcha road. It is located at a distance of about 10 Kms from Tekkali Town on the Tekkali-Parlakamudi. Tekkali is located on the Calcutta-Chennai Highway.



Railway : Nearest railway station is Tekkali about 1 kms from Tekkali town on the narrow gauge line and Naupada at a distance of about 9 kms from Tekkali town on the broad gauge line.

School, bus & Phone : Tekkali Town had a school, Junior and a Degree college.  
Hospital : Tekkali and Srikakulam  
Airport : Visakhapatnam  
Camping : Sirkakulam

### 3.0 GEOLOGY AND RESERVES

#### 3.1.1 Physiography/ Topography

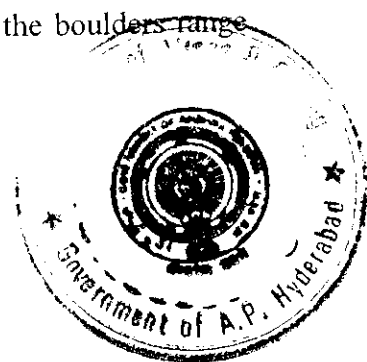
The Q.L area consists of a undulating terrain and comprise of hillock Migmatized Gneiss having a general trend of NE-SW direction. The quarry lease is occupied by boulders and sheet rock forming ridges. The maximum Relief of the hillock is 54 m and assumed bench mark is taken as 100m. Elongated boulders are noticed at the top with the hill gradually raising towards north. The drainage of the area is controlled by a net work of streams which act as feeders to the tanks present in the area. The tanks along with the bore wells and wells constitute the main source of water for agricultural and drinking purpose. The water table is located at a depth of about 20-30 m from the ground level. The region has a tropical humid climate with the maximum and minimum temperature varying from 28-38 degrees in summer and 25-15 degrees in winter. The average rainfall is around 900-1000 mm and the monsoon is from June to September. The occupation of the people in of the region is agriculture. No major rivers are present in the area. The drainage is of dendritic pattern.

#### 3.1.2 Regional Geology:

In and around Srikakulam, Blue granite is extensively quarried for the past 15 years or so. It is a part of Ghat group of rocks consisting of Chornokites, Khondalite and Granitoids a variety of hybrid rock formed by the interaction of Intrusive granite into the Khondalite. The Eastern ghat group attains a maximum thickness in the Ganjam -Cuttack tract. It occurs as ridges trending NE-SW. The eastern ghat belt exhibits high grade metamorphism as evidenced by the presence of Garnet and Silliminite. The Chornokite shows intrusive relation towards Khondalite and has itself under gone post migmatic changes. Felspathic bands are common and are due to Granitisation.

#### 3.1.3 Geology of the area:

The area was mapped in detail and the geology is incorporated and is enclosed s plate no -III The terrain in and around the area is of undulating in nature. The area on the western slope is covered by a thin soil cover along the periphery of the area. But major portion of the area is occupied by big boulders of granite followed by a sheet rock. The main rock exposed in the area consists of Migmatized Chornokite. The size of the boulders range



from 0.5 cbm to 10 cbm. Two set of joints are observed, one is parallel and the other perpendicular to strike direction. They are widely spaced and are useful in splitting big blocks from the mother rock. The rock on physical examination is malanocratic, medium grained, massive and compact. The bluish or grayish color is imparted by blue quartz and grey feldspar. The other accessory minerals present are biotite and garnet. The rock exhibits a wavy structure in few boulders and gneissic in some of them. The rock at places is intruded by quartz vein and feldspar band. The weathering extends to a depth varying from few inches to a foot in some areas. Megascopic and polished samples indicates that the rock takes good polish and exhibits fine texture. The over all appearance of the rock is bluish and hence is commercially known as Blue Granite.

**3.1.4 Lithounits Present in the area:** The main litho unit present in the area is Migmatized Charnokite in the form of boulders and sheet. The colour is dark blue in some places and light blue in some. The minerals present are Silliminite, Garnet. And quartz.

### **3.1.5 Exploration :**

#### **a) Already Carried Out**

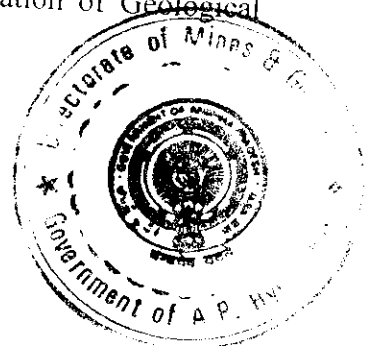
- a) Preliminary study of the visual examination of granite texture.
- b) Collection of surface sample and subjecting them to cutting and polishing
- c) Study the marketability
- d) Preparation of land by leveling to enable the movement of the machinery
- e) Opening of trail pits
- f) Drilling and splitting of primary blocks in to sized blocks and making them fit for examination by the buyers
- g) Present Status: The area was initially mapped and geology was plotted on the geological plan. Subsequently, surface samples were collected and based on the market response mining was started. The area is being worked for the past 8 years and the material is well accepted in the domestic and international market.

b) **Future Programme:** Since the deposit is proved in detail no further exploration is required.

### **3.1.6 Geological Plan:**

The area was surveyed by a theodolite and contour base plan was prepared on the scale of 1:500. On this plan geology was mapped and geology was plotted on the plan is enclosed as plate III.

**3.1.7 Geological Sections:** The contour plan enabled the preparation of Geological cross sections and are enclosed as plate IIIA.



### 3.2. GEOLOGICAL RESERVES – Category – wise

Based on the information obtained from the boulders and exploratory openings, the 'proved' category reserves may be estimated down to 15 m depth from the surface. The exploratory openings have reached a depth of about 15 m the quality of rock is also not likely to show much variation within this depth as shown in the exploratory face. From the base of the proved zone, a 5 m depth is considered for the estimation of the reserves under the 'probable' category. The quality of granite is likely to be the same as one in the proved zone. Finally a 3 m, zone below the probable zone is considered for estimation of reserve under the 'possible' category. The reserves are estimated by volumetric method. It consists of calculating the area and multiplying it by thickness to arrive at the volume. The reserves computed on the basis of the above consideration are given in Table-3.1

Table 3.1 Category wise Insitu Geological Reserves of Color Granite

Category	Type of Deposit	Average length in m	Average width in m	Thickness in m	Volume in cbm LxWxD	Recovery 25% in cbm	Wastage 75% in cbm
PROVED	Boulders and sheet	160	122.5	15	2,94,000	73,500	2,20,500
PROBABLE	DO	160	122.5	5	98,000	24,500	73,500
POSSIBLE	Sheet	160	122.5	3	58,800	14,700	44,100
<b>TOTAL</b>					<b>4,50,800</b>	<b>1,12,700</b>	<b>3,38,100</b>

Under the proved category the total ROM is estimated as 4, 50, 800cu m, under the probable category it is 98,000 cum and under the Possible category it is 58,800 cum. Therefore the total insitu deposit under the three category is 4,50,800 cum and considering 25% recovery, the recoverable blocks under the three category are estimated at 1,12,700 cu m. and the total wastage is estimated as 3,38,100 cum.

### 3.3 Mineable reserves and life of the mine:

The estimation of mineable reserves is arrived at by taking into consideration the insitu proved reserves only. which are 2, 94, 000 cum and taking a recovery percentage of 25% the mineable reserves are estimated as 73,500 cum and 2, 20, 500 cum will be the waste. The company has mined 14,119.827 cum till 31-3-2005 and therefore the net balance available reserves on 1-4-2005 are 59,380.173 cum. Considering an average production of 1600 cum the life of the mine is

$$59,380.173 / 1600 = 37.11 \text{ or } 37 \text{ years.}$$



## 4.0 MINING

In view of the shallow nature of the deposit, open cast mining method shall be adopted in a semi mechanized manner.

### 4.1.1 Method of Quarrying:

Semi -Mechanized quarrying method are to be followed involving the following Machinery as mentioned in 4.1

Table 4.1 Showing the Machinery to be deployed in the quarry

Machinery	Quantity	Nature of Work
Excavator	1 no	The excavator to be employed for the removal of the over burden, small boulders, cut boulders and waste rock
Tipper	2 no	For transportation of the overburden and blocks
Compressors	4 no	For drilling holes for splitting
Jack hammers	12 no	For drilling holes
Chain pulley block	1-10 ton	For lifting small blocks
Crane	1-10 ton	For loading the blocks in to the trucks

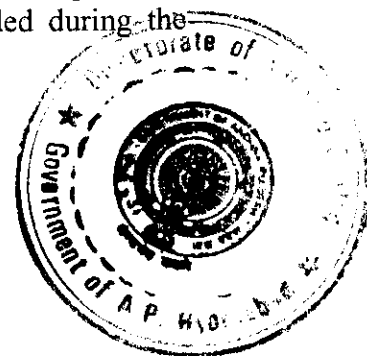
### TOOLS:

Drill Rods of size ranging from 2.5 feet to 10 feet long  
Feather and wedges for splitting the holed rock in a linear direction  
Grinding Wheels for grinding the diamond bits of the rods  
Wire net, Wire rope, chain 50mm, and other spares

### 4.1.2 METHOD OF DELINEATION

Several methods of delineation can be carried out and the prominent among them is mentioned below.

**Drilling and using Feather and Wedges:** Once the boulder is freed by removing the soil and waste rock surrounding it, a series of holes are drilled by compressed air using Jack Hammer at a regular interval of 15-30 cms depending on the size of the boulder, the depth of the hole depends on the height of the boulder and the holes are drilled up to the bottom leaving about a foot at the base. The holes have to be perfectly straight and vertical so that the vertical split is obtained. Line drilling machine can be used to drill straight holes. Feather and wedges are inserted into the holes and hammered continuously applying uniform pressure and the boulder splits vertically. Similarly the dressing is done and the boulder is given a rectangular shape. All the defects are avoided during the dressing stage.



**4.1.3 DETAILS OF PRODUCTION SO FAR MINED FROM THE BEGINNING OF THE QUARRY**

Year	Machine Deployed	Labour Employed	Production in cum	Despatches in cum	Size wise recovery of block %
1997-98	Compressor and excavator	25	146.954	144.840	15%
1998-99	Excavator, Compressor Crane & Tippers	40	1529.112	1483.410	20%
1999-00	Do	50	2275.043	2249.994	25%
2000-01	Do	50	2094.428	2017.806	25%
2001-02	Do	50	2019.523	2010.205	25%
2002-03	Compressor	50	2081.902	1990.074	25%
2003-04	Do	55	2381.815	2371.288	25%
2004-05	Do	55	1591.050	1549.550	25%
<b>TOTAL</b>			<b>14,119,827</b>	<b>13,817.167</b>	<b>25%</b>

**4.1.3 YEAR WISE DEVELOPMENT AND PRODUCTION FOR THE FIRST FIVE YEARS.**

**1<sup>ST</sup> Year:** Orientation of the bench will be in the N-S Direction and so will be the advancement. The length is taken as 50 m, the width as 25 m and bench height as 5.12 m. The annual excavated material is calculated 6,400 cbm and considering a recovery of 25 % it is planned to produce 1600 cbm of saleable blocks and 4,800 as waste during his year. The top RL will be 142 m and the bottom RL will be 136m.

**2<sup>ND</sup> Year:** Orientation of the bench will be in the N-S Direction and so will be the advancement. The length is taken as 50 m, the width as 25 m and bench height as 5.12 m. The annual excavated material is calculated 6,400 cbm and considering a recovery of 25 % it is planned to produce 1600 cbm of saleable blocks and 4,800 as waste during his year. The top RL will be 142 m and the bottom RL will be 136m.

**3<sup>RD</sup> Year :** Orientation of the bench will be in the N-S Direction and so will be the advancement. The length is taken as 50 m, the width as 25 m and bench height as 5.12 m. The annual excavated material is calculated 6,400 cbm and considering a recovery of 25 % it is planned to produce 1600 cbm of saleable blocks and 4,800 as waste during his year. The top RL will be 145 m and the bottom RL will be 136m.



**4<sup>TH</sup> Year :** Orientation of the bench will be in the N-S Direction and so will be the advancement. The length is taken as 50 m, the width as 25 m and bench height as 5.12 m. The annual excavated material is calculated 6,400 cbm and considering a recovery of 25 % it is planned to produce 1600 cbm of saleable blocks and 4,800 as waste during his year. The top RL will be 145 m and the bottom RL will be 136m.

**5<sup>TH</sup> Year :** Orientation of the bench will be in the N-S Direction and so will be the advancement. The length is taken as 50 m, the width as 25 m and bench height as 5.12 m. The annual excavated material is calculated 6,400 cbm and considering a recovery of 25 % it is planned to produce 1600 cbm of saleable blocks and 4,800 as waste during his year. The top RL will be 145 m and the bottom RL will be 136m.

The proposed production of ROM and Marketable blocks are shown in the table 4.1

Table 4.1 Projected production of ROM and Marketable blocks during the first plan period

Year	Section	Area for mining in m	Volume in cbm	Recoverable blocks (25%)	Wastage 75 % in cbm
I	B-B1	50x25x5.12	6,400	1,600	4,800
II	B-B1	50x25x5.12	6,400	1,600	4,800
III	B-B1	50x25x5.12	6,400	1,600	4,800
V	B-B1	50x25x5.12	6,400	1,600	4,800
V	A-A1	50x25x5.12	6,400	1,600	4,800
			32,000	8,000	24,000

The total ROM for the first five year is estimated at 32,000 cbm and the recoverable blocks of 8,000 cbm with an average production of 1600 cbm per annum. The waste generated during this period is 24,000 cbm.

#### 4.2 DRILLING

Drill hole pattern will be uniform single lined pattern, equidistance holes from 0.33 mtrs to 0.75 mtrs, 4.5 mtrs in depth.

Drilling Parameter

Drill hole diameter - 34.mm

Spacing depends upon the size of the boulder, in general it 15 cms from hole to hole for better splitting.

#### 4.3 HANDLING THE BLOCKS WITHIN THE QUARRY

Since the size of the boulder is big therefore it has to handled by a crane. The blocks will be dressed at the pit mouth and after checking the quality loaded in the tipper and



transported to the stockyard. The waste will loaded into the tippers and transported to the dump yard. The size of the block produced from the quarry may vary 60-350 cm in length, 40-200cms in width and 60 -180cms in height. Hence the existing crane and excavator are sufficient to handle the blocks within the quarry.

#### **4.4 TRANSPORTATION OF BLOCKS FROM QUARRY TO YARD AND DESTINATION**

Dressing of the blocks will be done at the pit mouth and are transported to stock yard by the existing 2 tippers are sufficient for handling the dressed blocks and for carrying the waste to the dump yard. The dressed blocks will be transported to the various destination by hired trucks.

#### **5.0 STORAGE AND HANDLING OF EXPLOSIVE**

Since there is no overburden and the boulders are exposed near the surface, the boulders can be easily dislodged and hence the requirement of explosive will be very less or negligible. Hence, there is no need to store the explosive in the quarry. If required the blasting can be given on contract to the licensed contractor who will bring the necessary explosive in the van and carry out the work under the supervision of a qualified blaster.

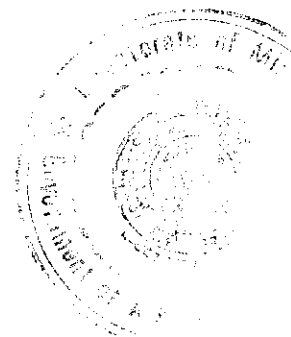
#### **6.0 WASTE MANAGEMENT**

##### **6.1 to 6.3 Solid Waste:**

During the five years period the total quantity of waste likely to be generated is 24,000 cum. It consists of granite blocks of various sizes, shapes and dimension. Soil component will be minimal but will be stacked separately from the mine waste. It is estimated that about 2,20,500 cbm of waste will be generated during the entire life of the mine.

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 a 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.

The waste generated during the five years may be dumped in the zone separately reserved for dumping. The dumps will have to designed in such that it will have slopes equal to the angle of repose of such material. Drains have to provided and the dump terraced. Garland drains have to be sunk along around the leading edge of the dump and trees have to be grown to arrest the run off of rain water.





#### 6.4 LIQUID WASTE

The liquid waste include mainly run off water during monsoon months from the quarry and waste dumps. The rain draining the freshly exposed rocks fragments and dust in the quarry and dump is susceptible for incorporating suspended solids and toxic elements. Such water laden with suspended solids may affect the fertility of the soil in the agricultural land as well as result in the formation of silt blankets on the ware bodies. The silt content may reach the major rivers in the region. Seepage of such water down to the water table may cause pollution to the ground water.

In order to avoid this it would be necessary to make the water leaving the quarry and dump site silt free. Since the granite is free from such minerals, which contribute toxic elements to the water the problem is not there.

The silt leaving the quarry can be arrested by constructing check dams at points where the water leaves the quarry. Siltation tanks can also be constructed so that the silt is trapped in them. The water leaving the dumps shall also be made silt free by constructing garland canal along the base of the dump.

#### 7.0 DRESSING

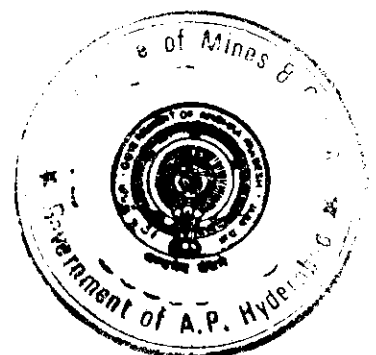
The rough blocks of black granite will be subjected to dressing at the pit mouth itself. Jack hammers along with compressed air is used to drill holes at 15 cms interval will split the block by using feather and wedges and applying uniform pressure by hammering on top of the offsets. Then the blocks are brought into rectangular shape by hammer and chisel.

#### 8.0 DESCRIPTION OF GRANITE PROCESSING PLANT:

The applicant intends to export dressed raw blocks and supply the blocks to local processing units. The applicant does not possess a processing plant at the moment.

#### 9.0 MARKET ANALYSIS:

The company during the mining operation had produced and got some good order from the domestic as well as International market. The bluish color with wavy pattern is very pleasing in appearance, takes good polish and has a well defined pattern. It is expected that the demand for this material grow in near future. The company has already got some purchase orders from various importers like MAGTI, and INBRA. The company is capable of maintaining time schedule for delivery of the material in the international market.



## 10.0 ENVIRONMENTAL MANAGEMENT PLAN

### 10.1 Base Line Information

#### (i) Existing land use pattern:

The land within 5 kms of the area is characterized by flat undulating terrain interspersed with isolated hills. The land use pattern is as given below.

Reserve Forest: 25%  
Surface Water: 10%  
Built in Area: 15%  
Hilly Tract: 25%  
Agriculture Land: 25%

#### (ii) Water Regime

The water regime in the area is marked by seasonal streams and tanks of different sizes and shapes. Ground Water regime is marked by water table 20-25 m below the surface. The tanks in the area are feed by the seasonal streams in the rainy season.

#### (iii) Flora and Fauna

Vegetation in the area is scanty and is mainly in the form of thorny bushes and small shrubs, some trees are present. Bear, Foxes, Peacocks and Snakes are reported to be present in the area.

#### (iv) Climatic Conditions

The region is characterized by hot and oppressive summer, mild winter and seasonal rainfall. The summer is from March to May with a maximum temperature reaching 42° c, the monsoon is from July to September and the winter if from October to March where the minimum temperature is between 15-20°C.

#### (v) Human Settlement

The important villages present in the vicinity of the area are Sitaramapuram, Tirlangi, Borugupeta, Sattivada, Ramakrishnapuram and Venkatapuram. The main occupation of the people is agriculture and working as agricultural labour.

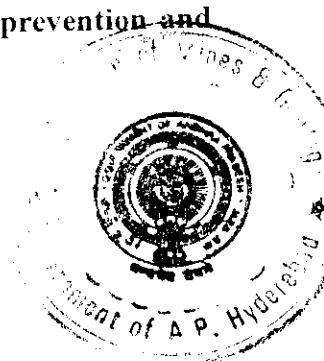
#### (vi) Public Building, Places of Worship and Monuments:

No Public building of importance, place of worship and Monuments exist in the area

#### (vii) Quality of Air and Water

The air in this region is unpolluted as there are no polluting establishments within a radius of 10kms. The water from the bore wells and wells is potable.

(viii) Does the area falls under notified area under water (prevention and Control of pollution) Act,1974: NO



## 10.2 ENVIRONMENTAL IMPACT ASSESSMENT STATEMENT

- a) **Land Degradation:** Due to this small scale mining activity the land degradation will be very less. It is estimated that about 1.5 Ha of land will be used for mining purpose. The top soil generated, if any, will be stored separately and can be used for plantation purpose.
- b) **Water Regime:** The impact of mining operation will have very little impact on the water regime, surface as well as ground water. Any impact on the water will be in the monsoon season as the water leaving the quarry may be silt laden and the same may be deposited in the water bodies. The seepage of rain water with dissolved toxic element may seep into the ground and pollute the ground water. Since the toxic element concentration in the granite is very low there is no chance of polluting the ground water.
- c) **Water Quality:** The quality of surface and ground water is good and unpolluted. The water is used for drinking, agricultural and plantation purpose.
- (d) **Ambient Air Quality:** Due to proposed small scale activity of mining involving drilling, movement of machinery and vehicles etc the contribution of dust to the air may be minimal. The ambient air quality will remain unaffected and within permissible limits.
- (e) **Noise Levels:** The noise generated by the machinery and vehicles as well as by drilling operation will be minimal. The machinery will be maintained well. The noise levels are well below the prescribed limits of 90 dB.
- (f) **Ecological Disturbance:** There will be hardly any impact on the ecology by this small scale mining operation.
- (g) **Miners Health:** Respirators, ear plugs and goggles will be provided to see that the health of the miner is not affected.
- (h) **Socio Economic Conditions:** This operation will have a positive impact on the socio economic condition of the people of the region, as there will be some employment generation.
- (i) **Vibration Levels:** As the drilling and blasting will be minimal using only low explosives, if required. There will be no ground vibrations.
- (j) **Historical Monuments:** No historical Monuments are present in the vicinity of the area.

## 10.3 ENVIRONMENTAL MANAGEMENT PLAN

- (i) **Storage and Preservation of Top Soil:** Soil is almost nil in the area and what ever soil is recovered will be stored separately.
- ii) **Year wise reclamation of land effected by mining activity during the five years period:** No reclamation of land is proposed during the five year period.



(iii) **Afforestation** : Each year some part of the barrier zone will be subjected to afforestation and care will be taken to protect the sapling. Fruit growing trees are proposed to be planted. The table no 5.1 shows the afforestation plan.

Table no -5.1 Showing Programme of afforestation, year wise for the five year period.

YEAR	Name of the Plant	No of Plants	Area Spacing	Area Covered In Sq.Mts
I-Year	Mango	10	3x3 mts.	90
II-Year	Gauva	15	3x3 mts	135
III-Year	Mango	10	3x3 mts	90
IV-Year	Mango	10	3x3 mts	90
V-Year	Mango	20	3x3 mts	180
<b>Total</b>		<b>65</b>		<b>585</b>

(iii) **Measures for Dust Suppression:** The roads, loading point and other dust generating areas will be sprinkled with water especially during dry season. Dust masks will be provided to the workers in the dressing section and dust collectors in the drilling section.

(iv) **Measures to Minimize Noise and Vibration:** The noise level will be very limited and well under the prescribed limits. The vehicles and machines deployed in the quarry will be well maintained so that the generation of noise is minimal and within the prescribed limits i.e.90 db.

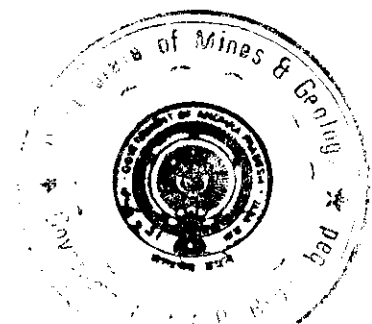
(v) **Stabilization of the dump yard:** Waste dump yards are proposed in the Eastern and Western end of the deposit. The dumps will have angle of repose so that no creeping of material will occur. The dead end will be subjected to vegetation by growing grass and bushes. Garland canal is proposed to be dug around the dump and plantation will be taken up in this site.

(vi) **Treatment and Disposal of Waste water:** The water draining from the dump will be channeled through a single point where a siltation tank will be dug. The silt carried from the quarry face will be deposited in this siltation tank and silt free water will be passed out into the surrounding environment. No treatment of waste water is required in this case as there is no chemical activity involved during the production and hence no treatment of waste water is required.

(vii) **Measures to control erosion/ sedimentation of water courses:** The water leaving the mine will be made silt free before joining into the water course by passing the water through siltation tank.

(viii) **Measures for minimizing adverse effects on water regime:** The surface and Ground water regime is not disturbed in any way and will not be affected.

(ix) **Protective measure for ground vibrations:** No ground vibration is anticipated as the blasting will be very less.



(x) **Measures for protection of Historical monuments:** No historical monuments are located within a radius of 5 km and question of protecting them does not arise.

(xi) **Socio Economic benefits arising out of mining:** The project will help more than 30 persons to get employment and about 75 persons will be benefited indirectly. The State Government and Central Government will be benefited by getting royalties, taxes and cess.

### 11.0 EMPLOYMENT AND SITE SERVICES

The quarry operation will provide employment to the following:

1) Mines Manager	-	1
2) Compressor Operator	-	1
3) Drillers	-	18
4) Excavator operator	-	2
5) Excavator Helper	-	2
6) Tipper Drivers	-	2
7) Cutters	-	12
8) Helpers	-	3
9) Watch man	-	2
10) Water Carriers	-	2
11) Accountant	-	1
12) Store Keeper	-	1
13) Supervisors	-	2

This Mining Plan is Approved subject to the Conditions/Stipulations Indicated in the Mining Plan Approval Letter No. ....  
40601/R1-1/TIP/2005, dated 07.07.2006.

### 11.1 SITE SERVICES:

The rest shelter cum office, First aid room, and toilets are constructed in the flat central portion of the area. The roof is of asbestos sheets covered by hay to keep it cool in summer. A first aid certificate holder will be in charge of the first aid room. Protected drinking water will be provided and stored in earthen pots and all the site services will be maintained as per Mining Rules 1961.

### 12.0 OTHER INFORMATION:

The blue granite present in the area is well accepted in the Domestic as well as International market. With this kind of small scale mining operation the environment will not be effected at all. It will improve the socio economic condition of the local people by providing much need employment, which will help their economy in this district of Srikakulam. The Government will also earn valuable foreign exchange.

For Designer Rocks Pvt Ltd

*S. Sambesh Rao*  
S.SAMBESH RAO  
Managing Director

**APPROVED**

A.S.CHAUHAN

*A.S. Chauhan*  
(RQP/DMG/HYD/062/2002)

*P. Rajasekhar Reddy*  
P. Rajasekhar Reddy  
Joint Director  
Dept. of Mines and Geology,  
Govt. of A.P. Hyderabad.



~~CONFIDENTIAL~~  
PROCEEDINGS OF THE DIRECTOR OF MINES & GEOLOGY:: HYD.  
(PRESENT: SRI T. DEVENDRANATH, M.SC., DIRECTOR.)

Proceedings No. 10615/R1-3/2001

Dated. 1.6.2001.

Sub:- M&Q - Transfer of Quarry Lease for Colour Granite held by  
M/s Rock Mansion for a period 15 years Extent of 3.000 Hectares  
S.No. 27 - Meelasathiwada Village - Tekkali Mandal Srikakulam  
District - Transfer in favour of M/s Designer Rocks Pvt. Ltd. -  
Sanctioned - Orders - Issued.

Ref:-1) Application for transfer of Q.L. dated. 19.12.2000 filed by  
M/s Rock Mansion.  
2) M&Q - Srikakulam - S.No. 2775/Q/97, dated 29.3.2001.

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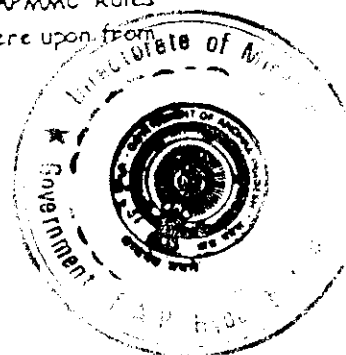
Through the reference 1<sup>st</sup> cited M/s Rock Mansion have filed an application for transfer of Q.L. held by him in S.No. 27 of Meelasathiwada Village, Tekkali Mandal Srikakulam District over an extent of 3.000 Hectares for the un-expired portion of the lease period in favour of M/s Designer Rocks (P) Ltd., the transferor M/s Rock Mansion have furnished an affidavit stating that they got good acquaintance with Mr. S. Sambesh Rao, of M/s Designer Rocks (P) Ltd., and he is the Managing Director of the said Company and he is willing to transfer the said lease in favour of that Company. Further Sri. Ayala Achary, Proprietor of M/s Rock Mansion has also joined as one of the Directors of M/s Designer Rocks Pvt. Ltd.,

M/s Designer Rocks (P) Ltd., have also filed an affidavit stating that they are willing to take the Quarry Lease held by M/s Rock Mansion as the lessee is one of the Directors of the transferee Company.

Through the reference 2<sup>nd</sup> cited the Asst. Director of Mines and Geology, Srikakulam has reported that M/s Rock Mansion has been granted a Quarry Lease for Colour granite over an extent of 3.000 Hectares in S.No. 27 of Meelasathiwada Village, Tekkali Mandal, Srikakulam District for a period of 15 years vide Proceedings No. 12144/R1-38/94, dated. 6.11.97 of the Director of Mines and Geology, Hyderabad. The lease will be in force up to 9.11.2012 and as per the records there are no mineral revenue dues against this lease and also paid advance dead rent for etc. for the year 2000-2001.

Finally the Asst. Director of Mines and Geology, Srikakulam has recommended to transfer the Quarry Lease held by M/s Rock Mansion in favour of M/s Designer Rocks (P) Ltd.,

In view of the above circumstances M/s Rock Mansion is hereby permitted to transfer the Quarry lease held by them for Colour Granite over an extent of 3.000 Hectares in S.No. 27 of Meelasathiwada Village, Tekkali Mandal, Srikakulam district in favour of M/s Designer Rocks (P) Ltd., for the un expired portion of the lease period upto 9.11.2012 as per Rule 12(B) (h) (VIII) of APMAC Rules, 1966, subject to the terms and conditions mentioned in the original grant order, amended APMAC Rules 1966, subsequent Government orders and executive instructions issued there upon from time to time and conditions mentioned here under:-



- 1) The transferee should submit a mining plan as per rule 12 of Granite Conservation and Development Rules, 1999 on after execution of transfer lease deed.
- 2) The transferor and Transferee should submit valid M.R.C.C. and proof of payment of Advance Dead Rent, L.A. cess on L.A. for 2001-2002 before execution of Transfer deed for the lease deed.
- 3) The Transferee should pay security deposit as per amended APMMC Rules, 1966 before execution of Transfer deed.
- 4) The Transferee should execute the lease deed within a period of 60 days from the date of grant of this order.

Sd/-T.DEVENDRANATH  
DIRECTOR OF MINES & GEOLOGY.

//ATTESTED//

FOR DIRECTOR OF MINES & GEOLOGY.

To  
M/s Rock Mansion,  
6-4372/A,  
Krishnanagar Colony,  
Balakpur,  
Secunderabad. (BY.R.P.A.D.)

✓ M/s Designer Rock (P) Ltd.,  
203, Archana Apartments,  
Begumpeta,  
Hyderabad - 16 (BY.R.P.A.D)

Copy to the Asst. Director of Mines and Geology, Srikakulam along with Record of enquiry for Information and necessary actions. (BY.R.P.A.D.).

Copy to the Dy. Director of Mines and Geology, Visakhapatnam for favour of Information

Copy to Stock file.

DEPARTMENT OF MINES AND GEOLOGY

PROCEEDINGS OF THE ASST. DIRECTOR OF MINES & GEOLOGY: SRIKAKULAM.

( Present : - Sri D.Santhappa, M.Sc., )  
Asst. Director.

\*\*

Proceedings No. 3035/2/2001

Date: 20 -06-2001.

SUB:- MINES & QUARRIES - Quarry lease held by M/s Rock Mansion for colour granite in S.No.27 of Meelasathiwada village, Tekkali Mandal Srikakulam District - Over an extent of 3.000 Hectares ~~xxx~~ - previously executed on 10-11-1997- TRANSFERRED in favour of M/s Designer Rocks Private Limited for the un-expired period of lease i.e, upto 9-11-2012 - Transfer of Lease Deed - Executed Work Orders - Issued - Regarding.

- REF:- 1. Proc.No. 10615/R1-3B/2001, dtd. 1.6.2001 from the Director of Mines & Geology, Hyderabad.
2. Letter dtd. 12.6.2001 from M/s Designer Rocks Private Limited.

ORDER

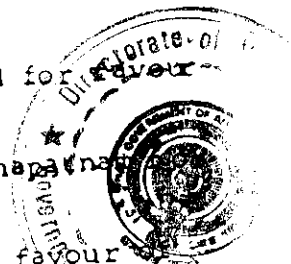
In the reference 1st cited, the Quarry lease held by M/s Rock Mansion, Prop: Sri Ayla Achary, H.No. 5-1-372/A Krishnanagar Colony Bholakpur, Secunderabad, for colour granite in Survey No. 27 of Meelasathiwada village, Tekkali Mandal Srikakulam District, over an extent of 3.000 Hectares was transferred in favour of M/s Designer Rocks Private Limited 203, Archana Apartments, Begumpeta, Hyderabad - 16, for the un-expired period of the lease ( i.e, 9.11.2012 ). The Transfer of Lease Deed was executed on 20 -06-2001. M/s Designer Rocks Private Limited, 203, Archana Apartments, Begumpeta Hyderabad - 16, is hereby permitted to enter and work the Quarry lease for the un-expired period of lease i.e, upto 9.11.2012 ) under the provisions of A.P.M.M.C.Rules, 1966 and as imposed in the sanctioned order.

ASST. DIRECTOR OF MINES & GEOLOGY,  
SRIKAKULAM.

To:  
M/s Designer Rocks (Pvt) Limited,  
203, Archana Apartments,  
Begumpeta, Hyderabad - 16.

Copy submitted to :

1. The Director of Mines & Geology, Hyderabad for information.
2. The Dy. Director of Mines & Geology, Visakhapatnam for information.
3. The Mandal Revenue Officer, Tekkali for favour information.





GOVERNMENT OF ANDHRA PRADESH  
DEPARTMENT OF MINES AND GEOLOGY

Notice No.

Date:

Sub:- Quarry lease for Colour Granite over an extent of - 3.0 hectares in

Sy.No. (27) of Subbarao village,

M Mandal, Srikakulam District - held in favour

of M/s Orpa - Approved Mining Plan  
- Regarding .

It is hereby informed that as per Rule 17 of Granite Conservation & Development Rules, 1999, the existing lease holders have to submit the Mining Plan within one year from the date of commencement of these rules.

However as per this office records so far you have not submitted the Approved Mining Plan in respect of the quarry lease in the subject area, to this office. Therefore you are requested to submit the Approved Mining Plan <sup>within one year</sup> immediately to this office, failing which action will be initiated against you as per Granite Conservation & Development Rules, 1999 and A.P.M.C. Rules 1966.

Edi  
Assistant Director of Mines & Geology,  
Tekkali ( Srikakulam-II)

TO.

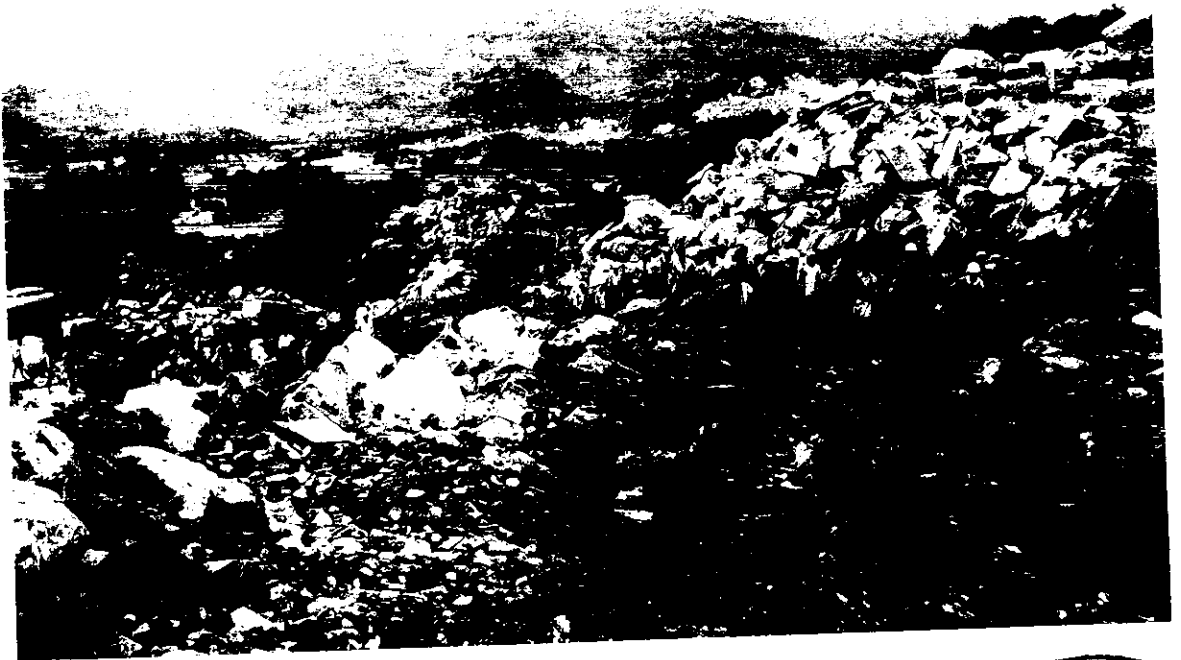
Mr. Orpa  
M

Copy submitted to the Director of Mines and Geology, Hyderabad for favour of information  
Copy submitted to the Dy. Director of Mines and Geology, Visakhapatnam for favour of information

J. P. Reddy  
S. Prasad  
S. Arora  
Ch. Arora, T. U.



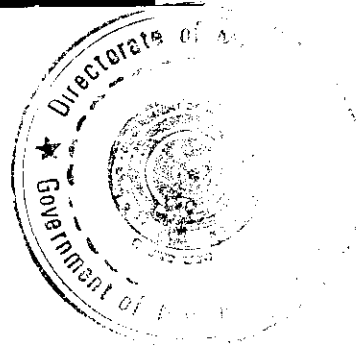
General View of the Quarry



View of the pit



View of Deposit



Block Dressing



61



pvt. ltd.

LEASE-II

DT: 04.01.07,  
TEKKeli.

TO

Asst. Director,  
Dept of Mines & Geology,  
TEKKeli.

2075  
5/1/07

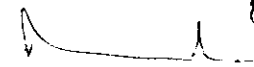
Sir,

109  
5/1/07

Sub: In respect of colour granite quarry lease  
sy no. 27, Meelathivada (V), TKL(M), SKL(M) (or)  
on extent 3.00 hect - Approved mining plan  
submitted reg:

We are here with submitting approved mining plan  
of 27, Meelathivada (V), TKL(M), SKL(M) (or) on extent  
of over 3.00 hect. This is for your kind information  
and record.

Thanking you Sir.

Yours faithfully  
for M/s. DESIGNER ROCKS (P)  
V  LTD-II  
(V. RAMESH)  
Authorized Signatory