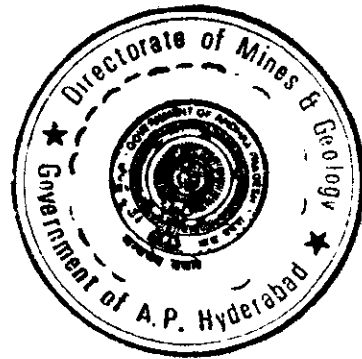


MINING PLAN ON COLOUR GRANITE
Over an extent of 3.00 Hectares, Sy.No 71,
Lingalavalasa(V), Tekkali(M), Srikakulam Dist. A.P.

Transferred to
For M.S.P Granite

M/s Blue Rock International Incorporation,
Srikakulam



APPROVED

Prepared by
V.T.CHANDER
Consultant Geologist & RQP
(RQP/DMG/HYD/02/2001)
#202, H.No 10-1, Mahalaxmi Ganapathi Complex,
P&T Colony, Dilsukh Nagar, Hyderabad 500 60.

CERTIFICATE

This is to certify that Mining Plan in respect of Quarry lease area over an extent of 3.00 Hectares, Sy.No 71, Lingalavalasa(V), Tekkali(M), Srikakulam Dist. A.P.has been prepared by Sri V.T. Chander, Consultant Geologist & RQP and we agree to follow the same in accordance to the provision of Law.

Date:
Place: Hyderabad

T. Venkatesh
For M/s Blue Rock International Incorporation
Srikakulam



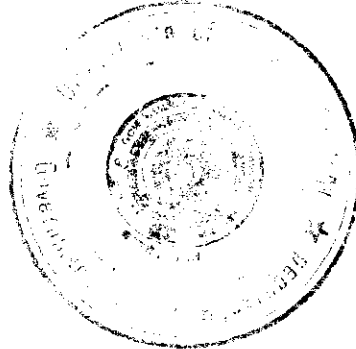
CERTIFICATE

The provision of Granite Conservation and Development Rules 1999 have been observed in the Mining Lease of COLOURED GRANITE, area over an extent of 3.00 Hectares, Sy.No 71, Lingalavalasa(V), Tekkali(M), Srikakulam Dist. A.P. leased to M/s Blue Rock International Incorporation., Srikakulam. Whenever specific permissions are required the applicant will approach the concerned authorities.

Date: 12-4-03

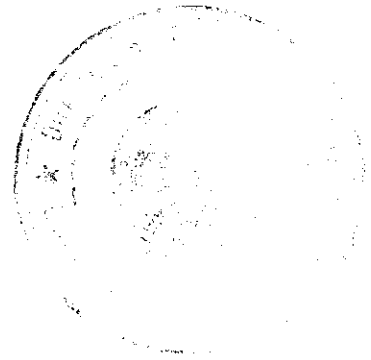
Place: Hyderabad


RQP



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LIST OF PLATES

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IV	GEOLOGICAL CROSS SECTIONS	H	1: 1000
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LIST OF ANNEXURES

1. Copy of the DMG, Hyderabad Proceedings dated 28-11-2000
2. Year wise Production for Next 5 Years
3. Copy of the Letter No. 14966/RL-3/2002, dated 6-11-2002

MINING PLAN FOR COLOUR GRANITE
Over an extent of 3.00 Hectares, Sy.No 71,
Lingalavalasa(V), Tekkali(M), Srikakulam Dist. A.P.

For
M/s Blue Rock International Incorporation
Srikakulam

By
V.T Chander, Consultant Geologist & RQP

This Mining Plan is Approved subject
 Conditions/Stipulations Indicated in t
 Mining Plan Approval Letter No.....
 24.63/mpt/03... dated...11-8

Introduction

M/s Blue Rock International Incorporation. Srikakulam, a private Firm, was granted Quarry lease for 15 years for colour granite over an extent of 3.00 hectares spread over in Sy.No 71 of Lingalavalasa village, Tekkali Mandal, Srikakulam Dist. A.P. Vide Director, Department of Mines and Geology, Hyderabad. Proceedings No.26391 /R1-3B/97 Dated 29-4-1998, the lease deed was executed on 26-6-1998, vide AD,M&G,Srikakula Proc No 1799/Q/98 dated 26-6-98. Since the date of execution the company was operating the Quarry and extracting the Granite blocks.

As per the GCDR Rule 17 of 1999, all the owners of the existing quarries required to submit the mining plan to the Director of Mines & Geology, Hyderabad. For approval within stipulated time

M/s Blue Rock International Incorporation. Srikakulam, Approached Sri V.T.Chander Consultant Geologist and RQP (RQP/DMGHyd/02/2001)For preparation of Mining Plan in the above mentioned quarry. Accordingly Mining Plan IS prepared as per the guidelines given by Govt. India. Ministry of Steel & Mines, GCDR Rules 1999, for the existing quarry.

APPROVED

Dr. P. DAYASANKAR
 JOINT DIRECTOR
 DEPT. OF MINES & GEOLOGY
 GOVT. OF A.P. HYDERABAD.



1.0 GENERAL

- 1.1. Name and Address
Incorporation the applicant : M/s M/s Blue Rock International
Prop: Sri T.Vaikunta Rao
Plot No:5, Vysya Bank Colony
Srikakulam 532 001
- 1.2 Status of the Applicant : Private firm
- 1.3. Mineral for which Applicant
intends to mine : Coloured granite
- 1.4 Period of Quarry Lease granted : 15 years (up to 25-6-2013)
- 1.5 Name of the RQP
Address : V.T.Chander,
202, H.No 10-1,
Mahalaxmi Ganapathi Complex,
P&T Colony, Dilsukhnagar,
Hyderabad 500 060
- RQP Registration No : RQP/DMG/HYD/02/2001.[valid upto
April 2012]
- Phones : 040- 24068218,56618351,56638243,
Mobile : 98 490 35771.

2. LOCATION AND ACCESSIBILITY:

a) Location Map: : Location map enclosed as Plate I

b) Details of Area:

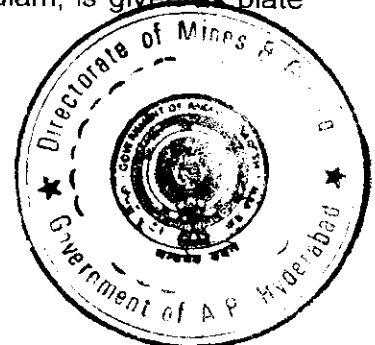
The applied area falls in the Survey of India Toposheet No.74 B/2 and is bounded East Longitude 84°- 10'-04" and North Latitude 17° - 36'-36". It is situated 1 Km North East of Lingalavalasa village and 6.5 Km West of Tekkali Town & Mandal HQ's. The road leading from Tekkali to Temburu will take to the applied area by taking a diversion at lingalavalasa (V) to East, The location of the area is indicated in key cum location Map (Plate I).

Table No.1 Details of the Area

Dist.	State.	Mandal	Village	S.No.	Extent	Ownership of Occupancy
Srikakulam	Andhra Pradesh	Tekkali	Lingalavalasa	71	3.00 Ha	Govt.land Existing quarry

c. Period for which Quarry lease is granted = 15 years (upto 25-6-2013)

Cadastral Map certified by the Asst. Director of Mines & Geology, Srikakulam in favour of M/s Blue Rock International Incorporation, Srikakulam, is given as plate No II



2.8. Infrastructure and Communication

- ❖ It is situated 1 Km North East of Lingalavalasa (V). The road leading from Tekkali – Tembur and diversion at Lingalavalasa Railwaygate will lead to the site
- ❖ Amenities like Post & Telegraph office, Police station, Primary Health center etc. are available at Tekkali.
- ❖ Tekkali is the Mandal headquarters.
- ❖ Vishakapatnam port is about 150 km from area.
- ❖ Electricity is available at Lingalavalasa (V). The area is having good ground water potential.

Further vast potential exists for the employment of unskilled labour in the existing Granite quarries and allied Small-scale industries. The area experiences Semi - arid climatic conditions with an average Annual rainfall of 1000 mm. The local day temperature varies from 25° C in November to 48° C in April & May months. The general wind direction reported is SW to NE and SE to NW.

III. GEOLOGY

3.1 Physiography :

The applied area is located on hill steeply sloping .The area is 90 Mts above ground level, with loose boulders of 2-5M large and little soil cover of negligible thickness, excepting for a depression zone passing along the grid line N150 in NE-SW, where considerable thickness of soil and weathered zone is present, a seasonal nala flows during Rainy days.

REGIONAL GEOLOGY

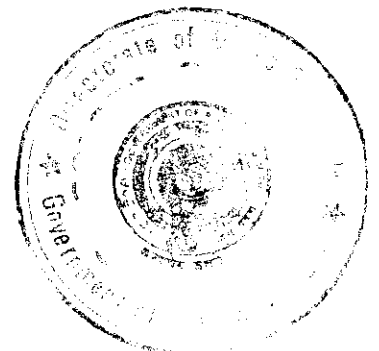
The Eastern Ghat Mobile Belt [EGMB] is more than 600 Km in length from Srikakulam in the North to Ongole in the South. This belt is more than 100 Km in width in Northern part and tapers down to less than 20Km in the South, it has broad arcuate trend with west ward convexity. The NNE –SSW trend in the southern part of the belt changes NE-SW in the North. EGMB is divided into 3 longitudinal zones viz

1. Western - Charnockitic zone,
2. Central - Kondalite Zone
3. Eastern - Migmatite Zone

While in the northern parts in Srikakulam, Vizianagaram & Vishakapatnam Districts the central Khondalite Zone occupies Major part of the area. where as Western Charnockite Zone occurs in the Southern part. The rocks in this belt are represented high grade Granulite facies of Metamorphism and suffered by complex deformation. The stratigraphic succession of EGMB is as follows:

INTRUSIVES

Layered Anorthisites and associated Mafics and Chromiferrous Ultra Mafics.



CHARNOCKITE GROUP	Charnockites with mega crystic K- Felspar Charnockite Two Pyroxene granulite / Amphibolites.
KHONDALITE GROUP	Calc-Sillicate-Granulites. Garnet-Silliminite-Quartz-Biotite-K-Felspar- Graphite Gneiss [Khondalite]. Quartzite-Garnet-Silliminite.
GRANITOID SUITE	Granitoid with mega crystic K-Felspar. Un differentiated (with Migmatitic Dia Tectite, Augen) perferoblastic granite and Gniesses. Garnet- Biotite Homophanus Granite/Gniess. Leptinite, Local Charnockite Neosomes and Relics.

In Srikakulam district the EGMB is represented by wide range of litho units Viz: Charnockites, Khondalites, Twopyroxene Granulites, Migmatites, Leptinites and Intrusive porphyroblastic Charnockites. Large enclaves of Acid Charnockites, Khondalites and Meta-Basic rocks occur within Migmatites, which are largely seen in the area lying between R.Vamsadhara and Coast line.

Local Geology

The Migmatites and Migmatized Charnockite deposits are commercially known as "SRIKAKULAM BLUE". The Migmatite essentially consists of Blue Quartz and Bluish Grey to Light Grey Felspar with accessory minerals like Hypersthene, Hornblende and Biotite. The rock displays wavy banding, pygmatic folding of bands, paleosom – mesosom – leucosom and minimal lineation. A number of parallel slips trending N-S, NNW-SSE and NNE-SSW cut across the wavy banding, pinching and displacing the bandings which imparts additional beauty to the stone besides its blue colour.

The arrested enclaves of Charnockite [locally known as oil patches] and healed hairline fractures [known as white and black lines] cutting across the wavy banding are considered defects.

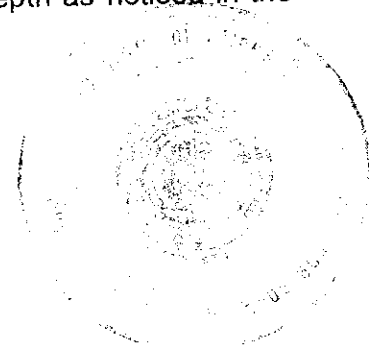
N 45°W – S45°E is the major joint direction recorded in the area

(d) Structure :

Three sets of joints are recorded in the Dolerite Dyke

- 1 N30° W-S 30° E. vertical nature
- 2 N 30° E-S 30° W. Sub vertical nature
- 3 E-W vertical

These joints are closely spaced on the surface-giving rise to bouldery nature to the deposit. On the other hand they are widely spaced in the depth as noticed in the quarry sections.



Lithology : 3 working pits present in the area shows following generalized lithology from surface to 3 Mtrs depth, small size boulders with interstitial soil 3 Mtrs to 5 Mtrs depth large boulders. 5 to 12 Mtrs sheets separated by Joint Planes.

- a. Soil : Red soil mixed with fragment of migmatite found in interspeice of wider joints planes, it is extending upto 3 Mtrs.
- b. Migmatite Boulders : Migmatite boulders of various size ranging from 1 to 5 M³ size overlying to the sheet of Migmatic rock. The Migmatite is blueish grey to light grey in colour, with wavy banding with tygmatic folding. A number of parallel slips cut across the body and displacing the beds.

4. **Exploration:**

4.1. **Present Status :**

Mining plan is prepared for the existing quarry, which is active since 1998. Therefore, the mining operation of the quarry, production of market grade rough blocks, generation of waste from the quarry is described in the following paragraphs.

4.2. **Mining operations carried out**

The following mining operations were carried out in applied area.

Existing quarry started during year July 1998. The loose large sized boulders were removed using Hitachi Excavators and dumped in the dumping yard located in the grid North 100 – 150 and E 100 – 150. Big Boulders of Migmatite present in weathered Mantle also were removed during development of quarry. The production started after the development. The land drills were used for drilling of the holes. For loosening the rock exposed at the peak of the deposit in the central portion and also all over the lease area.

During 26-6-1998 to 31-03-2003 a total of 514,567 M³ of commercial grade rock was dispatched only from the loose exposed boulders. Not much of excavation is attempted during this period.

The quarry is a open cast Semi-mechanised type. The following machinery was used for the quarrying purposes.

a) Air compressors	2 No.s
b) Tippers	2 No.s
e) Hitachi Excavators	1 No.s
f) Jack hammers	6 No.s
<u>Man power:</u>	
Manager	1 No.
Supervisors	2 No.s
Compressor operator	2 No.s
Tipper drivers	2 No.s +2(Helpers)
Hitachi operators	1 No.

Besides 20 No's unskilled labourers are employed on daily wages.



4.3 Future Programme:

Since, the deposit is exposed all over the lease area, exposing total deposit. Moreover, the present quarry is surrounded by busy quarrying activity. Therefore, no future exploration is required.

5. RESERVES:

Geological traverses in the quarry and the study exposures in the quarry facilitated to access the shape and size of the deposit in the area. It is a hill deposit rising 90 M. above ground level. The surface of sheet rock is wavy and irregular.

5.1. Method of Estimation of Reserves :

The exposed granite deposit is found to be irregular in shape. The volume is computed by multiplying area with the height of the granite body. However, 3 sections were drawn for assessing the thickness of the deposit, which forms a part of the hill sloping South West. wards

5.2. Categorization of Reserves:

The deposit is exposed. Therefore, the average thickness of rock of 30 Mt below this zone is considered for computing the reserves, which is classified under "Proved" category.

Area 3 Hectares or 30,000 M²
Height considered for estimation 30 M

Hence, the total geological reserves 30,000 X 30 = 9,00,000 M³

As the deposit is exposed and forms a part of the hill sloping, only the buffer zone all around the lease area is considered for the deposit not available for mining.

Deposit blocked under the buffer zone:

Northern Boundary	287M X 7.5 X 30	= 64,575 M ³
Southern Boundary	352.5 X 7.5 X 30	= 79,312.5 M ³
Eastern Boundary	103.5 X 7.5 X 30	= 23,287.5 M ³
Western Boundary	153 X 7.5 X 30	= 34,425 M ³
		<u>2,01,600 M³</u>

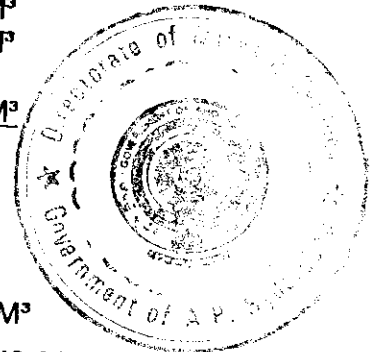
Area occupied by dumps	40 x 30 x 30	= 36,000 M ³
Area occupied by site services	200 x 30	= 6,000 M ³
Area occupied by roads	1600 x 30	= 48,000 M ³
1600 M ²		

TOTAL = 2,49,600 M³

Total geological reserves estimated = 9,00,000 – 2,49,600 = 6,50,400 M³

@ 40% recovery = 2,60,160 M³

Life of the Mine = 2,60,160/3998
= 65 Years



Photograph showing Working Face on the Hill



Photograph showing Secondary Splitting & Chipping



6. MINING: The Quarry is in operation since 1998.

4.1 Opening of Mine

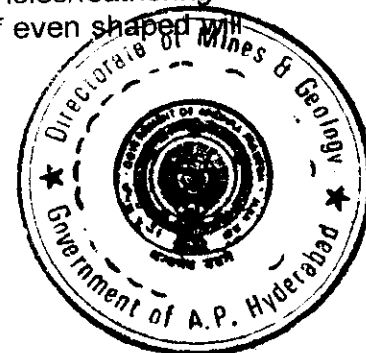
The Coloured Granite in this quarry mined out by open cast, Semi-mechanized method,

Presently the soil and weathered layers are removed in this quarry and the quarrying operations are in progress. The details are as follows

The Mining / Extraction started all over the lease area by extracting only the loose boulders of sizes 2-5 M which are all most floating in nature. They were subjected to primary & secondary splitting and dressing and dispatched to the market. It was reported that recovery % was nearly 70% from these Boulders. The sheet is likely to be occurring below this depth.

1 Brief description of method of future Mining :

- (A) **Over burden removal:** The over burden is extracted with the help excavator of 300 LC capacity, and where the weathered rock is hard and could not be drilled by Jackhammer due to collapsive nature of the walls of the hole, wagon drills will be deployed to drill 2½ to 4" diameter holes and blasted with little charge, thereby loosing the weathered rock. Generally, special gelatin is used in charging the hole. After, loosing the compact weathered rock the excavator will be deployed to remove the material and to load into the tippers for transporting to dumping yard.
- (B) **Primary Splitting:** After removal of over burden the deposit in the form of boulders and sheet will be exposed. The excavator will remove the boulders. The under size, weathered and defective boulders will be hauled to dumping yard. The large sized boulders will be subjected to splitting with the help of feathers and wedges, the waste portions are separated forming rectangular blocks. Bulges if drilling and wedging making it to perfect blocks will remove any found. If the sheet rock under lying the boulder is exposed this will be tackled by developing benches, working faces, etc, along the lination benches of 3 – 6 M will be developed. The drill holes will be drilled closely at regular intervals of 30 – 40 Cm apart up to 2 – 3 M depth with the help of feathers, wedges and hammering and the holes are charged with special gelatin and blasted to form a crack connecting all the drill holes releasing the block from the mother rock. The block thus released will be shaped into rectangular block and hauled to dressing yard for further process.
- (C) **Secondary Splitting:** The primary block will be keenly examined for defects like hairline fractures, patches, lines and other defects. Depending on the disposition of these defects, it will be planed to separate these defects and the area will be marked for secondary splitting using drill holes/feathering & wedging and hammering. By this method rough blocks of even shaped will be recovered.



(D) **Dressing** : Dressing is the final phase wherein the secondary rough blocks are squared into perfect rectangular shape i.e. all the sides will have 90° angle. These blocks will be made into different sizes for marketability using jackhammers, feathers and wedges and sledgehammers.

6.B.Drilling & Blasting:

A) Drill hole pattern for primary and secondary smooth blasting holes of 3M depth will be drilled in a single row with a spacing of less than 0.3Mts and burden of 1.6Mts or more shall be maintained uniformly. This arrangement will yield rock size of 3M x 2M cross section. A bench height of 6.0Mts will be tackled in two steps. Drilling parameters:

i) Drill hole diameter 32m.m up to 3Mts long.

ii) Depth and inclination of drill hole.

Generally drilled vertically in a alignment, however in primary cutting in the absence of sheet joints to develop bottom level horizontal holes also be drilled.

iii) Spacing and burden :

The spacing shall be about 0.1M to 0.3M from hole to hole and burden goes up to 1.6Mt for the splitting of the rock.

iv) Stemming & charging of bore hole : Gun powder is used.

v) Explosive type :

Where ever required gunpowder is used for splitting the block, special gelatin along with electric detonator also used, if necessary.

vi) Quantity of explosive used :

Blasting is occasionally using gunpowder after full development resorted mine 500kgs per month special gelatin may be required.

6. C DETAILS OF PRODUCTION SO FAR MINED FROM THE BEGINNING OF THE QUARRY:

The details of production, dispatches, and seniorage paid to govt. during the mining operations are

Year	Production	Dispatches
98-99	146.356 M ³	146.356 M ³
99-2000	190.712 M ³	190.712 M ³
2000-01	67.121 M ³	67.121 M ³
2001-02	59.164 M ³	59.164 M ³
2002-03	51.214 M ³	59.164 M ³
Total :	514.567 M ³	514.567 M ³



The Srikukulam Blue rough blocks of gang saw size are having good demand in the international market. Hence, the production of rough blocks are restricted to gang saw size only.

6 D .MINING PROGRAMME FOR THE NEXT 5 YEARS:

It is proposed to produce 3,998 M³ of rough blocks on an average per year in the first five years. Total 19,990 M³ rough blocks will be produced in five years utilizing an area of 4800 M².

In the first year mining starts from North, a bench of 6 M height will be formed between RL 100 and RL 94, in the grid East 150 – 200 and North 100 – 150, covering an area of 1600 M². There by 9600 M³ of rock will be obtained. From which 3,840 M³ market grade rough blocks are produced, generating 5,760 M³ of rock debris.

In the second year the mining extends further South-East and bench of 6 M height will be formed between RL 105 – 99, in the grid East 150 – 200 and North 50 – 100, covering an area of 1600 M², producing 3,840 M³ of market grade rough blocks and 5760 M³ of wastage.

In the third year mining extends further South - East, a bench of 6 M height will be formed between RL 105 and RL 99, in the grid East 150 – 250 and North 00 – 100, covering an area of 1600 M². There by 9600 M³ of rock will be obtained. From which 3840 M³ market grade rough blocks are produced, generating 5760 M³ of rock debris.

In the fourth year the mining extends further below the second year bench with a height of of 6 M height will be formed between RL 99 – 93, in the grid East 150 – 200 and North 50 – 100, covering an area of 1250 M²., producing 3,000 M³ of market grade rough blocks and 4,500 M³ of wastage.

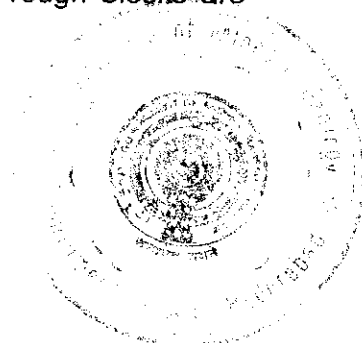
In the fifth year the mining extends further South-West and bench of 6 M height will be formed between RL 99 – 93, in the grid East 150 – 250 and North 00 – 100, covering an area of 1250 M², producing 3,000 M³ of market grade rough blocks and 4,500 M³ of wastage.

The year wise production of Economically marginal grade shown in Annexure II & Mine layout plan and mine layout sections shown in Plates VI and VII.

e). Quantum of Excavation:

In the next five years it is proposed to produce a total of 15000 Cu.M of commercial grade rough blocks, to obtain this at the rate of 40% recovery, a huge mass of rock waste will be generated. It is estimated that a total of 22500 Cu.M waste will be generated for the next 5 years period with an average of 4500 Cu.M of waste / year. Since this is an operating mine not much of the overburden is expected to be generated.

Market Analysis : The Company has established its deposit in the international market. The Srikukulam Blue rough blocks of gang saw size are having good demand in the international market. Hence, the production of rough blocks are restricted to gang saw size only.



f) Production Schedule :-

The production of CaSO_4 granite continuous to through out year expect during monsoon. That is 10 working months, 20 working days per month are considered. The production of 3,000 Cu.M per year can be easily achieved in a single shift with sufficient men and machinery.

g).Magazine Type and Capacity:

The lessee has applied for explosive license to the Government, the application under process.

h). Description of Processing Plant:

Not applicable.

i). Organizational Chart:

Man powerat Quarry

Manager	1 No.s
Supervisors	2 No.s
Compressor operator	2 No.s
Tipper drivers	2 No.s
Hitachi operators	1 No.

Besides 20 No's unskilled labourers are employed on daily wages

j). Site Services:

Rest Rooms, First Aid Room, Shelters, Lavatory, Bore well for Drinking water are available at Quarry Site.

7. SCHEME OF WASTE MANAGEMENT PLAN (SOLID & LIQUID):

- i) **Solid waste for the first Five Years:** The granite body exposed to the surface. Hence, the weathering on the surface of the rock closely spaced joints and shears along with inherent defects like Moles, Dark patches and acidic veins contribute a large extent of waste generation during the mining. It is estimated that in the next five years a total of 22500 Cu.M of waste is expected to be generated with an average of 4500Cu.M per annum. The year wise waste generation in next 5 years is as follows:

Year	Waste generation in Cu.M
I	4500
II	4500
III	4500
IV	4500
V	4500



- ii) **Dumping Site Particulars:**
For dumping of waste generated during mining will be dumped in the dump located between the grids E 150-200 and N 100- 150.
- iii) **Estimated Waste Quantity that will be generated in the Entire Period:**
At the rate of 4500 Cu.M per year the volume of waste generated in balance lease period i.e 12 years is estimated to be 54,000 Cu.M.
- iv) **Utilisation of Waste if not Prevented:**
- ❖ Soil can be utilised for reclamation of degraded area.
 - ❖ Weathered rock if it is sufficiently soft and devoid of rock fragments can be utilised for roads, filling of road side ditches, formation of approach roads to quarries, construction works etc.
 - ❖ Large and medium sized waste rock can be used as revetment for deep cut stream sections from preventing from soil erosion.
 - ❖ The waste generated during the mining will also be used for back filling of the mine pit after completion of mining.

8.ENVIRONMENTAL MANAGEMENT PLAN:

8.1. Baseline information:

a. Existing land use pattern:

The applied area is a hill, with sparse vegetation small bushes form the vegetal cover. The deposit is occupying the lease area.

b. Water regime:-

No water bodies exist in the vicinity of the Quarry.

c. Flora & Fauna:-

Vegetation is sparse. No wild animals reported.

d. Quality of Air, Ambient Noise Level and Water:

- ◆ Air quality is good. As the quarrying is limited in this particular belt not much of dust is expected.
- ◆ The noise generated due to blasting, drilling, vehicular traffic, which is minimum as the production is very less. Hence, the noise pollution is comparatively negligible. However, suitable precautions will be maintained by the lessee for protecting the workers by providing suitable protective gear.
- ◆ Granite mining will not affect water quality.

i; Climatic Conditions:

The area is falling under semi-arid tropical zone. The area is having dry climate. The temperature recorded in this area is 25°C, in winter and about 48°C. in summer seasons. The wind direction is in SW to NE. The average annual Rainfall of the area is 1000mm

f. Human Settlement:-

The human settlements located around the lease area are

Sr.No.	Habitation	Direction & Distance	Population
1	Lingalavalsa	1 Km SW	750
2	Sathewada	1 Km NE	300
3	Bajarampuram	2 Km NW	750
4	Laxmipuram	1.75 Km SE	2,500
5	Polavaram	1.75 Km SE	1,000

g. Public buildings, places & Monuments :-

No public buildings important places and monuments are seen in and around the area.

h. The samples are collected for polishing from the existing working Quarry. The same is shown in plate IV.

- i) Does area (Partly or Fully) fall under notified area under water (Prevention and control of pollution) Act 1974.
Not Applicable

8.2 Environmental Impact Assessment:

- i) Land Degradation:
Granite Mining will alter the physiographic scene, a small portion of the hill will alter its shape.
- ii) Air Quality:
Air quality will not be disturbed, as the quarrying is very limited.
- ii) Water Regime:
The mining of Coloured Granite no adverse effect is anticipated on the water regime of the area.
- iii) Noise Levels:
1. Compressor - 84 to 98 dB(A)
2. Tipper Empty- 88 to 91 dB(A), Tipper Loaded - 95 – 103 dB(A)
3. Poclaim - 90 to 96 dB(A)
4. Blasting - 89 to 95 dB(A)
The lessee for protecting will maintain suitable precautions. The workers by providing suitable protective gear.
- iv) Vibration Levels:
It is proposed to use low explosives and less quantity to minimise the effects so that the vibration generated will be feeble within 8 Hz
- v) Socio Economics:
The applied area is surrounded by 5 villages within a distance of 2.5 Kms. Agriculture is important profession of the people living in the village besides involving themselves in Quarrying activity.

8.3. Environmental Management:

- i) Temporary utilisation of top soil:
No soil will be generated during quarrying. The rubble will be used for lying roads.
- ii) Year wise proposal for reclamation of Land effected by mining activities in first 5 years:
Since the quarry is active with mining and located on a Hill. Hence, no reclamation is envisaged.
- iii) In case of abandoned Quarries / Pits are proposed to be used as Reservoir, their size, water holding capacity and proposal for utilisation of such water be given :
Granite Mining will alter the physiographic scene, deep pits will be formed after completion of the quarry license period. These pits will not be useful for water harvesting structures.
- iv) Program of afforestation year wise for the initial five years indicating number of plants with name of species to be afforested under different areas in hectares :
As mentioned above the lease area is not suitable for Afforestation.
- v) Stabilisation and vegetation of dumps along with waste dump Management year wise for first five years :
Since the waste generated is only rock debris and boulders vegetal growth is not possible on the waste dumps.
- vi) Measures to control erosion / sedimentation of water courses :
Not Applicable.
- vii) Treatment and disposal of water from Mines :
Not Applicable
- viii) Measures for Minimising adverse effects on water Regime :
No adverse effects on water regime is anticipated.
- ix) Protective Measures for Ground Vibrations:
It is proposed to use low explosives and less quantity to minimise the effects so that the vibration generated will be feeble.
- x) Measures for protecting Historical monuments and for rehabilitation of human settlements likely to be disturbed due to mining activity :
No historical monuments exist in the area and as the human settlements are far away from the mining area no disturbances are likely to be fore seen.

xi) Socio - Economic benefits arising from the Mining:

- ◆ Employment generation.
- ◆ Infrastructure development viz roads, power & water supply, medical facilities in villages etc.

9.. Employment and site services:

A. Employment: Given in Para 6 (i)

B. Site Services:

Office, Rest rooms, Store room, First-Aid room will be provided out side the Quarry site. Further, Drinking water will be provided in the land proposed to be acquired by the applicant'

This Mining Plan is Approved subject to the Conditions/Stipulations Indicated in the

Mining Plan Approval Letter No

2463/MPJ(03)....., dated: 1-5-03

10. ANY OTHER INFORMATION:

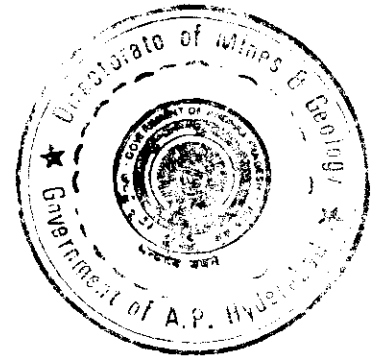
1. No violations are noticed by the Department of Mines and Geology.
2. No violations were pointed out by the Director General of Mines Safety.
3. No objections were raised by the either Villagers, Revenue Officials and other Government Departments.

T. Venkatesh
For M/s M/s Blue Rock International Incorporation

V.T. Chander
RQP
(V.T.Chander)

APPROVED

Dr. P. DAYASANKAR
JOINT DIRECTOR
DEPT. OF MINES & GEOLOGY
GOVT. OF A.P. HYDERABAD.



Government of Andhra Pradesh
Department of Mines and Geology

Proceedings of Asst. Director of Mines and Geology, Srikakulam)

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

Proceedings No. 1799/Q/98,

Dated 17-6-98.

Sub: MINES AND QUARRIES - Quarry Lease for colour granite over an extent of 3,00 Hectares in S.No.71 of Lingalavalasa Village, Tekkali Mandal, Srikakulam District. Grant in favour of M/s The Blue Rock International Incorporation - Execution of Quarry Lease - Work Order - Issued - regarding.

- Ref: 1. Proc.No. 26391/R1-3B/97, dt. 29-4-98 of Director of Mines and Geology, Hyderabad.
2. Lr.D.Dis. 6260/97, dt. 26-11-97 of the Dt. Collector, Srikakulam.
3. Letter dated 26-6-98 from M/s The Blue Rock International Incorporation, Srikakulam.

-00000-

ORDER:

The Quarry Lease granted in favour of M/s The Blue Rock International Incorporation, Srikakulam for colour granite in S.No.71, of Lingalavalasa Village, Tekkali Mandal, Srikakulam District over an extent of 3-00 Hec., for a period of 15 years has been executed on 16-6-98 by the undersigned. The Quarry Lease is valid for a period of 15 years from 16-6-98 to 16-6-2013.

M/s The Blue Rock International Incorporation, Srikakulam is hereby permitted to enter and work the quarry area under the provisions of A.P.M.M.C. Rules, 1966 and conditions laid down in G.O.Ms.No. 317, Industries and Commerce Department, dt. 9-7-92 and subsequent instructions issued on the matter from time to time. The lessee should submit the Quarterly Returns to the Asst. Director of Mines and Geology, Srikakulam, the Dy. Director of Mines and Geology, Visakhapatnam and the Director of Mines and Geology, Hyderabad. This work order is issued subject to the condition that the Government reserve the right to cancel the quarry lease granted and executed under A.P.M.M.C. Rules, 1966 without assigning any reasons and giving notice and the conditions imposed in the past order and Appendix.

Asst. Director of Mines and Geology
SRIKAKULAM.

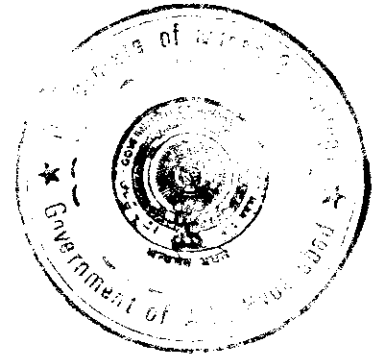
To
M/s The Blue Rock International
Incorporation,
Prop: Sri T. Vaikunta Rao,
Plot No. 5, Vysya Bank Colony,
S R I K A K U L A M.



- 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.
Copy submitted to the Dt. Collector, Srikakulam for fav. of information.
Copy submitted to the Chief Executive Officer Z.P. Srikakulam for favour of information.
Copy submitted to the Revenue Divisional Officer, Tekkali for favour of information.
Copy to the Mandal Revenue Officer, Tekkali for information.
Copy to the Mandal Development Officer, Tekkali for information.
Copy to the Sarpanch, Lingalavalasa (V) Tekkali (M) Srikakulam Dt. for information.

**ANNEXURE II
YEAR WISE PRODUCTION FOR FIRST FIVE YEARS**

Year	Area	Bench Height	Total mass removed	Product of Market Grade Rough blocks of 40%	Waste generated
<u>I Year</u>	40M X40M	6M	9,600M ³	3,840M ³	5,760 M ³
<u>II Year</u>	40M X40M	6M	9,600 M ³	3,840M ³	5,760 M ³
<u>III Year</u>	40M X40M	6M	9,600M ³	3,840M ³	5,760 M ³
<u>IV Year</u>	42M X42M	6M	10,584 M ³	4,233.6M ³	6,350.4 M ³
<u>V Year</u>	42M X42M	6M	10,584 M ³	4,233.6M ³	6,350.4 M ³
				19,987.2 M³	29,980.8 M³
			Average Production	3,997.44 M³	5996.16M³



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GOVERNMENT OF ANDHRA PRADESH

Letter No. 14966/RL-3/2002,

Dated: 6-11-2002

From:

T. Devendranath, M.Sc.,
Director of Mines & Geology,
Hyderabad.

To

M/s The Blue Rock International
Incorporation,
Plot No. 5,
Vysya Bank Colony,
Srikakulam - 532 001.

Sir,

Sub: Mines & Quarries - Transfer application
filed M/s M.S.P.Granites to take the Q.L.
held by M/s Blue Rock International Incorporation
for a period of 15 years Extent 3.00 hect. in S
S.No. 71 Lingalavelasa (W) Tekkali (M), Srikakulam
District - AMP called - Reg.

Ref: Your Transfer application dt; 26-10-2001.

I invite your attention to the reference 1st cited
wherein through the reference 2nd cited, the Asst. Director
of Mines & Geology, Srikakulam has submitted transfer
proposals from M/s Blue Rock International Incorporation
to M/s M.S.P.Granite as per the D.C.R.G. 1999, the existing
quarry lease holder have to submit A.M.P. But as seen from
the proposals submitted by Asst. Director of Mines & Geology
Srikakulam the A.M.P. not submitted.

In view of the above, I therefore request that
kindly to furnish one copy of the same to take further necessary
action on your Transfer application in the matter immediately,

Yours faithfully,

Sd/- S.K.M.Parvez,
for Director of Mines & Geology.

//t.c.f.b.c//

G.V. dyg Sagar
Superintendent

