MINING PLAN FOR ROAD METAL & BUILDING STONE
OVER AN EXTENT OF 3.000 Hect. LOCATED IN SY. NO. 1481,
CHANDRAGIRI VILLAGE, CHANDRAGIRI MANDAL, CHITTOOR DISTRICT,
ANDHRA PRADESH STATE

Introduction

M/s. Sri Srinivasa Stone Crusher, Prop:Sri Y.Sridhar Naidu
has applied for grant of Quarry Lease for Road Metal and Building Stone
over an extent of 3.000 hectares in 1481 of Chandragiri village, Chandragiri Mandal, Chittoor District on 14-11-2006.

The Asst. Director of Mines & Geology, Chittoor has submitted
proposals duly recommending for grant of quarry lease for Road Metal
and Building stone over an extent of 3.000 hectares in 1481 of Chandragiri village, Chandragiri Mandal, Chittoor District for a period of
15 years in favour of M/s. Sri Srinivasa Stone Crusher, Prop:Sri
Y.Sridhar Naidu.

The Deputy Director of Mines & Geology after careful examination of
the proposals of the Asst. Director of Mines & Geology, Chittoor has
granted the Quarry Lease for Road Metal & Building stone over an extent
of 3.000 hectares in 1481 of Chandragiri village, Chandragiri Mandal, Chittoor District for a period of 15 years in favour of M/s. Sri Srinivasa
Stone Crusher, Prop:Sri Y. Sridhar Naidu. vide Proc. No. 4119/Q/2006,

In the light of above circumstances stated above the lease deed
was executed in favour of M/s. Sri Srinivasa Stone Crusher, Prop:Sri
05-2007, ADM&G, Chittoor and permitted to commence quarry operations
for Road Metal & Building stone over an extent of 3.000 hectares in 1481
of Chandragirivillage, Chandragiri Mandal, Chittoor District for a period of
15 years with effect from 04-05-2007 to 03-05-2022. subject to the

In this connection it is submitted that as envisaged in the
Environment Impact Assessment (EIA )Notification, 14th September, 2006, the mining projects with lease area of 5Ha and above irrespective
of the mineral ( major or minor) to obtain prior environment clearance
under the provisions thereof. Further all Category A and Category B1 projects shall under take public consultation in accordance to EIA Notification, 2006. Further the Government of India, Ministry of Environment & Forest vide office memorandum No. L-11011/47/2011-IA.II(M), Dated: 18th May, 2012 in order to ensure compliance of the Honourable Supreme Court Dated:27.02.2012 in I.A.12-13 of 2011 in SLP( C ) No. 19628-19629 of 2009, instruction were issued that all the mining projects of minor minerals including their renewal, irrespective of the size of the lease would hence forth require prior environment clearance.

The Government of India vide Notification No. 141(E), Dt: 15.01.2016 notified guidelines for construction of District Level Environment Impact Assessment Authorities and other guidelines for issue of Environmental clearances for minor mineral leases for an extent of less than 5.00 hec. etc., accordingly, Mining Plan become a prerequisite for obtaining Environmental clearance. Hence a Provision to the effect that quarry operations for minor minerals shall be conducted in accordance with the approved Mining Plan has to be incorporated by the State Government vide G..O.Ms. No. 56, Inds.& Comm. (M.II) Department, Dated:30.04.2016.

M/s.Sri Srinivasa Stone Crusher,Prop:Sri Y.Sridhar Naidu approached Dr.G.Eswar Reddy, Consultant Geologist & RQP to prepare the Mining Plan following the guidelines and hence this Mining Plan is prepared under Rule 7 (A) of APMMC’1966 and submitted.

I GENERAL

<table>
<thead>
<tr>
<th>1.1</th>
<th>Name and Address of the Lessee</th>
<th>M/S.SRI.SRINIVASA STONE CRUSHERS, PROP: SRI Y.SREEDHAR NAIDU, D.NO.2-117,KOTHA CHERLOPALLI(V), PUDIPATTA POST, TIRUPATHI RURAL MANDAL, CHITTOOR DISTRICT, A.P. CONTACT NO. 7330911159</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>Status of the Lessee (Individual/ Private Company/ Firm)</td>
<td>Individual</td>
</tr>
<tr>
<td>1.3</td>
<td>Mineral (s) which are included in</td>
<td>ROAD METAL &amp; BUILDING STONE</td>
</tr>
</tbody>
</table>
II LOCATION AND ACCESSIBILITY

1. Toposheet No. with latitude and longitude of all corner boundary pillars: The Quarry lease area falls on SOI Toposheet No. 57 O/06 or D44M14 the Geo Co-ordinates of the boundary pillars are tabulated below:

<table>
<thead>
<tr>
<th>GCP</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>13° 33’ 16.4”N</td>
<td>79° 18’ 38.2”E</td>
</tr>
<tr>
<td>2.</td>
<td>13° 33’ 20.2”N</td>
<td>79° 18’ 45.4”E</td>
</tr>
<tr>
<td>3.</td>
<td>13° 33’ 23.5”N</td>
<td>79° 18’ 43.3”E</td>
</tr>
<tr>
<td>4.</td>
<td>13° 33’ 19.6”N</td>
<td>79° 18’ 36.0”E</td>
</tr>
</tbody>
</table>

*Map Datum: WGS-84*
2. Attach a general location map showing area and access routes:
The QL area is located at a distance of 65 km from the District Headquarter town of Chittoor. After travelling about 60 Kms on Chittoor to Tirupathi Road SH-61 Chandragiri is reached where a diversion towards Mallaiagaripalli and travel further 2.5 Kms left diversion at 0.5 km the QL area reached. The QL area has got good accessibility to the Chittoor to Tirupati SH 61 road is 4.50 kms. from Q.L. Area connecting at Chandragiri. Power connections are available near to quarry site. The company will draw power lines from the village mallaihgaripalli. Tele communication facility is available at Chandragiri which is at a distance of about 4.0 km and all networks can function in the site area. The nearest railway station is at Tirupati which is about 10.5 km. Nearest Port facilities are at Chennai, Krishnapatnam, Mangalore and Tuticoreine. The processing of the raw blocks is not available at the mine site. High school is present in the Chandragiri village, Degree level Educational facilities exist at Tirupati. Hospital facility is available at Chandragiri which is 4.50 km. from the quarry.

The Mandal Headquarter Chandragiri is about 4.0 Kms from the QL area. The State capital, Amaravathi is about 550 Kms.

III DETAILS OF APPROVED MINING PLAN / PLAN OF MINING IF ANY

This is the first Mining Plan being submitted.

PART – A

1. General details of the Q.L. area:
The subject area covers the part of the Pediment comprising negligible soil cover along the depressions of the sheet rock exposed over the subject area. The proposed quarry lease area is elevated on South Western side and it is sloping towards North East. It is having maximum relief of 270 m MSL from the base of 230m MSL. The drainage pattern is dendritic to sub-dendritic. The QL area belongs to rocky terrain it does not have much vegetation. The climate is tropical with temperatures ranging from 28 °C to 38 °C in the summer and 18 °C to 20 °C in the winter. The average annual rainfall is about 1020.8 mm and in the year 2010-11 is 1009.50mm.
2. GEOLOGY AND EXPLORATION:

a) Regional Geology:

The region of the subject area is belonging to Peninsular Gneiss of Archean group. The Peninsular Gneissic Complex comprising migmatite gneiss, grey granodiorite, Porphyritic granite and intruded by dolerite and aplite veins.

The Peninsular Gneissic Complex comprises of gneiss – migmatite – granite suite of rocks. They are highly variable in mineralogical composition appearance structure and relative ages. The individual members have not been distinguished in a major part of the area. However, granite and migmatite gneiss occupy a large part of the area while bands of relatively younger coarse – grained gneissic granite occur in the north eastern part.

The Chittoor belt located along the Peninsular Gneissic Complex comprises a complex assemblage of gneissic variants and granitic rocks which occupy almost the entire lease area the Peninsular Gneissic Complex in the area is representing mostly by Biotite hornblende gneiss granite and migmatite in north eastern part of the lease area and made up of rocks of high grade metamorphism, migmatisation and intense deformation. These granites, which are often porphyritic, are intrusive into the gneissic terrain and contain alkali feldspar space. The later in parts the colour to the granite which ranges from light to deep pink because of the massive nature of these intrusive they are amenable for producing large size blocks, due to the wide spaced joint pattern imparted to them. The granite deposits are mostly confined to the belt between Gudipla and Chittoor.

Stratigraphy of the Area:

<table>
<thead>
<tr>
<th>Lithology</th>
<th>Formation</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hornblende-biotite gneiss – Granodiorite – <strong>Granitoid Gneiss</strong> - Migmatite</td>
<td>Peninsular Gneissic Complex</td>
<td>Archaean</td>
</tr>
<tr>
<td>Calc –Sillicate rock, Marble, Fuchsite</td>
<td>Middle Proterozoic</td>
<td></td>
</tr>
</tbody>
</table>
Quartzite, Hornblende, Talc – Mica Schist

Quartzo- felspathic schist / Quartz-Mica Schist / Banded Ferruginous Quartzite

b) Local Geology:
   The subject area is Granitoid gneiss belonging to Peninsular Gneissic Complex of Archaean age. The outcrop exhibits multiple sets of joints both closely spaced and widely spaced as such it is most suitable for quarrying Road metal and Building stone (Plate-3).

c) Details of the Prospecting License Holder: N.A.

d) Details of the Prospecting carried out:
   The subject area is demarcated on the ground with reference to Revenue Pillars. Later the topographical survey of the area was carried out. The ABM (BP-3) is connected to Grid of N 13° 33’ 23.5” & E 79° 18’ 43.3” located on the SW of the QL area. Based on topographical survey and geological features, collected from the surface data, the surface geological Plan is prepared on 1:1500 scale with 7.0 m contour interval and enclosed as Plate -3.

e) Surface Plan area on 1:1000 scale: The surface cum Geological Plan and Cross Sections of the QL is prepared on 1:1000 scale and is enclosed as Plates-3 & 4.

f) Geological Plan is enclosed as Plate-3.

g) Geological cross sections have been shown on Plate-4.

h) Future Program of Exploration programme Plan need in next four years:
   The subject area is a hillock deposit and clearly exposed in the levels of both vertically and laterally. High amount of reserves exist in the hillock are notice itself. Hence no future programme of exploration is required.
i) Reserves and Resources as per UNFC:

(i) Type of Deposit as per UNFC Guidelines

Road metal and building stone is not failing in any category of UNFC classification. It is localized mineral available anywhere utilized for construction purpose such as laying roads, construction of buildings etc., depending upon the characteristics of the rock. Granites, dolerites etc which are highly disturbed and dolomites, quartzite etc., which are not useful for any other their specific purpose of their characteristics in specified area useful for construction as road metal and building stone as locally.

ii) Parameter – Grade, Threshold value, Sectional Area and Bulk Density:

As the ROM is intended for use in the Road metal and Building stone no specific parameters were considered. The bulk density of 2.5 is adopted for estimating the reserves.

The sectional area was considered and assumed thickness of sheet rock and 50 m on either side of the leased area. The Bulk Density was considered at 2.5.

ii) Status of exploration: G1

GEOLOGICAL AXIS:

1. Geological Survey:

i) Mapping: Detailed geological survey was carried out in the applied area on 1:2000 scale with 7.0 meter contour interval.

ii) Preparation of detailed topographical cum Geological map: The topographical cum Geological map including all surface Geological features, extent of deposit, structures, have been prepared on 1:2000 scale duly marked with surface geological features, GCP’s etc. (Plate-3).
iii) **Topo grid / Triangulation stations:** The topo grid with Geological cross sections has been prepared on prescribed scale showing litho-units. Relevant Plans are enclosed as **Plate-3.**

2. **Geo-Chemical Survey:** Geo Chemical survey is not warranted. The suitability for aggregates was tested.

3. **Geophysical survey:** Not carried out.

4. **Technological survey:**

   - Detailed topographical and geological survey was carried out on 1:2000 scale showing all the surface features, contours at 7.0 m interval, the lease boundary, surface Geology & Structural features.
   - The entire thickness of Road metal & Boulder stone found to be more than 60m which was correlated from the bore hole inventory data in the adjacent lands.
   - Reserves are estimated by cross section method

**FEASIBILITY AXIS:**

1. **Geology:**
The detailed Geology has been detailed in **Part-A, Para-2** which may kindly be referred to.

2. **Mining:**
Road Metal and Building stone will be exploited through opencast other than fully mechanized mining methods with drilling & Blasting. ROM will be directly consumed by the Lessee for the crushing Plant and intended for the highways Project from Chittoor to Tirupati. The Lessee will sell material to already established crusher and hot mix Plant adjacent to the quarry lease area.

3. **Environment:**
The deposit will be mined adopting conventional opencast semi-mechanized mining methods without any adverse environmental impact. The Lessee will obtain statutory clearances as soon as this Mining Plan is approved. Mining in the leasehold does not disturb any human settlements as they are far away from the lease area. On
the other hand the mining operations will create livelihood to the villagers nearby. The Lessee will develop green belt around the ML area as part of his commitment to environment protection.

4. Processing:
After blasting the ROM will be fed directly on to the crusher for crushing in to desired sizes of aggregates. The crusher is already in place outside the proposed quarry lease area.

Mining operations will be carried out by deploying the following machinery:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Type of machine</th>
<th>Nos</th>
<th>Dia of hole (inches)</th>
<th>Size/capacity</th>
<th>Make</th>
<th>Motive power</th>
<th>H.P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excavator /JCB</td>
<td>2</td>
<td>-</td>
<td>1.2 cu m</td>
<td>L&amp;T</td>
<td>Diesel</td>
<td>200</td>
</tr>
<tr>
<td>2</td>
<td>Tippers</td>
<td>5</td>
<td>-</td>
<td>17 tons</td>
<td>-</td>
<td>Diesel</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Drilling machines</td>
<td>1</td>
<td>3”</td>
<td>-</td>
<td>Diesel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Tractor mounted compressors</td>
<td>2</td>
<td>2”</td>
<td>-</td>
<td>Diesel</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Water Tankers</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Loaders</td>
<td>2</td>
<td></td>
<td>3 cu m</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Infrastructure: The entire necessary infrastructure such as office, rest shelter, magazine, explosive van, water tankers, power connection etc., will be provided near the QL area. The QL area is connected with roads to the Mandal and District headquarters.

6. Costing: The cost of production of Road Metal & Building Stone works out to be Rs. 250/- per tonne.

7. Marketing: Road Metal and Building stone is not intended for outside sale. It is for captive purpose for the crusher and Hot mix Plant intended to put for use in the Highways road project from Chittoor to Tirupati in Chittoor District.

8. Economic Viability: As the proposed quarry lease is in the near vicinity and captive use it is surely economic and viable.
9. **Other factors:** Relevant clearances shall be obtained for continuing the mining operations in the QL area.

**ECONOMIC AXIS:**

1) **Detailed exploration:**
**Present Status:**

This is an old quarry. The lessee has started quarrying operation duly removing overburden and side burden up to an area of 650sq.mts average depth of about 22 to 25mts. Within the development pit over an extent of about 650sq.mt working operations done in the South Western portion of quarry lease area for a depth of 6m. The Road Metal are extracted from the open pit. The recovery factor is more than 95% due to joints and cracks encountered in the deeper portion of the sheet rock. The recovery of Road Metal during the QL period is tabulated in Table-A. Further the quarrying operations are continued due to demand in market towards North and West of working pit.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Year</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2007-08</td>
<td>1650</td>
</tr>
<tr>
<td>2</td>
<td>2008-09</td>
<td>1080</td>
</tr>
<tr>
<td>3</td>
<td>2009-10</td>
<td>1590</td>
</tr>
<tr>
<td>4</td>
<td>2010-11</td>
<td>1800</td>
</tr>
<tr>
<td>5</td>
<td>2011-12</td>
<td>1800</td>
</tr>
<tr>
<td>6</td>
<td>2012-13</td>
<td>1194</td>
</tr>
<tr>
<td>7</td>
<td>2013-14</td>
<td>----</td>
</tr>
<tr>
<td>8</td>
<td>2014-15</td>
<td>600</td>
</tr>
<tr>
<td>9</td>
<td>2015-16</td>
<td>1100</td>
</tr>
<tr>
<td>10</td>
<td>2016-17</td>
<td>----</td>
</tr>
<tr>
<td>11</td>
<td>2016-17</td>
<td>600</td>
</tr>
</tbody>
</table>

**Total** 11414

Detailed topographic survey and geological mapping the applied QL area was subjected to detailed exploration by field traverses and well inventory data. The depth of sheet rock is assessed by the litho log observed in the boreholes of agricultural lands.

2) **Mining Reports/Mining Plan**

This is the first Mining Plan being submitted.

3) **Specific end-use grades of reserves (above economic cutoff grade)**

ROM is intended for crushing to use in the aggregates for roads.
4) **Specific knowledge of forest/non-forest and other land use data**

The entire QL area is covered by Government lands. Panapakkam Reserve Forest Boundary is 1.5km West and Sambatla RF is 550mts East of the QL area. The interstate boundary between Andhra Pradesh and Tamilnadu is 32 Kms South of the Quarry lease area. Hence, considering the above parameters discussed reserves / resources are categorized as E-1 Axis.

(j) **Feasibility Report along with financial analysis per economic viability of the deposit:** The cost of production of road metal and building stone is arrived at Rs250/- per ton inclusive of taxes and royalty. The entire ROM is for only captive purpose as such it is surely economic and profit oriented.

(k) **RESERVES**

(i) Mode of Mining, recovery Factor, Mining Losses, Processing Losses etc., Road Metal and Boulder stone will be mining by open cast other than fully mechanized method with drilling and blasting. The recovery factor is considered as 95% with 5% interstitial voids and fractures. There will not be any mining losses excepting handling loss which will be again recovered during further loading.

(ii) **Cut off grade and Ultimate Pit depth:** There is no cut off grade as the ROM will be put to use for road metal as aggregates. The UPL will be 359m at the south western portion of the QL area during the fifth year of this Mining Plan period.

(iii) **Mineral blocked due to the presence of / maintenance of benches, barriers, internal roads, electrical lines etc.,** The mineral will be blocked in 7.5m safety barrier zone, Roads, Benches which is computed separately and tabulated in the succeeding paragraphs.
(iv) Total Mineral reserves:

The reserves are estimated basing field traverses and the litho log of the well inventory in the adjacent agricultural fields and cross sections drawn on the ore body. The area of the influence and the cross sections were taken at 50 m on an average i.e. 25 m on either side of the Cross section. The occurrence of the Granitoid gneiss is more than 60.0 m BGL. Based on the field traverses and correlated data from the boreholes in the adjacent agricultural lands to a depth of 150.0m, the estimated reserves are considered as Proved reserves. The cross sections A-A’ & B-B’ are considered for computation of reserves. The present area which is explored is considered for computation of reserves under G-1 category.

<table>
<thead>
<tr>
<th>Category</th>
<th>SECTION S</th>
<th>Sectional Area</th>
<th>Deposit Height in m</th>
<th>Volume m³</th>
<th>RESERVES OF AGGREGATE @ 95% IN m³</th>
<th>RESERVES OF AGGREGATE @ 2.5/m³ IN Tons</th>
<th>Rock Waste @ 5% in m³</th>
<th>Topsoil in m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved</td>
<td>A-A’</td>
<td>15100</td>
<td>3</td>
<td>45300</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>45300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15100</td>
<td>36</td>
<td>543600</td>
<td>516420</td>
<td>1291050</td>
<td>27180</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>543600</td>
<td><strong>516420</strong></td>
<td><strong>1291050</strong></td>
<td><strong>27180</strong></td>
<td></td>
</tr>
<tr>
<td>Proved</td>
<td>B-B’</td>
<td>14900</td>
<td>3</td>
<td>44700</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>44700</td>
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<td></td>
<td></td>
<td>14900</td>
<td>34</td>
<td>506600</td>
<td>481270</td>
<td>1203175</td>
<td>25330</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>506600</td>
<td><strong>481270</strong></td>
<td><strong>1203175</strong></td>
<td><strong>25330</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30000</td>
<td></td>
<td>1050200</td>
<td>997690</td>
<td>2494225</td>
<td>52510</td>
<td>45300</td>
</tr>
<tr>
<td></td>
<td>AFTER BUFFER ZONE</td>
<td>870388</td>
<td></td>
<td>826868</td>
<td>2323403</td>
<td>43519</td>
<td>45300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AFTER SLOPE DEDUCTION</td>
<td>830658</td>
<td></td>
<td>789125</td>
<td>1972812</td>
<td>41533</td>
<td>45300</td>
<td></td>
</tr>
</tbody>
</table>

Geological Reserves of Road Metal & Building Stone = 24,94,225Tons
Less Reserves blocked in Buffer Zone of 7.5mts = 23,23,403Tons
Net Reserves available for Mining after Bench Slope Deduction = 1972812 Tons

Total Mined / excavated R.M in The Q.L. Area = 3365 Tons
Net Minable Reserves of road metal & building stone = total reserves - depleted minerals = 1972812 - 11414 = 1961398tons.

ANTICIPATED LIFE OF THE MINE:-
Net Mineable reserves/ Average yearly production=1961398/109614 =17.89 years.
### (i) OPEN CAST MINING METHOD (Mining Carried out)

**i) This is a running mine.** The proposed mining will be carried out by opencast other than fully mechanized mining method with drilling and blasting. The ROM will be sized and sorted in the crusher established outside the quarry lease area and loaded on to tippers and tractors using JCB. Mining will be carried out by formation of benches of height 6 mts. The details and sections are depicted on Plate-4.

**ii) Year wise tentative excavation in Cubic Meters indicating development, ROM, Pit wise:** About 14191 $\text{m}^3$ of excavation out of which intended ROM 230766 tons of Road Metal & Boulder Stone will be mined by forming two benches of 6.0 m each. The year wise details are tabulated below:

### In situ Tentative Excavation

<table>
<thead>
<tr>
<th>Year</th>
<th>Working areas $\text{m}^3$</th>
<th>Bench height m</th>
<th>Volume $\text{m}^3$</th>
<th>RESERVES OF AGGREGATE @ 95% IN $\text{m}^3$</th>
<th>RESERVES OF AGGREGATE @ 2.5/ m$^3$ in Tons</th>
<th>Rock Waste @ 5% in $\text{m}^3$</th>
<th>Topsoil in $\text{m}^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st year</strong> 2017-18</td>
<td>2732 3</td>
<td>8196</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8196</td>
</tr>
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<td></td>
<td>2732 6</td>
<td>16392</td>
<td>15572</td>
<td>38931</td>
<td>779</td>
<td>779</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2473 6</td>
<td>14838</td>
<td>14096</td>
<td>35240</td>
<td>705</td>
<td>705</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2222 6</td>
<td>13332</td>
<td>12665</td>
<td>31664</td>
<td>633</td>
<td>633</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>44562</strong></td>
<td><strong>42334</strong></td>
<td><strong>105835</strong></td>
<td><strong>2117</strong></td>
<td><strong>8196</strong></td>
<td><strong>8196</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2nd year</strong> 2018-19</td>
<td>2739 3</td>
<td>8217</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8217</td>
</tr>
<tr>
<td></td>
<td>2739 6</td>
<td>16434</td>
<td>15612</td>
<td>39031</td>
<td>781</td>
<td>781</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2481 6</td>
<td>14886</td>
<td>14142</td>
<td>35354</td>
<td>707</td>
<td>707</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2230 6</td>
<td>13380</td>
<td>12711</td>
<td>31778</td>
<td>636</td>
<td>636</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>44700</strong></td>
<td><strong>42465</strong></td>
<td><strong>106163</strong></td>
<td><strong>2123</strong></td>
<td><strong>8217</strong></td>
<td><strong>8217</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3rd year</strong> 2019-20</td>
<td>2978 3</td>
<td>8934</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8934</td>
</tr>
<tr>
<td></td>
<td>2978 6</td>
<td>17868</td>
<td>16975</td>
<td>42437</td>
<td>849</td>
<td>849</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2651 6</td>
<td>15906</td>
<td>15111</td>
<td>37777</td>
<td>756</td>
<td>756</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2341 6</td>
<td>14046</td>
<td>13344</td>
<td>33359</td>
<td>667</td>
<td>667</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>47820</strong></td>
<td><strong>45429</strong></td>
<td><strong>113573</strong></td>
<td><strong>2271</strong></td>
<td><strong>8934</strong></td>
<td><strong>8934</strong></td>
<td></td>
</tr>
<tr>
<td><strong>4th year</strong> 2020-21</td>
<td>3002 3</td>
<td>9006</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9006</td>
</tr>
<tr>
<td></td>
<td>3002 6</td>
<td>18012</td>
<td>17111</td>
<td>42779</td>
<td>856</td>
<td>856</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2725 6</td>
<td>16350</td>
<td>15533</td>
<td>38831</td>
<td>777</td>
<td>777</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2436 6</td>
<td>14616</td>
<td>13885</td>
<td>34713</td>
<td>694</td>
<td>694</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>48978</strong></td>
<td><strong>46529</strong></td>
<td><strong>116323</strong></td>
<td><strong>2326</strong></td>
<td><strong>9006</strong></td>
<td><strong>9006</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5th year</strong> 2021-22</td>
<td>2740 3</td>
<td>8220</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8220</td>
</tr>
<tr>
<td></td>
<td>2740 6</td>
<td>16440</td>
<td>15618</td>
<td>39045</td>
<td>781</td>
<td>781</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2481 6</td>
<td>14886</td>
<td>14142</td>
<td>35354</td>
<td>707</td>
<td>707</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2230 6</td>
<td>13380</td>
<td>12711</td>
<td>31778</td>
<td>636</td>
<td>636</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>14191</strong></td>
<td><strong>44706</strong></td>
<td><strong>106177</strong></td>
<td><strong>2124</strong></td>
<td><strong>8220</strong></td>
<td><strong>8220</strong></td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>230766</strong></td>
<td><strong>219228</strong></td>
<td><strong>548069</strong></td>
<td><strong>10961</strong></td>
<td><strong>42573</strong></td>
<td><strong>42573</strong></td>
<td></td>
</tr>
</tbody>
</table>
First Year: (2017-18): The mining will be initiated over the Eastern side of working pit of lease hold area with formation of benches of 6m height (Three benches one of 6m and second one of 6.0 m) covering an area of 2732m² & 2473m² excavating 42334 m³ of rock mass from which **105835 tons** usable Road Metal & Boulder Stone recovery. About 2117m³ comprising of intercalated waste or interstitial voids is anticipated. The waste if at all generated will be used for formation of roads and as safety barrier around the lease boundary.

Second Year: (2018-19): The mining will be continued towards West of the first Year’s working with two benches of height 6.0m and 6.0m over an area of 2739m² & 2481m² excavating 42465 m³ of rock mass from which **106163 tons** usable Road Metal & Building Stone recovery. About 2123m³ comprising of intercalated waste or interstitial voids is anticipated. The waste if at all generated will be used for formation of roads and as safety barrier around the lease boundary.

Third Year: (2019-20): The mining will be continued towards West of the second Year’s working with two benches of 6.0m and 6.0m height over an area of 2978m² & 2651m² excavating 45429 m³ of rock mass from which **113573 tons** usable Road Metal & Building Stone recovery. About 2271m³ comprising of intercalated waste or interstitial voids is anticipated. The waste if at all generated will be used for formation of roads and as safety barrier around the lease boundary.

Fourth Year: (2020-21): The mining will be continued towards West of the Third Year’s working with one bench of height 6.0m over an area of 3002m² & 2725m² excavating 46529 m³ of rock mass from which **116323 tons** usable Road Metal & Building Stone recovery. About 2326m³ comprising of intercalated waste or interstitial voids is anticipated. The waste if at all generated will be used for formation of roads and as safety barrier around the lease boundary.

Fifth Year: (2021-22): The mining will be continued towards West of the Fourth Year’s working with three benches height of 6.0m over an area of 2740m² & 2481m² excavating 42471 m³ of rock mass from which
106177 tons usable Road Metal & Building Stone recovery. About 2124m³ comprising of intercalated waste or interstitial voids is anticipated. The waste if at all generated will be used for formation of roads and as safety barrier around

(iii) Dump Management: There is no proposal for dump as waste is not anticipated and only interstitial voids and joints are expected in the sheet rock formation.

Lay out of Mine Workings, pits, roads, etc.
The Lessee intends to extract Road Metal and Building Stone production to the tune of 219228m³ or 548069 tons of road metal and boulder stone during the Mining Plan period.

During this period, it is proposed to exploit the road metal from the total area of 14191m² to an average depth of 12 m over the lease area from South RL 237 to North RL 237m as shown on Plate 5.

There is no problem in the quality of Road Metal & Boulder Stone which confirms to the specifications Aggregates (Annexure -IV).

The Lessee proposes to carry out mining by opencast other than fully mechanized method with drilling and blasting. The mineral will be sized and sorted in crusher for desired size separation. Trucks / tippers will be deployed for transportation Plate- 5.

3.1 Drilling and Blasting:
Drilling and blasting plays an important role for extraction Rom of Road metal and building stone. The primary drilling is done with Crawler drills of 4.5 ” diameter and secondary drilling is done with jackhammers and compressor. The compressor attached to the wagon drill has 450CFM capacity and compressor attached to jacks can cater needs of 2 jackhammers. Tippers are of 20 T capacity will be utilized for transportation from the leased area to crusher.

Broad parameters of blasting:

\[H = \text{Height of bench} = 10 \ m \quad L = \text{Length of drill hole} = 11 \ m \quad B = \text{Burden} = 3.0 \ m \quad S = \text{Spacing} = 3.5 \ m \quad D = \text{Diameter of the blast hole} = 100 \ mm\]

\[V_R = V_{\text{Rock}} = B \times S \times L = 3.5 \times 3 \times 10 = 105 \ m^3 \]

Volume of rock generated from one hole = 105 x 2.5 sg = 262.5 T

After blasting the rock, the excavator is used for loading rocks. The
oversize boulders are dealt with secondary blasting. The material thus transported is fed to 250 TPH capacity crushing Plant. The products are stored separately from where they are dispatched to customers.

**Explosive consumption:**
Taking on powder factor basis, with a PF of 4 total explosive needed per year is 10,00,000/4 = 250 Tons.

**Explosive used:**
The proponent has permission to use ANFO and also got permission under MMR 106 (2(b)) for deep hole drilling and blasting. The explosives that are used in the quarry are ANFO, cartridge slurries for booster, Pentolite boosters and other blasting accessories.

Storage of Explosive/ Ammonium Nitrate:
The client has an approved explosive magazine 2 in numbers each of capacity 4.5 tons. Thus each magazine has filling permission for 10 times per month i.e. 90 tons the magazines can cater the need of explosive storage requirement. Ammonium Nitrate storage license of 100 tons at a time and twice in a month i.e., 200 tons of Ammonium Nitrate can be used in a month The client has also obtained permission for ANFO mixing shed, where the ANFO is mixed.

**Manpower Requirement:**
A total of 50 persons shall be engaged to carry out the various operations at the QL area. The man power required for the mining operations shall be as per Table given below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining mate</td>
<td>01</td>
</tr>
<tr>
<td>Supervisors</td>
<td>01</td>
</tr>
<tr>
<td>Excavator &amp; Tipper operators</td>
<td>04</td>
</tr>
<tr>
<td>Helpers</td>
<td>10</td>
</tr>
<tr>
<td>Crushing operations</td>
<td>6</td>
</tr>
<tr>
<td>Garrage staff</td>
<td>4</td>
</tr>
<tr>
<td>Drill operators</td>
<td>4</td>
</tr>
<tr>
<td>Compressor operators</td>
<td>3</td>
</tr>
<tr>
<td>Unskilled labours</td>
<td></td>
</tr>
</tbody>
</table>
Deployment of Machinery:
The mining machinery and equipment proposed to be deployed in the mine for different mining operations during the Plan period are described in the table below:

Details of Mining Machinery Required

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Type of machinery</th>
<th>Capacity &amp; Nos.</th>
<th>Make</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Breaking</td>
<td>Crawler drill 4.5&quot;</td>
<td>100 mm dia 450 cfm / 2 nos.</td>
<td>Atlascapco / CP</td>
</tr>
<tr>
<td>2. Loading</td>
<td>Loader / Excavator</td>
<td>2 no.</td>
<td></td>
</tr>
<tr>
<td>3. Haulage</td>
<td>Tippers</td>
<td>25- tonner, 6nos</td>
<td></td>
</tr>
<tr>
<td>4. Water tanker</td>
<td>Tractor type 1 no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) **Conceptual Mine Plan:** The worked out pit will occupy an area of 14191 m² or 1.4191 Hectares to a depth of 12 m reaching 338 m (FRL) at the western portion of the quarry lease area. The area occupied by internal roads would be 0.0150 Hectares, while Plantation will be occupying an area of 0.1776 Hectares on the North of the QL Area. The Conceptual Plan with Sections is enclosed as Plates 6.

(b) **UNDERGROUND MINING:** NOT APPLICABLE

4.0 **MINE DRAINAGE**

a) The QL area is over an elevated mound to a height of 6.0m above ground level. Rain water constitutes the drainage system of the area. Normal course of drainage is a sheet wash over lower reaches and flows through the seasonal nala located on North of QL Area. Groundwater level is observed to be ranging in depth from 40-50 m bgl in the nearby agricultural fields.

b) The maximum height of the working level is 237 m while the minimum level of working would be 237 m.

c) Quantity and Quality of Water: The quality and quantity of water cannot be estimated as the mine workings are at much higher levels of the groundwater table. However, the water is tasted in the nearby agricultural field and the quality of water is found to be potable.
d) The entire QL area is over a sloping terrain and only sheet wash is anticipated during monsoon in the applied QL area. Regional drainage pattern is observed to be dendritic to sub-dendritic in nature.

5.0 STACKING OF MINERAL REJECTS, SUB-GRADE & DISPOSAL OF WASTE

There is no mineral reject or sub-grade mineral in this quarry. However, about 5% interstitial voids and intercalated waste is anticipated which is computed separately. This will be utilized for the formation of internal roads and balance utilized to form a barrier all along the 7.5m buffer zone of the QL area to a height up to 2.0m.

6.0 USE OF MINERAL & MINERAL REJECTS

The ROM will be fed in to the crusher established outside the applied QL area where it will be crushed to desired sizes and utilized for the State Highway project from Madanapalli to Tirupati. Entire ROM is intended for captive consumption.

7.0 PROCESSING OF ROM & MINERAL REJECTS

In this area ROM will be sized and sorted in crusher for road metal and input to hot mix Plant. There is no Mineral Reject from this Quarry.

8.0 OTHERS

a) SITE SERVICES: Site services such as office Room cum First Aid, Separate Shelter and toilets for Gents & Ladies will be provided at the applied QL area.

b) EMPLOYMENT POTENTIAL:

The human resources deployed are as follows:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Category</th>
<th>No’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Second Class Mines Manager</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Mine Supervisors</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Skilled &amp; Unskilled Labour</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Watch Men</td>
<td>2</td>
</tr>
<tr>
<td>6.</td>
<td>Foreman</td>
<td>1</td>
</tr>
<tr>
<td>7.</td>
<td>Drivers</td>
<td>6</td>
</tr>
</tbody>
</table>
PART-B
PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 23 OF MCDR’ 1988

1. ENVIRONMENT BASE LINE INFORMATION

a) Existing Land use Pattern: The QL area is a barren land. An area of about 14191 m² will be broken to win the mineral. An area of 1776m² is proposed for afforestation. The QL area is a barren land and surrounding area forest in the West and agricultural lands to the North. (Plate-5)

b) Human Settlements: The QL area is surrounded by 5 villages. The main occupation of the local people is agriculture, Sheep rearing and business. The details of villages, location, distance and population are given in the following table:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>VILLAGE</th>
<th>Direction</th>
<th>DISTANCE</th>
<th>POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chandragiri</td>
<td>4.0</td>
<td>1800</td>
<td>North</td>
</tr>
<tr>
<td>2</td>
<td>Mallayapalle</td>
<td>2.0</td>
<td>350</td>
<td>West</td>
</tr>
<tr>
<td>3</td>
<td>Doranakambala</td>
<td>2.0</td>
<td>450</td>
<td>West</td>
</tr>
<tr>
<td>4</td>
<td>Mantapampalle</td>
<td>2.5</td>
<td>450</td>
<td>SW</td>
</tr>
<tr>
<td>5</td>
<td>Gangudupalle</td>
<td>4.5</td>
<td>550</td>
<td>SW</td>
</tr>
</tbody>
</table>

c) Public buildings, Places of Worship and Monuments: No buildings or places and Monuments are witnessed in the QL Area.

d) Indicate any Sanctuary is located in the vicinity of the leasehold: No Sanctuary, eco-sensitive areas etc. are located in the vicinity of the leasehold.

2. ENVIRONMENTAL IMPACT ASSESSMENT:

(a) Land Area Degraded: An area of about 14191 m² will be degraded for the working pit; and Roads 150 m².

(b) Air Quality: Road metal & Building Stone mining do to some extent generates dust during drilling and blasting. This would be minimized by usage of moist clay, sprinkling of water at blasting site and haulage roads. Masks, earplugs and safety goggles will be provided to the workmen at mine to avoid the negative impacts of dust arising.
(c) **Water Quality:** The subject area is far from industries and as such water is not polluted. The water drawn from bore wells will be supplied to workmen for drinking.

(d) **Noise Levels:** The QL Area is quite far from the habitation area situated 1.5 Kms away from Malliahpalli Village. Noise is anticipated from drilling, blasting and movement of vehicles. As the quantum of mining is on a small scale the noise generation would be well within the limits. Therefore, the noise pollution is expected to be negligible in the area. However, the Lessee will take all precautions during drilling and blasting by providing mufflers.

(e) **Vibration Levels due to Blasting:** As the proposed drilling is by deep hole drilling to some extent and mostly with tractor mounted compressor and blasting the vibration levels will be maintained to be within the limits.

(f) **Water Regime:** Mining of road metal will be carried out on top portion of the mound in the applied QL area to a depth of 30.0 m and in a closed environment limited to working pit. The mining activity proposed would not intersect water table of the area. The water table is observed to be 50-60 m in the adjacent boreholes of agricultural lands.

(g) **Acid Mine Drainage:** Not applicable.

(h) **Surface subsidence:** There will not be any surface subsidence as all the benches and ramp ways will be thoroughly rolled for hard surface.

(i) **Socio Economics:** Mining of road metal and building stone will create some employment opportunities to local villagers thereby generating income and improvement in livelihood of local villagers and revenue to Government by way of paying royalty.

(j) **Historical Monuments:** No Historical monuments are located near and around the applied ML area.

(k) **Bio-diversity:** The slopes of the subject area consist of scattered bushes. There is no report of existence of wild animals in this region.
3. **Progressive Reclamation Plan**: Mining activity will be carried out till the completion of state highway project and the worked out pit will be protected with barbed wire and the mined out pit will be used as storage water pit. Hence, Progressive reclamation is not studied and will be Plan need in the first Plan of mining.

4. **Mined out Land**: No mined out land will be formed during this Plan period as mineral is existing much below the proposed workings during this Plan period.

**Proposed for reclamation of land affected by quarrying activity during and at the end of mining**

No reclamation is envisaged in the life of the quarry as there are adjacent quarries that are operation. This point will be dealt while the cluster guidelines are received. Hence, no reclamation proposals are made.

**Plantation Programme**:

The quarry lease area is scanty suitable for plantation as most of area is rocky. There are chances of tree growing in the South side of the quarry applied area. However it is proposed to plant a few trees in the South side of the buffer zone of quarry applied area. It is also proposed to plant a few trees nearby village area in the place shown by the village panchayat. The details of proposed plantation are shown below.

**Details of Year wise Plantation Plan**

<table>
<thead>
<tr>
<th>Year</th>
<th>Planned Plantation</th>
<th>Location of Plantation</th>
<th>Type of Plants</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Year</td>
<td>10</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td>50% of survival is envisaged.</td>
</tr>
<tr>
<td>2nd Year</td>
<td>10</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td></td>
</tr>
<tr>
<td>3rd Year</td>
<td>10</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td></td>
</tr>
<tr>
<td>4th Year</td>
<td>10</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td></td>
</tr>
<tr>
<td>5th Year</td>
<td>10</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>Five in buffer &amp; Five in village or road sides</td>
<td>Neem, or Mango, or Peepal</td>
<td></td>
</tr>
</tbody>
</table>

All around the quarry that is in the buffer/safety zone of 7.5 meters as per AP PCB and MOEF rules, around the quarry attempts will be made to grow
plants with local arrangement of drums filled with mud. Thus it is envisaged that around 10 plants will be planted and taken care of in one year. Thus the area available around the periphery will be sufficient for around 10 years.

Although the area in general is fertile the location where the quarry is situated is totally rocky. Expect for some wild growing medium sized plants that grow in the cracks of boulders; there are no notable species in the area. However trees like Neem, Ashoka, Mango, and local species Peepal are found in and around. Therefore these three species are planned for plantation. Maintenance of these plants that are grown in the buffer zone will be taken care by the quarry management. The plants that will be grown in the village will be taken care by the management, in coordination with the panchayat members.

5. Top Soil Management: There is no top soil generation from the applied QL area as such management does not arise.

6. Tailing Dam Management: No tailing dam is required.

7. Disaster Management and Risk Assessment: In this area mining does not involve disaster of land etc., except degradation of land. No flooding, subsidence, land slide occur in the region. The Mines Manager will take the responsibility in the event of any untoward incident.

In event of any emergency the Contact person is:

M/S.SRI.SRINIVASA STONE CRUSHERS,
PROP: SRI Y.SREEDHAR Naidu,
D.NO.2-117,KOTHA CHERLOPALLI(V),
PUDIPATTA POST,
TIRUPATHI RURAL MANDAL,
CHITTOOR DISTRICT, A.P.
CONTACT NO. 7330911159.

8. Care and Maintenance during temporary discontinuance:

An emergency Plan to deal with the situation of temporary discontinuance or incomplete programme due to court order / due to statutory requirements or any other unforeseen circumstance will be drawn by the technical and managerial person to suit the specific situation of this mine. This would be reviewed and modified to suit changing conditions and needs. This would take care of preventing of access to dangerous places, pits and prevent accidental fall in to the water logged pit of animals and men. Security is also to be looked in to the safety measures placed at various places like firefighting equipment, main switches etc. Security to be deployed at Explosive storage.

The mining is yet to commence. As mining continues till then the question of discontinuance does not arise. However, any untoward incidence happens the safety of the mining area will not be disturbed. Security / Watchmen will be posted at the mine site for watch and ward.
<table>
<thead>
<tr>
<th>Items</th>
<th>Details</th>
<th>Proposed</th>
<th>Actual</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dump Management</td>
<td>Area afforested (Hect.) No. of Saplings Planned Cumulative number of Plants Cost including watch and care during the year</td>
<td>0.1776ha</td>
<td>Nil</td>
<td>No dump is anticipated</td>
</tr>
<tr>
<td>Management of worked out benches</td>
<td>Area available for rehabilitation(specify) No. of saplings Planned in the year Cumulative number of Plants Any other method of rehabilitation(Specify) Cost including watch and care during the year</td>
<td>Nil</td>
<td>Nil</td>
<td>No mineral is being worked from the benches.</td>
</tr>
<tr>
<td>Reclamation and Rehabilitation by back filling</td>
<td>Void available for back filling( LXBXD) pit wise/ slope wise Void filled by waste / tailings Afforestation on the back filled area Rehabilitation by making water reservoir Any other means (Specify)</td>
<td>Nil</td>
<td>Nil</td>
<td>No proposals made as the worked out pit will be utilized as water harvesting pit.</td>
</tr>
<tr>
<td>Rehabilitation of waste land within lease</td>
<td>Area available (hectares) Area rehabilitated Method of Rehabilitation</td>
<td>Nil</td>
<td>Nil</td>
<td></td>
</tr>
</tbody>
</table>

9. **Financial Assurance:**

Financial assurance can be submitted in any encashable from preferable a bank guarantee from a Scheduled Bank at the rates equivalent to rates prescribed in Rule 27 of MCDR, 2017 for next 5 years period expiring at the end of validity of the document. The proposed mining operations are by Manual method of quarrying and by shallow drilling and blasting means and hence the cost of reclamation & rehabilitation is calculated as per the provisions of Rule 27 MCDR, 2017 @ Rs. 2,00,000/- per hectare or part thereof. This amount works out to be Rs.6,62,380/- for 3.3119 Hectares area.

The minimum financial assurance in the form of Bank Guarantee for Rs.5,00,000/- will have be submitted to the Assistant Director, Department of Mines & Geology, Chittoor at the time of commencement of quarry.
### 10.0 FINANCIAL ASSURANCE PROFORMA

The details of area put to use and calculations there off for financial assurance are given in the proforma as below:

**DETAILS OF AREA CONSIDERED FOR COMPUTATION OF FINANCIAL ASSURANCE**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Head</th>
<th>Area put on use at the start of plan (in Ha.)</th>
<th>Additional requirement during the plan period (in Ha.)</th>
<th>Total (in Ha.)</th>
<th>Area considered as fully reclaimed and rehabilitated (in Ha.)</th>
<th>Net area considered for calculation (in Ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Area under Mining</td>
<td>0.1584</td>
<td>1.4191</td>
<td>1.5775</td>
<td>1.5775</td>
<td>1.5775</td>
</tr>
<tr>
<td>2</td>
<td>Storage for Top Soil</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>3</td>
<td>Overburden / Dump</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>4</td>
<td>Mineral Storage</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>5</td>
<td>Infrastructure (Workshop, Administrative Building etc..)</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>6</td>
<td>Roads (Within the pits)</td>
<td>0.0250</td>
<td>0.0100</td>
<td>0.0350</td>
<td>----</td>
<td>0.0350</td>
</tr>
<tr>
<td>7</td>
<td>Railways</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>8</td>
<td>Green Belt</td>
<td>0.0000</td>
<td>0.1776</td>
<td>0.1776</td>
<td>----</td>
<td>0.1776</td>
</tr>
<tr>
<td>9</td>
<td>Tailing Pond</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>10</td>
<td>Beneficiation Plant</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>11</td>
<td>Mineral Separation Plant</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>12</td>
<td>Township Area</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>13</td>
<td>Others</td>
<td>Retaining Wall</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fencing around the pit (included quarry area)</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GRAND TOTAL</td>
<td>0.1834</td>
<td>1.6067</td>
<td>1.7901</td>
<td>1.5775</td>
</tr>
</tbody>
</table>
11. Certificate:

Certified that the above mentioned points will be taken care in the Mining Plan for Road Metal and Building stone over an extent of 3.000 Hectares (7.41 Acres) in Sy. No. 1481 of Chandragiri Village, Chandragiri Mandal, Chittoor District, Andhra Pradesh.

All statutory organizations, courts etc. have been taken into consideration and wherever any specific permission is required the Lessee will approach the concerned authorities.

All the measures proposed in this Mining Plan will be implemented in a time bound manner as proposed.

9.1 Plan, Section etc,

Plans and Sections are submitted along with Mining Plan.

Date: 20-09-2017.
Place: Anantapuramu.

Lessee
M/S. SRI. SRINIVASA STONE CRUSHERS,

Consultant Geologist & RQP
G. Eswar Reddy
ANNEXURE-I
FIELD PHOTOGRAPHS

PHOTOGRAPH SHOWING THE BOUNDARY PILLAR

PHOTOGRAPH SHOWING THE BOUNDARY PILLAR
GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES & GEOLOGY

PROCEDINGS OF THE DEPUTY DIRECTOR OF MINES & GEOLOGY, KADAPA
(Present: - V.S.N. Sharma, Deputy Director)

Proceedings No. 4119/Q/2006


Ref: - 1) Quarry Lease Application Dated 14-11-2006 of M/s. Sri Srinivasa Stone Crushers

ORDERS:

M/s. Sri Srinivasa Stone Crushers, Prop: Y. Sndhar Naidu has applied for Road Metal and Building Stone over the subject area for a period of 15 years. The said application is received by the Asst. Director Mines & Geology, Chittoor on 14-11-2006.

The Asst. Director Mines & Geology, Chittoor through the reference 2nd cited has submitted proposals to this office duly requesting to consider the grant of Quarry Lease in favour of M/s. Sri Srinivasa Stone Crushers.

The Asst. Director of Mines & Geology, Chittoor has reported that the area applied for was inspected by the Asst. Geologist of his office. As per inspection report the applied area Petrologically is Quartz, feldsparic rock consisting Quartz, feldspar as essential minerals and mica and other ferro-magnesium minerals as accessory minerals. This is irregulogranular medium to coarse grained, leucocratic low metamorphic rock with so many structural disturbance and hence may be used for the same in Building stone, construction purpose and in laying of roads etc.

The applied area has been surveyed and demarcated by the Surveyor of the Asst. Director of Mines & Geology, Chittoor in presence of the applicant. After the survey the area has come to 3,000 Hectares for which the applicant has given consent on the notarized affidavit. The Surveyor has further reported that the surveyed area does not contain any public importance such as buildings, Temples, Roads, Railway lines etc. As per this office record the applied area is not over-lapping with any applications applied or granted. There are no revisions, appeals or any court cases. Further old workings measurements 40 x 20 x 15 mtr is seen in the applied area.

The Mandal Revenue Officer, Chandragiri Mandal vide his R.C.No.No.42/2007, dated: 24-01-2007 has reported that the applied area in S.No. 1481 is classified as Govt. Porambokes Gayaith no objection for grant of Quarry lease in favour of applicant.

In view of the above position and based on the recommendations of the Asst. Director of Mines & Geology, Chittoor a Quarry Lease for Road Metal & Building Stone is hereby granted in favour of M/s. Sri Srinivasa Stone Crusher, Prop: Y. Sndhar Naidu over an extent of 3,000 Hectares in S.No. 1481 of Chandragiri (V), Chandragiri (M), Chittoor District for a period of 15 years, from the date execution of Quarry Lease deed, under Rule 13 (1) of A.P.M.M.C.Rules,1966, also subject to the satisfaction of all terms and conditions of A.P.M.M.C.Rules,1966, subsequent Governments orders and executive instructions issued in the matter from time to time, subject to the conditions specified in the Appendix enclosed to these orders and also subject the following conditions:

Contd............2.
1. The Grantee should execute the lease deed before the Asst. Director of Mines & Geology, Chittoor within 90 days from the date of these orders.

2. The Grantee should pay the following amounts before execution of the Quarry Lease deed.
   - (a) Dead Rent: Rs. 25,000/- per Hectare per annum.
   - (b) Land Assessment: At the rate fixed by the Revenue Authorities.
   - (c) Cess on Land Assessment: 0.37 paisa per rupee of Land assessment.
   - (d) Security Deposit: The amount equivalent to Dead Rent.

3. The Grantee should pay the Seignorage for Road Metal & Building Stone to the Department of Mines & Geology, in advance before dispatching the material from the Quarry Lease area as under:
   - Building Stone/Rough Stone/Road Metal Rs. 45/30
   - (Rupees forty five and thirty only respectively) Per Cmt / MT.

4. The Grantee should submit a Notarised affidavit before the Asst. Director of Mines & Geology, Chittoor at the time of execution, indicating the details of Assets for the purpose of attachment as per Section-25 of Mines & Minerals (Development and Regulations) Act, 1957.

   The Grantee should pay the Dead Rent Land Assessment in advance in full before “1st March” of every year for the Succeeding year, failing which the lease will be terminated.

5. The Seignorage Fee or Dead Rent whichever is higher shall be assessed on mineral dispatched or consumed from the demised land every year

**NOTE:** The grant is liable for cancellation should it be found that it was grossly inequitable or was made mistake of fact or owing to Mis - representation or fraud or in excess of authority.

Deputy Director of Mines & Geology, KADAPA.

To

M/s. Sri Srinivasa Stone Crusher,
Prop: Y. Sridhar Naidu,
Kothacherlapalli (Vg),
Pudipatia (P),
Tirupati (RM).

Copy together with record of enquiry is sent to the Asst. Director of Mines & Geology, Chittoor with a request to take further action in the matter duly obtaining a Notarised Affidavit from the Grantee with regard to the details of Assets as per the instructions of the Director of Mines & Geology, Hyderabad contained in Memo No. 24212/PPC.2/98 Dated : 17-09-1998

Copy submitted to the Director of Mines & Geology, Hyderabad for favour of information.
GOVERNMENT OF ANDHRA PRADESH

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


PROCEEDINGS No. 4119/Q/2006

Date: 4 - 05 - 2007


Ref: Proceedings No. 4119/Q/2006, Dt. 07 - 03 - 2007 of the Deputy Director of Mines & Geology, Kadapa

ORDER:

The Deputy Director of Mines & Geology, Kadapa vide reference cited has granted a Quarry Lease in favour of M/s Srinivasa Stone Crushers, Prop: Y. Sridhar Naidu, for Road Metal & Building Stone over an extent of 3.000 Hectares in S.No.1481 of Chandragiri (V), Chandragiri (M), Chittoor District for a period of 15 (Fifteen) years.

In view of the above, sanction is hereby accorded to M/s Srinivasa Stone Crushers, Prop: Y. Sridhar Naidu to work for Road Metal & Building Stone over an extent of 3.000 Hectares in S.No.1481 of Chandragiri (V), Chandragiri (M), Chittoor District for a period of 15 (Fifteen) years with effect from 4 - 05 - 2007 to 3 - 05 - 2022, subject to the satisfaction of all other terms and conditions laid down in A.P.M.M.C. Rules, 1966 and subsequent Government order and executive instructions issued from time to time.

The Lessee should observe all the covenants of lease deed in form ‘G’ and terms and conditions given in the appendix enclosed to this deed.

The Lessee should maintain all the records and accounts and submit monthly (quarterly) annual returns to the Director of Mines and Geology, Hyderabad, Deputy Director of Mines & Geology, Kadapa and Asst. Director of Mines & Geology, Chittoor, as prescribed in A.P.M.M.C. Rules, 1966, so as to reach the respective authorities not later than 7th day of succeeding month to which they relate.

DESpatched On: 7 - 04 - 2023

Vide Memo. From 2.9.926 to 2.9.928

To: M/s Srinivasa Stone Crushers, Prop: Y. Sridhar Naidu,

Valla Chepthapalli Village,

Puttipada Post,

Truppadi Rural Mandal,

Chittoor District.
GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF MINES AND GEOLOGY
CERTIFICATE OF REGISTRATION
AS QUALIFIED PERSON TO PREPARE MINING PLAN
[Under Rule 14(2) of Granite Conservation and Development Rules 1999]


Registration Number is :

RQP/DMG/AP/07/2014

This Recognition is valid for a period of 10 years with effect from 22.12.2014.

This certificate will liable to be withdrawn/cancelled in the event of furnishing the wrong information/documents in the Mining Plan submitted by him.

Place: Hyderabad
Date: 22.12.2014

[Signature]
Director of Mines & Geology

[Signature]
Director of Mines and Geology
Govt. of A.P., Hyderabad
ANNEXURE-IV-A

CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON
(Under Rule 22C of Mineral Concession Rules, 1960)

Shri Gedde Eswar Reddy, whose Photograph and signature is affixed herein above, having given satisfactory evidence of his qualifications & experience is hereby RECOGNISED under Rule 22C of the Mineral Concession Rules, 1960 as a Qualified Person to prepare Mining Plans.

Registration number is

This certificate will liable to be withdrawn/cancelled in the event of furnishing the wrong information/documents in the Mining Plan submitted by him.

Date: 17.7.2013.