माइनिंग प्लान सेल / न.क. 1/2013

श्री राम महत्त्वार, श्री धनराम झा
5/0 की मामला, श्रीमती
निवासी- राजीव, साथी-
लट, भारतीय भाषा, उच्चारण- उच्चारण

खराब म- 950

केंद्र- तात्त्विक 
सात्त्विक- तात्त्विक
लोग- तात्त्विक

12.2.14

कायमिलय खेतीय प्रस्तुत
संचालनालय भूमि को तथा वनिकरण
क्षेत्रीय कायमिलय, गोरखपुर, ग्वालियर म.प.
दुर्गा एवं फेनस 07342499350 एवं 2067425 इंग्लिश- rhgnmgwa@mp.gov.in

वरिष्ठ सर्किल- माइनिंग (लोगुल) साधन, जिला- ग्वालियर
- माइनिंग प्लान सेल / न.क. 1/2013

विशेष अनुमोदन

श्री राम महत्त्वार

माइनिंग प्लान सेल / न.क. 1/2013

विशेष अनुमोदन

श्री राम महत्त्वार, श्रीनिवासी

12.2.14

प्रशिक्षण प्रमुख
**MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR JAKHODA FLAG STONE QUARRY**

<table>
<thead>
<tr>
<th>Village</th>
<th>JAKHODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehsil</td>
<td>GHATIGAON</td>
</tr>
<tr>
<td>District</td>
<td>GWALIOR</td>
</tr>
<tr>
<td>State</td>
<td>MADHYA PRADESH</td>
</tr>
<tr>
<td>Area</td>
<td>0.500 HECT.</td>
</tr>
<tr>
<td>Proposed Production</td>
<td>5,000 CUM PER ANNUM</td>
</tr>
<tr>
<td>Plan Period</td>
<td>5 YEARS</td>
</tr>
</tbody>
</table>

**Details of Area**

<table>
<thead>
<tr>
<th>Revenue Land</th>
<th>0.500 HECT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khasra No.</td>
<td>950</td>
</tr>
<tr>
<td>Type of land</td>
<td>GOVT. LAND</td>
</tr>
</tbody>
</table>

**PREPARED UNDER RULE 42 OF MP MINOR MINERALS RULES 1996**

**FOR**

Shri Ram Aktyar Adiwasi,
S/o Shri Gariba Adiwasi,
R/o Kanser,
Tehsil Ghatigaon
District Gwalior (M.P.)

**PREPARED BY**

Amit Saxena, RQP

Registration No. RQP/DGMMP/32/2013
12, Vinayak Nagar, Bohra Ganeshji, Udaipur
Mobile No. 098291-61803

**YEAR 2014**
**CONTENT**

**OF**

**MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN**

**FOR**

**JAKHODA FLAG STONE QUARRY**

**(AREA 0.500 HECT.)**

**(LESSEE: SHRI RAM AKTYAR ADIWASI)**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Particulars</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapter 1 (Introduction)</td>
<td>1 – 2</td>
</tr>
<tr>
<td>2</td>
<td>Chapter 2 (General)</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Chapter 3 (Location &amp; Accessibility)</td>
<td>4 – 5</td>
</tr>
<tr>
<td>4</td>
<td>Chapter 4 (Topography)</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Chapter 5 (Geology)</td>
<td>7 – 8</td>
</tr>
<tr>
<td>6</td>
<td>Chapter 6 (Exploration details)</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Chapter 7 (Reserves)</td>
<td>10 – 12</td>
</tr>
<tr>
<td>8</td>
<td>Chapter 8 (Recoverable reserves)</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>Chapter 9 (Sampling)</td>
<td>14</td>
</tr>
<tr>
<td>10</td>
<td>Chapter 10 (Mining)</td>
<td>15 – 19</td>
</tr>
<tr>
<td>11</td>
<td>Chapter 11 (Blasting)</td>
<td>20 – 21</td>
</tr>
<tr>
<td>12</td>
<td>Chapter 12 (Stacking &amp; disposal of waste)</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Chapter 13 (Others)</td>
<td>23</td>
</tr>
<tr>
<td>14</td>
<td>Chapter 14 (Mineral Processing)</td>
<td>24</td>
</tr>
<tr>
<td>15</td>
<td>Chapter 15 (Conceptual Mining Plan)</td>
<td>25 – 30</td>
</tr>
<tr>
<td>16</td>
<td>Progressive Mine closure Plan</td>
<td>31 – 36</td>
</tr>
</tbody>
</table>
LIST OF PLATES
OF
MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN
FOR
JAKHODA FLAG STONE QUARRY
(AREA 0.500 HECT.)
(LESSEE: SHRI RAM AKTYAR ADIWASI)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Particulars</th>
<th>Plate No.</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Khasra Map</td>
<td>Plate No.1</td>
<td>1:4,000</td>
</tr>
<tr>
<td>2.</td>
<td>Surface Geological Plan &amp; Sections</td>
<td>Plate No.2</td>
<td>1:1,000</td>
</tr>
<tr>
<td>3.</td>
<td>Five Year Development &amp; Production Plan &amp; Sections</td>
<td>Plate No.3</td>
<td>1:1,000</td>
</tr>
<tr>
<td>4.</td>
<td>Conceptual Plan and Sections</td>
<td>Plate No.4</td>
<td>1:1,000</td>
</tr>
<tr>
<td>5.</td>
<td>Environment Plan</td>
<td>Plate No. 5</td>
<td>1:5,000</td>
</tr>
</tbody>
</table>

LIST OF ANNEXURES
OF
MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN
FOR
JAKHODA FLAG STONE QUARRY
(AREA 0.500 HECT.)
(LESSEE: SHRI RAM AKTYAR ADIWASI)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Particulars</th>
<th>Annexure No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Copy of lease sanctioned order</td>
<td>Annexure No.1</td>
</tr>
<tr>
<td>2.</td>
<td>Copy of lease deed</td>
<td>Annexure No.2</td>
</tr>
<tr>
<td>3.</td>
<td>Khasra Map &amp; Khatoni</td>
<td>Annexure No.3</td>
</tr>
<tr>
<td>4.</td>
<td>Copy of RQP certificate</td>
<td>Annexure No.4</td>
</tr>
</tbody>
</table>

AMIT
CERTIFICATE

A. Certified that the provisions of MP MINOR MINERALS RULES 1996 made there under have been observed in the Mining Plan & Progressive Mine Closure Plan.

B. This is to certify that the provisions of Minor Mineral Rules 1996 have been observed in the Mining Plan & Progressive Mine Closure Plan of Jakhoda Flag Stone Quarry area 0.500 Hect. (Khasra No. 950) in village Jakhoda, tehsil Ghatigaon, district Gwalior of M.P. lessee by Shri Ram Aktyar Adiwasi S/o Shri Gariba Adiwasi and wherever specific permissions are required the lessee will approach the concerned authorities for granting the permissions.

C. It is also certified that the information furnished in the above Mining Plan & Progressive Mine Closure Plan are true and correct to the best of my knowledge & belief.

Place: 

Date: 

(Amit Saxena) 

RQP/DGMMP/32/2013
कार्यालय कलेक्टर खनिज जिला न्यालियर (मोंगो)

कमांक क्यू. / ना. / क्यू.एल-75 / 2002

स्वालियर निवंद 03/2014

प्रति.

प्रमाणी अधिकारी
मुख्य प्रदूषण नियंत्रण बोर्ड
दौनदाँती नगर न्यालियर

विषय:— संस्था द्वारा जल द्वारा अधिनियम के अन्तर्गत प्रदत्त समासित क्षमता के प्रभावीकरण हेतु जानाकारी।

सन्दर्भ:— आपका पत्र को 187/क्षेत्राधिकारी/म्या/2013 दिनांक—20/02/2014।

उपरोक्त विषयान्तर्गत संदर्भित पत्र के पालन के परिपेक्ष में लेख है कि पट्टेदार श्री
नरेन्द्र सिंह कुशावाह पुत्र श्री जहार सिंह कुशावाह निवासी—घासमण्डी जिला न्यालियर के पक्ष
मे गाम जखोदा के सर्वक मांक के 943 रक्षा 2672 हैक्टर क्षेत्र पर खनिज माण्डी पत्थर का
उत्खनित होना अवश्य दिनांक 02/10/04 से 01/10/2014 तक स्वीकृत होकर अनुवंशित है।

पट्टेदार (उधमी) द्वारा वर्ष 2013 (1-1-13 से 31-12-2013 ) मे स्वीकृत
खदान मिल पत्थर संचालन किया गया है।

1

खनिज अधिकारी
जिला न्यालियर

प्रतिलिपि:—

श्री नरेन्द्र सिंह कुशावाह पुत्र श्री जहार सिंह कुशावाह निवासी—घासमण्डी जिला
न्यालियर की ओर सूचनार्थ।

2

वनजी अधिकारी
=जिला न्यालियर
CONSENT LETTER FROM THE APPLICANT

The Mining Plan & Progressive Mine Closure Plan in respect of Jakhoda Flag Stone Quarry, area 0.500 Hect. (Khasra No. 950) in village Jakhoda, tehsil Ghatigaon, district Gwalior of M.P. lessee by Shri Ram Aktyar Adiwasi S/o Gariba Adiwasi under Minor Minerals Rules 1996 which has been prepared by Shri AMIT SAXENA, RQP.

I request the Concern authorities to make further correspondence regarding modification of the Mining Plan & Progressive Mine Closure Plan with the said person on his following address.

Shri Amit Saxena
12. Vinayak Nagar, Bohra Ganeshji,
Udaipur (Rajasthan)
Mobile No. 098291-61803

I hereby undertake that all the modification so made in the Mining Plan & Progressive Mine Closure Plan by the recognized person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respect, “understood the contents of the Mining Plan & Progressive Mine Closure Plan and agree to implement”. Boundary pillars are marked precisely in the field, which formed the basis for preparation of Mining Plan & Progressive Mine Closure Plan.

Place:  
Date:  

(Ram Aktyar Adiwasi)  
Applicant
MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN OF JAKHODA FLAG STONE QUARRY

MINING PLAN FOR JAKHODA FLAG STONE (FARSHI PAITTHAR) AT VILLAGE JAKHODA, TEHSIL GHATIGAON DISTRICT GWALIOR (MP) AREA 0.500 HECTARE SUBMITTED UNDER RULE 42 OF MP MINOR MINERALS RULES 1996

CHAPTER 1

INTRODUCTION
The Mining plan for Jakhoda Flag Stone over an area of 0.500 Hectare Survey No. 950 situated at Village Jakhoda, Tehsil Ghatigaon, District Gwalior is being submitted by applicant Shri Ram Aktyar Adiwasi S/o Shri Gariba Adiwasi, Resident of Village Kanser, Tehsil Ghatigaon, District Gwalior (M.P.) which is being SUBMITTED UNDER RULE 42 OF MP MINOR MINERALS RULES 1996.

The Flag Stone quarry lease has been sanctioned by the District Collector Gwalior vide letter No. क्यू.एल–07/2006 on dated 09.02.2010, Area 0.500 hectare for ten years and agreement was done on dated 23.03.2010 valid 23.03.2010 to 22.03.2020.

As per the gazette notification of Madhya Pradesh Govt. dated 23.03.2013. All the existing and fresh quarry lease owner has to submit approved mining plan and progressive mine closure plan.

Therefore the applicant Shri Ram Akhtar Adiwasi submitting the mining plan and progressive mine closure plan for approval to the competent authority by utilizing the services RQP Amit Saxena.

Address: 12, Vinayak Nagar, Bohra Ganesji, Udaipur (Rajasthan) Mobile: 098291-61803
MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN  
OF  
JAKHODA FLAG STONE QUARRY

Production capacity is 5,000 Cum per year. The lease area is Govt. land.
Lease area presently not use in agriculture activity. No forest land involve in lease area. This is first mining proposal. The Flag Stone mines from lease area shall be utilized for dam, building and other constructions work. Land use pattern as per the land schedule in as follows.

<table>
<thead>
<tr>
<th>Classification of Land</th>
<th>Village/District</th>
<th>Area in Hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey No 950</td>
<td>Jakhoda, Gwalior</td>
<td>0.500</td>
</tr>
<tr>
<td>Govt. Land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Area</td>
<td></td>
<td>0.500</td>
</tr>
</tbody>
</table>

Address: 12, Vinayak Nagar, Bohra Ganeshji, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER – 2

GENERAL:

Name of Applicant -
SHRI RAM AKTYAR ADIWASI

A) Proprietor Name and Address
SHRI RAM AKTYAR ADIWASI S/o SHRI GARIBA ADIWASI,
RESIDENT OF VILLAGE KANSER, TEHSIL GHATIGAON,
DISTRICT – GWALIOR (M.P.)

B) Minerals, which are occurring in the which the applicant intends to
mine : -
Flag Stone (Farshi Patthar)

D) Period for which the mining lease is proposed to be granted:
10 Years valid up to 22.03.2020

C) Name of RQP preparing mining plan :
Shri Amit Saxena
Address: 12, Vinayak Nagar, Bohra Ganesji,
Udaipur (Rajasthan)
Phone No. : 098291-61803
Registration No. RQP/DGMM/32/2013
Valid up to 15.5.2018
Photocopy of RQP authorization enclosed in Annexure.

Address: 12, Vinayak Nagar, Bohra Ganesji, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER 3

LOCATION AND ACCESSIBILITY:
The lease area is situated near Village Jakhoda, Tehsil Ghatigaon, District Gwalior, Area 0.500 Hectare, Survey No. 950 From District Headquarter at 45 Km. Gwalior to Ghatigaon at 30 Km., Ghatigaon to Village Jakhoda at 12 Km. and Village Jakhoda to lease at 3 Km. The quarry area is at Topo sheet No. 54F/16 of Survey of India and latitude 26°-03'-55.4”N, longitude 77°-49'-44.3”E

INFRASTRUCTURE
This is a sanctioned quarry by District Administration; office building, labour rest shelter etc will be constructed. The area is well connected by State road from Tehsil Ghatigaon and District Headquarter Gwalior.

WATER
Nearest source of drinking water is form of hand pump near QL area.

ELECTRICITY
Electricity facility is available near the QL.

MANPOWER
Man power is easily available from the surrounding local villages.

OTHER FACILITIES:
Regular bus services are available up to Jakhoda village near to Quarry lease area.

By road
The Lease area Jakhoda is 43 km from District headquarter Gwalior and 2 km from village Jakhoda.
BY Train

The lease area can be access by train up to Gwalior, which is lying on the Gwalior – Agra route. The approachability is by means of regular buses, matador which are easily available up to Jakhoda Village.

Details of area

<table>
<thead>
<tr>
<th>DIST/STATE</th>
<th>TEHSIL</th>
<th>VILLAGE</th>
<th>KHASRA NO</th>
<th>AREA HECT.</th>
<th>TYPE OF LAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gwalior</td>
<td>Ghatigaon</td>
<td>Jakhoda</td>
<td>Survey No. 950</td>
<td>Area 0.500 hectare</td>
<td>Govt. land</td>
</tr>
</tbody>
</table>

TOTAL

|               |         |         |           | 0.500      |              |

No public road is passing through the lease area.

Address: 12, Vinayak Nagar, Bohra Ganeshi, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER 4

PHYSIOGRAPHY

TOPOGRAPHY

Topography of the lease area is flat gentle slope and its surrounding area is flat and agriculture land. The lease area is the undulate land. The highest elevation is of 316.

REGIONAL

Gwalior District is a reflection of history of the state of Madhya Pradesh; it makes the North boundary of the state. Gwalior district is a repository of natural, historical and cultural history. This district is known for luxuriant natural resources with various rivers draining the district. Gwalior district falls under the river basin of the Sind, Parvati & Mahudi both are tributary of Sind River. The entire Gwalior district forms the part of the Sind River. The primary occupation of the majority of the population in the district is agriculture and allied activities. On one side the spectrum of its floristic socio-cultural diversity and ethnic history of tribal.

अनुमोदित

Address: 12, Vinayak Nagar, Bohra Ganesiji, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER 5

GEOLOGY

Geology of the District: The district comprises rocks of Basic sill, Gwalior group of rocks overlain by Vindhyan Super-group and Bundelkhand granite complex. The Regional geological succession of rocks is as given below:

Regional Geological Succession

<table>
<thead>
<tr>
<th>Recent</th>
<th>Alluvium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub Recent</td>
<td></td>
</tr>
<tr>
<td>Basic Sill</td>
<td>Dolerite</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Gwalior group</td>
<td>Sitla Formation</td>
</tr>
<tr>
<td>lenses</td>
<td>Ferroginus shale with iron ore</td>
</tr>
<tr>
<td>with</td>
<td>Sigpur formation</td>
</tr>
<tr>
<td></td>
<td>Sandstone, Shale</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Vindhyan Super</td>
<td>Bhandar Group</td>
</tr>
<tr>
<td>Group</td>
<td>Shale, Sandstone, limestone</td>
</tr>
<tr>
<td>with Quartzite.</td>
<td>Rewa Group</td>
</tr>
<tr>
<td></td>
<td>Sandstone, Shale</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kaimur Group</td>
</tr>
<tr>
<td></td>
<td>Sandstone Shale</td>
</tr>
</tbody>
</table>

-Granite, Granite gneisses, Pegmatite vine etc.

\[\text{अनुमोदित}\]

Address: 12, Vinayak Nagar, Bohra Ganesji, Udaipur (Rajasthan) Mobile: 090291-61803
The local Geological Succession of the Lease Area

The lithological successions of the mining lease area are as follows:

<table>
<thead>
<tr>
<th>Recent</th>
<th>Alluvial Soil (Brownish gray in colour) / Laterite/Murram (Thickness 0 to 1.00 meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub Recent</td>
<td>Laterite/Murram</td>
</tr>
<tr>
<td>Gwalior group</td>
<td>Sitala Formation</td>
</tr>
<tr>
<td></td>
<td>Sigpur Formation</td>
</tr>
<tr>
<td></td>
<td>Sandstone, Shale with conglomerate at the bottom.</td>
</tr>
</tbody>
</table>

**Physical Properties:**

The Rewa and Kaimur sandstone/flagstone exposed mainly on the hillocks and mounds. The Flagstone exposed in the area is white, off white, pink, and yellowish in color, fine to medium grained in nature and hard/compact, horizontal bedded and flaggy at downward direction. As seen in most of the pits located in the area the Sandstone is flaggy in nature and different dimension of Farshi Patthar.

At places along with flaggy Sandstone layers of hard and compact sandstone is also there which is white to off white in color and can be mined for cutting and polishing purpose.
CHAPTER 6
DETAILS OF CARRIED OUT EXPLORATION

It is running/operated quarry and sanctioned for ten years to lessee on contract by District Administration.

LOGGING AS FOLLOWS

N. A.

AREA OF MINERALIZATION

Locally the area has the mineralization confined from higher altitude to lower middle altitude and the area South West to North East. According to topography the area has been divided in one block.

Mineralized Area

Total area of mineralization 5000 M^2

Litho Sequence:-

Litho Units  Depth M
Flag Stone  46 (Avg.)

(Please see Surface Geological map Plate No 3)

Contribution of Minerals

Flag Stone = 30%
Overburden = 70%

UNEXPLORED AREA

It is operating mine, already explored.

DETAIL OF NEARBY MINES

There is number of working mine and abundant mines of stone in periphery of 5 – 10 Km from the lease area.

अनुमोदित

Address: 12, Vinayak Nagar, Bohra Ganesji, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER 7

RESERVES:

A. MINERAL RESERVES
The reserves are calculated with graphical method for below mentioned category where this system having the geological assessment, feasible assessment and economic validity. While calculating the reserves following factor has been considered.

1. Geological Assessment:
   i. The whole area is mapped on 1:1000 scales where the stone is mineralizes with respect to topography from higher altitude to lower altitude of lease area (See above and surface geological plan and section plate)
   
   ii. Depth: the parameter is based on the present finding and the correlative comparatively studies with excavated pits where following depth parameters considered:

   Overburden: Exposed as capping of average 1.5 m thick.

   Flag Stone: in layer form and the thickness is minimum 46 m.

   iii. Contribution of Minerals: Following ratio is expected

<table>
<thead>
<tr>
<th>MINERALS</th>
<th>CONTRIBUTION</th>
<th>AREA OF MINERALIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag Stone</td>
<td>30%</td>
<td>Whole area</td>
</tr>
<tr>
<td>Overburden</td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>

Address: 12, Vinayak Nagar, Bohra Ganeshi, Udaipur (Rajasthan) Mobile: 098291-61803
FEASIBILITY ASSESSMENT:
This is an old mine which is in working from last 3 years.

ECONOMIC ASSESSMENT:
Under the economic axis the details of excavated finding has been already given in which said minerals mineralization is limited to certain extent due to less exploratory right therefore it concludes that the major part of the applied area is economic viable.

MINERAL RESERVES
Mineralized Area
The lease area has the resource for the stone mineralization where stone occurs from top of the surface in the form of stone and overburden in the rock sheet form, therefore, the lease area should have the same litho set up under the sheet dip of the formation and the following are the reserves.

अनुमोदित
### GEOLOGICAL RESERVE FOR STONE

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>X-Sec area in sqm</th>
<th>Influence length in m.</th>
<th>Volume in Cum</th>
<th>Stone 30% cum</th>
<th>Overburden 70% cum</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROVED (316 to 290 mRL)</td>
<td>2311.0</td>
<td>30</td>
<td>69330</td>
<td>20799</td>
<td>48531</td>
</tr>
<tr>
<td>Probable (290 to 280 mRL)</td>
<td>962.0</td>
<td>30</td>
<td>28660</td>
<td>8658</td>
<td>20202</td>
</tr>
<tr>
<td>Possible (280 to 270 mRL)</td>
<td>962.0</td>
<td>30</td>
<td>28660</td>
<td>8658</td>
<td>20202</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127050</strong></td>
<td><strong>38115</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL GEOLOGICAL RESERVE = 127050 Cum**

### MINEABLE RESERVE FOR STONE

*(Assuming 10% losses in mine benches and safety zone)*

<table>
<thead>
<tr>
<th>Category</th>
<th>Reserves</th>
<th>Flag Stone 30%</th>
<th>Overburden 70%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Geological</td>
<td>Mineable (90% of Geological)</td>
<td></td>
</tr>
<tr>
<td>Proved</td>
<td>69330</td>
<td>62397</td>
<td>18719</td>
</tr>
<tr>
<td>Probable</td>
<td>28660</td>
<td>25974</td>
<td>7792</td>
</tr>
<tr>
<td>Possible</td>
<td>28660</td>
<td>25974</td>
<td>7792</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127050</strong></td>
<td><strong>114345</strong></td>
<td><strong>34304</strong></td>
</tr>
</tbody>
</table>

Flag Stone = 34304 Cum
Overburden = 80042 Cum

Address: 12, Vinayak Nagar, Bohra Ganesji, Udaipur (Rajasthan) Mobile: 098291-61803
CHAPTER 8

GRADE
Flag Stone is building stone which is having the following characteristics:
1. Fine to medium grained in nature and hard/compact.
2. Good impact value.
3. Horizontal bedded and flaggy at downward direction.
4. Flaggy in nature and different Dimensional Stone.
5. White, off white, pink, and yellowish in color.

RECOVERABLE OR MINEABLE RESERVES
Mincable reserves are those reserves which are left after deducting mineral blocked in benches and barrier zone area.
Total Mineable Reserve for Flag Stone = 34304 Cum

MINE LIFE = 34304/5000 = 6.8 Years

= Say 7 years

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CHAPTER 9

SAMPLING

Random sampling was done from surface and quarry pit.
CHAPTER 10

MINING

Proposed mining activity will be carried out by the open cast semi mechanized method of mining using hand tools such as excavators, loaders. From the loading point of view Flag Stone will be transported by tractors to the users. The proposed plan period working will be emphasized with systematic benches developed in pits with development and production benches. Site services will be provided in 7.5 m barrier zone of lease area.

During the ensuing years the Flag Stone quarrying will be according to the proposed method of manual and mechanized means, for mechanized way the following machines are proposed to use as on hire basis:

Details of machinery: The following machineries will be continued to deploy for further proposal for the Flag Stone quarrying, are as follows:

Excavator Machine (JCB): One each
Tractor: - 1

Анногодит